1981

Winnebago and Itasca Motorhome

Owner's Manual

by Winnebago Industries, Inc.

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 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 definition of these terms is:

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.

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INTRODUCTION

Driving a motor home requires a somewhat different driving attitude than when driving an automobile. Your motor home has been equipped with such standard features as power steering and power brakes to make it handle as easily as your family car. You must remember that the weight, length, width and height are greater than a car.

The motor home requires greater stopping distances, more space for parking and maneuvering, and more acceleration time when passing other vehicles than an automobile. However, after a few miles of careful and alert driving, you should be able to easily adapt to the larger size of the motor home.

This manual has been written with the owner in mind. It is intended to provide you with information needed to properly operate and care for your new motor home. It also contains tips and information that will help you enjoy your motor home while travelling.

Before getting into the driver's seat, always observe the area around your motor home. A small auto or motorcycle may have parked behind or to the side of your vehicle and remain unseen until too late. It is advisable to have a passenger check the area around your vehicle as you maneuver out of a difficult parking space, especially when backing.

Always be aware of the dimensions of your motor home. These are listed in the specifications section of this manual. 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 or TV antenna. Also, remember that some old bridges may not accept the weight of your motor home.

When planning a trip to another state, write ahead for a booklet detailing the laws for the state. Some states have specific laws pertaining to recreational vehicles.

For safety sake, always use your seat belt and instruct your passengers to do so as well. Frequent rest stops are advised to relieve stress on the driver, the family and the vehicle.

After reading this manual, be sure to keep it in your motor home as a reference. Your dealer will be glad to provide any further information you feel you need, as well as answer any questions about operating the equipment in your motor home. Your dealer is also prepared to perform any service or repair work required to maintain your motor home in top condition.

NOTE: The description, 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, some accessories and components may be standard or optional on some models. Therefore, some equipment described in this manual may not apply to your vehicle.

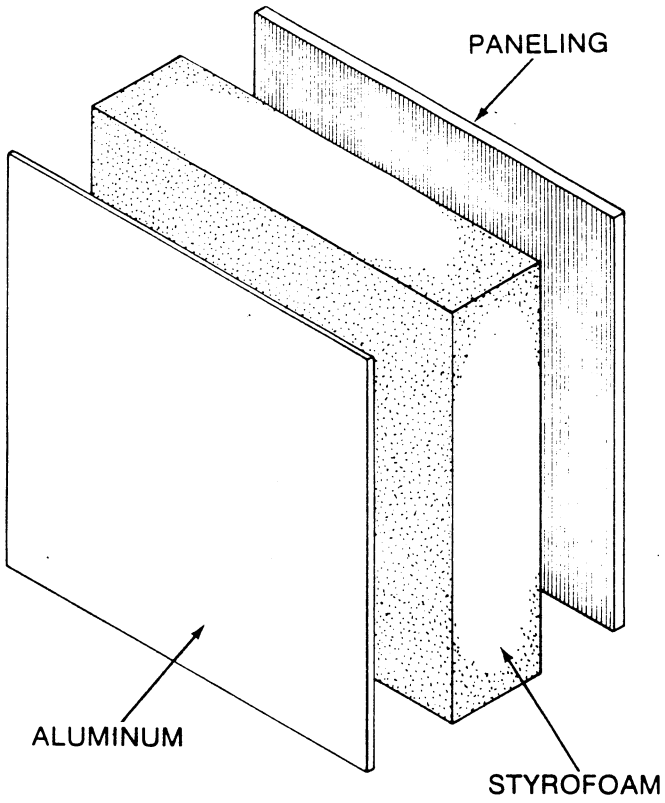
IMPORTANT:
Some sections of this manual refer only to an A-Body, or a C-Body motor home. An A-Body vehicle is "box" shaped and provides access to the driver's seat only through the entrance door on the right side or a driver's door on the left front. A C-Body motor home is built on a truck or van type chassis. In addition to the entrance door, there is a door on each side of the cab for access to the driver's and passenger's seats. You need refer only to those sections which apply to your motor home for operation or adjustment.

Thermo-Panel® Construction

The walls, floor and roof of your motor home are made of laminated panels developed by Winnebago Industries for use in Winnebago recreational vehicles.

Thermo-Panel® materials are made by bonding the exterior aluminum skin and interior paneling to a core of Styrofoam® plastic foam insulation. The materials used in making the "sandwich panel" are first sprayed with an adhesive. A combination of heat and pressure permanently bond the panels together. The Styrofoam insulating core is the best insulator being used in recreational vehicles. It makes your motor home more comfortable every season of the year.

It is opaque, odorless and chemically inert (will not support plant or animal life).



Repairs

One of the many outstanding features of the Thermo-Panel® construction is the ease of repairs. If your motor home should receive damage to a section of one side, for example, that section can be cut out and another panel quickly cut to size and spliced into place. Many Winnebago and Itasca dealers are prepared to make this repair.

If there is damage, we recommend your motor home be delivered to the Forest City factory or to a factory recommended repair shop. For prompt service at the Forest City Plant, you must contact the Customer Service Department by phone or letter and schedule an appointment in advance.

Winnebago International Travelers Club,
Itasca Travelers Club

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.

WARRANTY COVERAGE TO OWNER

A. Warranty Coverage - Winnebago Industries, Inc., of Forest City, Iowa, warrants each new Winnebago or Itasca motor home to the owner as follows:

WARRANTY PERIOD

For the period of one year or 12,000 miles of use, whichever occurs first, from date the vehicle is delivered to the first retail purchaser or first placed in service as a demonstrator or company vehicle, whichever is earlier.

ITEMS COVERED

The Thermopanel® construction, as pertains to the bonding process of the aluminum outer skin metal to the side wall and roof construction.

Plus the following list of equipment:

Air Conditioner (auto)
Air Conditioner (115V)
Auxiliary Battery(s)
Carpet
Compartment Doors
Converter (110 - 12V)
Cushion Fabric
Cushion Foam
Demand Pump
Drainage Hose
Driver and Passenger Seats
Electrical Systems
Faucets
Fire Extinguisher
Furnace
Gauges
Light Fixtures
L.P. Gas Tank(s)
L.P. Gas Valves
Plumbing System
Power Range Hood
Pre-Finished Paneling
Radio
Range
Refrigerator
Sealants
Shower Door
Showerhead
Sink
Speed Control
Stereo
Switches
T.V. Antenna
Toilet

Vacuum Cleaner
Vinyl
Water Heater
Windows
115V Power Plant

ITEMS NOT COVERED

Chassis
Tires
Service Items
- Fuses
- Headlight Seal Beams
- Interior and Exterior Light Bulbs
- Oil and Air Filters
- Oil or Lubricants
- Vacuum Cleaner Bags
- Windshield Wiper Blades

This warranty shall not apply to failures due to normal wear, accident, misuse, abuse or negligence.

IMPLIED WARRANTIES

In addition, each new Winnebago or Itasca motor home shall be subject to warranties implied by law including the implied warranties of merchantability and fitness for any particular purpose but such implied warranties are limited to the owner for the period of one year or 12,000 miles of use, whichever occurs first, from date the vehicle is delivered to the first retail purchaser or placed in service as a demonstrator or company vehicle, whichever is earlier. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

WINNEBAGO'S RESPONSIBILITY

B. Any part of the Winnebago or Itasca motor home subject to this warranty which is found to be defective in material or workmanship, will be repaired or replaced at Winnebago Industries' option, within thirty (30) days of notice of defect by the selling dealer without charge to the customer for parts or labor. If the owner of the motor home has moved to a different locality and cannot return to the selling dealer, the owner may obtain warranty repairs or replacement of such items at any authorized Winnebago or Itasca dealership. If the owner of the motor home is traveling and is in excess of 100 miles from the selling dealer, or if the selling dealer has ceased to do business as an authorized Winnebago or Itasca dealer, the owner may obtain warranty repairs or replacement of such items at any authorized Winnebago Industries, Inc. (Winnebago or Itasca brands) dealership.

CARE AND MAINTENANCE

Under this warranty the owner must perform the care and maintenance duties discussed in the Owner's Manual which accompanied your motor home. Any damage which results to your motor home as a result of your failure to perform such duties, will not be covered by this warranty. The care and maintenance duties described in the Owner's Manual will be done at your expense.

The servicing dealer will perform any adjustment service required as the result of a manufacturing deficiency during the first 90 days of warranty coverage. Thereafter, adjustments will be considered owner maintenance responsibility.

INSTALLATION NOT COVERED

Winnebago Industries, Inc., cannot, however, and does not accept any responsibility in connection with any of its motor homes for additional equipment or accessories installed at any dealership or other place of business, or by any other party other than Winnebago Industries, Inc. Such installation of equipment or accessories by any other party will not be covered by the terms of this warranty.

IF REPAIRS ARE NEEDED

C. If a part of the system covered by this warranty fails to function or requires service during the warranty period:

1. Take the motor home to the selling dealer or other authorized Itasca or Winnebago Industries, Inc., dealer, as specified in Section B of this warranty, for repair.

2. If the dealer is incapable of making the repair, request that he contact Winnebago Industries, Inc., Owner Relations Department, for technical or parts assistance.

CUSTOMER RESPONSIBILITY

3. If, after the above steps are completed and the repair is not made, the customer should contact Winnebago Industries, Inc., P.O. Box 152, Forest City, Iowa 50436, Attention: Owner Relations Department, and furnish the following information:

CONTACTING WINNEBAGO SERVICE DEPARTMENT

- The complete serial number of the motor home
- Date of retail purchase
- Selling dealer's name
- Nature of the service problem, and a brief explanation of the steps or service the dealer has performed, and the results obtained. The customer may be directed to another dealer or service center for repairs to be completed, if such dealer or service center is better able to complete the repair.

4. If all attempts to repair the motor home at the dealer level fail to accomplish the repair, Winnebago Industries may request that the motor home be allowed to be brought back to Winnebago Industries, Inc., Customer Service Department at Forest City, Iowa, at Winnebago Industries' expense, to complete the repairs. In such event, Winnebago Industries, Inc., shall be allowed an additional thirty (30) days to perform its obligations under this warranty,

   If the customer refuses to allow the motor home to be brought back to Winnebago Industries, Inc., for such repairs, or refuses to go to the designated service center or dealer for repairs, the warranty on that repair will be voided.

5. If after the above steps are completed and the repairs are not completed, the customer can:
   - Contact the General Service and Parts Manager of Winnebago Industries and request a customer relations board meeting to resolve the problem. This action, however, is not mandatory.
   - This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. In the event of a problem with warranty service or performance, you may be able to go to a small claims court, a state court or a federal district court.

DEALER REPRESENTATION EXCLUDED

D. Winnebago Industries, Inc., does not undertake responsibility to any purchaser of its products for any undertaking, representation or warranty made by dealers selling its products beyond those herein expressed.

CONSEQUENTIAL DAMAGES

Without regard to the alleged defect, Winnebago Industries, Inc. under any circumstances, does not assume any responsibility for loss of time, inconvenience, or other consequential damage including expense for gasoline, telephone, travel, lodging, loss or damage to personal property, or loss of revenue. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

CHANGES IN DESIGN

Winnebago Industries, Inc., reserves the right to make changes in design and changes or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

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 a passenger to stand or kneel on the seats when 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.
- Avoid inhaling exhaust gases. They contain carbon monoxide, which by itself is odorless, colorless and poisonous.
- Use care when accelerating or downshifting on a slippery surface. Abrupt speed changes can cause skidding and loss of control.
- 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.
- Never allow the LP tank to be filled above the 80 percent level. Make sure the vehicle is level when filling the bunk tank so that it is not accidently overfilled. This can be controlled by ensuring the refilling attendent has knowledge on how to use the outage valve.
- All pilot lights and appliances must be turned off while refilling the fuel tank or LP tank.
- 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 see-through 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.
- 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.
- Never carry extra gasoline inside the motor home.
- 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.
- Only seats equipped with seat belts are to be occupied while the vehicle is in motion.
- 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 or LP gas in items such as the range, chassis engine, generator engine, refrigerator, furnace and hot water heater.
- Be aware of the GVWR, GAWR and individual load limit on each tire or set of duals. See "Loading the Motor Home" page 35

SPECIFICATIONS

All specifications in this manual were accurate 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.

Chassis:

Specifications pertaining to the vehicle engine and chassis are contained in the chassis manufacturer's owners manual. This information is provided with your owner's package and should be kept

available for ready reference. Since manufacturer's specifications are subject to change without notice, it is advised that you become familiar with the chassis specifications applicable to your particular model unit.

Vehicle Weight:

The frame and load carrying components of your vehicle have been designed to provide satisfactory service as long as the vehicle is not loaded in excess of the gross vehicle weight rating (GVWR) or the gross axle weight rating (GAWR) for the front and rear axles. These ratings are listed on the "Vehicle Certification" label, located on the drivers sidewall to the left of the dash on all A-body motor homes and on the cab body just above the left door striker on all C-body motor homes. Use this label for reference when loading the unit and then weigh the vehicle on scales to determine the actual weight. Since all weights are listed in the motor home owners manual are approximate only, it is recommended that the vehicle be weighed and the values recorded for future operational reference. The dry weight of the vehicle is defined as the standard unit with no fluid or passengers. The wet weight of the vehicle is defined as the standard unit with fuel, water, LP gas full, the holding tanks empty and 800 lbs. total for four passengers and luggage. Refer to the paragraphs entitled, "Loading the Motor Home" and "Weighing the Motor Home", to assist in conforming to the Gross Vehicle Weight Rating (GVWR) and the Gross Axle Weight Rating (GAWR - Front, GAWR - Rear). It is recommended that the vehicle be weighed periodically to assure continued conformance to the gross vehicle weight requirements.

Capacities:

The tank capacities are determined from physical dimensions and are approximate only. Refillable capacities, therefore, may differ slightly from model to model.

Tires:

Your motor home has been equipped with the proper size and load range tires, conforming to the GVWR of the vehicle and offering optimum operating ease and efficiency. The tire size and load range may vary depending on your particular model. It is recommended that you consult your chassis owners manual to obtain the applicable tire size and load range requirements. This information is also displayed on the "Vehicle Certification" label, located on the drivers sidewall to the left of the dash on all A-body motor homes and on the cab body just above the left door striker on all C-body motor homes.

Use care when replacing tires to assure that replacement tires are of the same size, construction, and load range rating as those originally installed. To assure proper vehicle performance and tire longivity, maintain the proper tire load limit inflation pressure. Refer to the paragraph entitled "Tires," for additional tire care and use information.

Specifications - Engine	350 cu. in.	360 cu. in.	400 cu. in.	440 cu. in.	454 cu. in.
No. Cylinders	8	8	8	8	8
Oil Filter	Full Flow Spin-On	Full Flow Spin-On	Full Flow Spin-On	Full Flow Spin-On	Full Flow Spin-On
Crankcase Capacity	4 qts.	6 qts.	4 qts.	6 qts.	6 qts.
Crankcase Capacity including filter	5 qts.	7 qts.	5 qts.	7 qts.	7 qts.
Transmission Fluid Capacity	19 pts.	19 pts.	20 pts.	19 pts.	19 pts.
Cooling System Capacity	16.9 qts.	21 qts.	20 qts.	23 qts.	21 qts.
Thermostat	195°	185°	195°	185°	195°
Firing Order		1-8-4-3-6-5-7-2			1-8-4-3-6-5-7-2
Spark Plug	AC R44-T	Champion F10	AC R44-T	Champion BL9Y	AC R44-T
Spark Plug Gap		.035"	.045"	.035"	.045"
Fuel	Un-Leaded	Regular	Unleaded	Regular	Unleaded
Brake Master Cylinder Fluid	DOT-3	DOT-3	DOT-3	DOT-3	DOT-3

* Refer to the chassis manufacturer's owners manual for additional specification information.

SPECIFICATIONS - WINNEBAGO MODELS WC419RB, WD419RB, WC420RG, and WD420RG

These specifications were accurate 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.

	WC419RB		WD419RB			
	Single rear wheel	Dual rear wheels	Single rear wheel	Dual rear wheels	WC420RG	WD420RG
Width - Body	83 3/4"	94 3/4"	83 3/4"	94 3/4"	95"	95"
Width - Bumper	81 1/2"	81 1/2"	81 1/2"	81 1/2"	93"	93"
Height - w/o Roof Air	9' 4 3/4"	9' 4 3/4"	9' 2 3/4"	9' 2 3/4"	9' 3"	9' 4"
Height - With Roof Air	9' 11 1/2"	9' 11 1/2"	9' 9 1/2"	9' 9 1/2"	10' 1"	10' 1"
Length - Bumper to Bumper	19' 5"	19' 5"	19' 7"	19' 7"	20' 8 1/2"	20' 6 3/4"
Approximate Dry Weight	6,300 lbs.	*	5,800 lbs.	*	7,500 lbs.	7,228 lbs.
Approximate Wet Weight	7,600 lbs.	*	7,200 lbs.	*	9,000 lbs.	8,500 lbs.
Interior Height	76"	76"	76"	76"	80"	80"
Interior Width (Widest Point)	80"	80"	80"	80"	91.5"	91.5"
Water System Capacity (Approx.)	26 gal.	26 gal.	26 gal.	26 gal.	28 gal.	28 gal.
Holding Tank Capacity - Sewage (Approximate)	26 gal.	26 gal.	26 gal.	26 gal.	12 gal.	12 gal.
Holding Tank Capacity - Waste Water (Approximate)	N.A.	N.A.	N.A.	N.A.	12 gal.	12 gal.
LP Gas Capcacity - Standard	42 lbs.	42 lbs.	42 lbs.	42 lbs.	42 lbs.	42 lbs.
LP Gas Capacity - Optional	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Water Heater Capacity	6 gal.	6 gal.	6 gal.	6 gal.	6 gal.	6 gal.
Sleeping Capacity - Standard**	4	4	4	4	5	5
Sleeping Capacity - Maximum**	4	4	4	4	6	6
Chassis Manufacturer	Chevrolet	Chevrolet	Dodge	Dodge	Chevrolet	Dodge
Model	CG31332	CG31332	MBL300	MBL300	G30	MBH400
Wheelbase	125"	125"	127.6"	127.6"	125"	127.6"
Axle Ratio	4:10	4:10	4:10	4:10	4:10	4:10
GVWR***	8,600 lbs.	8,900 lbs.	8,200 lbs.	8,300 lbs.	10,200 lbs.	10,500 lbs.
GAWR - Front***	***	***	***	***	***	***
GAWR - Rear***	***	***	***	***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.	200 lbs.	200 lbs.	200 lbs.	200 lbs.
Tire Size****	****	****	****	****	****	****
Tire Rating****	****	****	****	****	****	****
Engine	350 cu. in.	350 cu. in.	360 cu. in.	360 cu. in.	350 cu. in	360 cu. in.
Optional Engine	N.A.	N.A.	N.A.	N.A.	N.A.	360-3 cu. in.
Fuel Tank Capacity - (Approx.)	33 gal.	33 gal.	45 gal.	45 gal.	33 gal.	45 gal.

NOTE: California WD419RB's have a GVWR range different from above: check "Vehicle Certification" label.

* Not available at time of printing.

** Depends on the optional floor plan configuration.

*** Refer to the "Vehicle Certification" label for applicable weights (GVWR and GAWR) pertaining to the vehicle.

**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.

SPECIFICATIONS - WINNEBAGO MODELS WCF22RB, WCF26RT, WDF26RT, WCF26RH and WDF26RG

These specifications were accurate 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.

	WCF22RB	WCF26RT	WDF26RT	WCF26RH	WDF26RH
Width - Body	94.5"	94.5"	**94.5"**	**94.5"**	**94.5"**
Width - Bumper	95.0"	95.0"	95.0"	95.0"	95.0"
Height - w/o Roof Air	8' 10 1/2"	8' 10 1/2"	8' 10 1/2"	8' 10 1/2"	8' 10 1/2"
Height - With Roof Air	10' 3"	10' 3"	10' 3"	10' 3"	10' 3"
Length - Bumper to Bumper	22' 2 1/2"	25' 11"	25' 11"	26' 8"	26' 8"
Approximate Dry Weight	*	*	*	*	*
Approximate Wet Weight	*	*	*	*	*
Interior Height	77"	77.5"	77.5"	77.5"	77.5"
Interior Width (Widest Point)	91"	91"	91"	91"	91"
Water System Capacity (Approx.)	52 gal.	44 gal.	44 gal.	45 gal.	45 gal.
Holding Tank Capacity - Sewage (Approx.)	26 gal.	25 gal.	25 gal.	35 gal.	35 gal.
Holding Tank Capacity - Waste Water (Approx.)	25 gal.	19 gal.	19 gal.	20 gal.	20 gal.
LP Gas Capacity - Standard	42 lbs.	42 lbs.	42 lbs.	42 lbs.	42 lbs.
LP Gas Capacity - Optiona	80 lbs.	80 lbs.	80 lbs.	80 lbs.	80 lbs.
Water Heater Capacity	6 gal.	6 gal.	6 gal.	6 gal.	6 gal.
Sleeping Capacity - Standard **	3	4	4	4	4
Sleeping Capacity - Maximum **	4	6	6	5	5
Chassis Manufacturer	Chevrolet	Chevrolet	Dodge	Chevrolet	Dodge
Model	CP31132	CP31432	M400	CP31432	M400
Wheelbase	137"	158 1/2"	159"	158 1/2"	159"
Axle Ratio***	4:56	4:56	4:88	4:56	4:88
GVWR****	11,800 lbs.	12,300 lbs.	12,000 lbs.	12,300 lbs.	12,000 lbs.
GAWR - Front****	****	****	****	****	****
GAWR - Rear****	****	****	****	****	****
Maximum Hitch Load	200 lbs.	200 lbs.	200 lbs.	200 lbs.	200 lbs.
Tire Size	7.50 x 16	7.50 x 16	8 x 17.5	7.50 x 16	8 x 17.5
Tire Rating	D-8PR	D-8PR	D-8PR	D-8PR	D-8PR
Engine	350 cu. in.	350 cu. in.	360 cu. in.	350 cu. in.	360 cu. in.
Optional Engine	454 cu. in.	454 cu. in.	446 cu. in.	454 cu. in.	446 cu. in.
Fuel Tank Capacity (Approx.) M1*****	60.4 gal.	N.A.	75 gal.	N.A.	75 gal.
Fuel Tank Capacity (Approx.) M2*****	60.4 gal.	69.7 gal.	N.A.	69.7 gal.	N.A.

* Not available at time of printing.
** Depends on optional floor plan configuration.
*** Axle ratio is 4:10 on vehicles equipped with 454 cu. in. engines.
**** Refer to the "Vehicle Certification" label for the applicable weights (GVWR and GAWR) pertaining to the vehicle.
***** The approximate fuel tank capacity may be determined by the M1 or M2 designation contained within the vehicle indentification number (i.e., VIN F10F45M161664).

SPECIFICATIONS - WINNEBAGO MODELS WCN26RB, WDN26RB, WCN29RT and WDN29RT

These specifications were accurate 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.

	WCN26RB	WDN26RB	WCN29RT	WDN29RT
Width - Body	94.5"	94.5"	94.5"	94.5"
Width - Bumper	95"	95"	95"	95"
Height - w/o Roof Air	8' 11 1/2"	9' 1 1/2"	9'	9' 2 1/2"
Height - With Roof Air	10' 1"	10' 3"	10' 1 1/2"	10' 4"
Length - Bumper to Bumper	26' 5"	26' 5"	29' 11"	29' 11"
Approximate Dry Weight	*	*	*	*
Approximate Wet Weight	*	*	*	*
Interior Height	77.5"	77.5"	78.5"	78.5"
Interior Width (Widest Point)	91"	91"	91"	91"
Water System Capacity (Approx.)	45 gal.	52 gal.	71 gal.	71 gal.
Holding Tank Capacity - Sewage (Approx.)	35 gal.	35 gal.	40 gal.	40 gal.
Holding Tank Capacity - Waste Water (Approx.)	20 gal.	20 gal.	30 gal.	30 gal.
LP Gas Capacity - Standard	80 lbs.	80 lbs.	80 lbs.	80 lbs.
LP Gas Capacity - Optional	N.A.	N.A.	N.A.	N.A.
Water Heater Capacity	6 gal.	6 gal.	6 gal.	6 gal.
Sleeping Capacity - Standard**	4	4	5	5
Sleeping Capacity - Maximum**	5	5	6	6
Chassis Manufacturer	Chevrolet	Dodge	Chevrolet	Dodge
Model	CP31432	M400	CP31832	M500
Wheelbase	158 1/2"	159"	178"	178"
Axle Ratio	4:10	4:56	4:10	4:56
GVWR***	12,300 lbs.	12,000 lbs.	14,500 lbs.	14,500 lbs.
GAWR - Front ***	***	***	***	***
GAWR - Rear***	***	***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.	200 lbs.	200 lbs.
Tire Size****	****	****	****	****
Tire Rating****	****	****	****	****
Engine	454 cu. in.	440 cu. in.	454 cu. in.	440 cu. in.
Optional Engine	N.A.	N.A.	N.A.	N.A.
Fuel Tank Capacity (Approx.) - M1*****	N.A.	69.7 gal.	N.A.	69.7 gal.
Fuel Tank Capacity (Approx.) - M2*****	69.7 gal.	N.A.	69.7 gal.	N.A.

* Not available at time of printing.
** Depends on optional floor plan configuration.
*** Refer to the "Vehicle Certification" label for the applicable weights (GVWR and GAWR) pertaining to the vehicle.
**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.
***** The approximate fuel tank capacity may be determined by the M1 or M2 designation contained within the vehicle identification number (i.e., VIN F10N65M160664).

SPECIFICATIONS - WINNEBAGO MODELS WC621RB, WC723RB and WC723RH

These specifications were accurate 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.

	WC621RB	WC723RB	WC723RH
Width - Body	95"	91.3"	91.3"
Width - Bumper	93"	*	*
Height - w/o Roof Air	9' 4"	8' 8 1/2"	8' 8 1/2"
Height - With Roof Air	9' 10 3/4"	9' 7"	9' 7"
Length - Bumper to Bumper	21' 7 1/2"	22' 1"	22' 1"
Approximate Dry Weight	7,600 lbs.	(1)	(1)
Approximate Wet Weight	9,300 lbs.	*	*
Interior Height	77.5"	73"	73"
Interior Width (Widest Point)	92"	88"	88"
Water System Capacity (Approx.)	36 gal.	20 gal.	20 gal.
Holding Tank Capacity - Sewage (Approx.)	32 gal.	20 gal.	20 gal.
Holding Tank Capacity - Waste Water (Approx.)	23 gal.	N.A.	N.A.
LP Gas Capacity - Standard	42 lbs.	28 lbs.	28 lbs.
LP Gas Capacity - Optional	80 lbs.	80 lbs.	80 lbs.
Water Heater Capacity	6 gal.	4 1/2 gal. optional	4 1/2 gal. optional
Sleeping Capacity - Standard **	5	4	4
Sleeping Capacity - Maximum **	5	5	5
Chassis Manufacturer	Chevrolet	Chevrolet	Chevrolet
Model	P30/6U2	P20/601 (3)	P20/603 (3)
Wheelbase	133"	133"	133"
Axle Ratio	4:10	(2)	(2)
GVWR***	11,000 lbs.	(3)	(3)
GAWR - Front***	***	***	***
GAWR - Rear***	***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.	200 lbs.
Tire Size****	****	****	****
Tire Rating****	****	****	****
Engine	350 cu. in.	350 cu. in.	350 cu. in.
Optional Engine	N.A.	N.A.	N.A.
Fuel Tank Capacity (Approx.)	40 gal.	(4)	(4)

* Not available at time of printing.
** Depends on optional floor plan configuration.
*** Refer to the "Vehicle Certification" label for applicable weights (GVWR and GAWR) pertaining to the vehicle.
**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.
(1) 5492 lbs. with standard 7200 lb. GVWR chassis
5576 lbs. with optional 8600 lb. GVWR chassis
(2) 3:23 on standard 7200 lb. GVWR chassis
3:73 on optional 8600 lb. GVWR chassis
(3) 7200 lb. GVWR chassis is optional
8600 lb. GVWR chassis is optional
(4) 25 gal. on standard 7200 lb. GVWR chassis
40 gal. on optional 8600 lb. GVWR chassis.

SPECIFICATIONS - ITASCA MODELS IC419RB and ID419RB

These specifications were accurate 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.

	IC419RB	
	Single rear wheel	**Dual rear wheels**
Width - Body	83 3/4"	94 3/4"
Width - Bumper (Rear)	81 1/2"	81 1/2"
Height - w/o Roof Air	9' 4 3/4"	9' 4 3/4"
Height - With Roof Air	9' 11 1/2"	9' 11 1/2"
Length - Bumper to Bumper	19' 5"	19' 5"
Approximate Dry Weight	6,300 lbs.	*
Approximate Wet Weight	7,600 lbs.	*
Interior Height	76"	76"
Interior Width (Widest Point)	80"	80"
Water System Capacity (Approx.)	26 gal.	26 gal.
Holding Tank Capacity - Sewage/Waste Water Comb. (Approx.)	26 gal.	26 gal.
LP Gas Capacity - Standard	42 lbs.	42 lbs.
LP Gas Capacity - Optional	N.A.	N.A.
Water Heater Capacity	6 gal.	6 gal.
Sleeping Capacity - Standard	4	4
Sleeping Capacity - Maximum **	4	4
Chassis Manufacturer	Chevrolet	Chevrolet
Model	CG31332	CG31332
Wheelbase	125"	125"
Axle Radio	4:10	4:10
GVWR***	8600 lbs.	8900 lbs.
GAWR - Front ***	***	***
GAWR - Rear***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.
Tire Size****	****	****
Tire Rating****	****	****
Engine	350 cu. in.	350 cu. in.
Optional Engine	N.A.	N.A.
Fuel Tank Capacity - (Approx.)	33 gal.	33 gal.

* Not available at time of printing.
** Depends on the optional floor plan configuration.
*** Refer to the "Vehicle Certification" label for applicable weights (GVWR and GAWR) pertaining to the vehicle.
**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.

SPECIFICATIONS - ITASCA MODELS ICF22RB, ICF26RT and ICF26RH

These specifications were accurate 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.

	ICF22RB	ICF26RT	ICF26RH
Width - Body	94.5"	94.5"	94.5"
Width - Bumper	95"	95"	95"
Height - w/o Roof Air	110.00"	110.00"	110.00"
Height - With Roof Air	122.75"	122.75"	122.75"
Length - Bumper to Bumper	22' 2 1/2"	25' 11"	26' 8"
Approximate Dry Weight	*	*	*
Approximate Wet Weight	*	*	*
Interior Height	77.75"	77.50"	77.50"
Interior Width (Widest Point)	91"	91"	91"
Water System Capacity (Approx.)	52 gal.	44 gal.	44 gal.
Holding Tank Capacity - Sewage (Approx.)	26 gal.	25 gal.	25 gal.
Holding Tank Capacity - Waste Water (Approx.)	25 gal.	19 gal.	19 gal.
LP Gas Capacity - Standard	42 lbs.	42 lbs.	42 lbs.
LP Gas Capacity - Optional	80 lbs.	80 lbs.	80 lbs.
Water Heater Capacity	6 gal.	6 gal.	6 gal.
Sleeping Capacity - Standard	3	4	4
Sleeping Capacity - Maximum	**	6	5
Chassis Manufacturer	Chevrolet	Chevrolet	Chevrolet
Model	CP31132	CP31432	CP31432
Wheelbase	137"	158 1/2"	158 1/2"
Axle Radio *****	4:56	4:56	4:56
GVWR***	11,800 lbs.	12,300 lbs.	12,300 lbs.
GAWR - Front***	***	***	***
GAWR - Rear***	***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.	200 lbs.
Tire Size****	****	****	****
Tire Rating****	****	****	****
Engine	350 cu. in.	350 cu. in.	350 cu. in.
Optional Engine	454 cu. in.	454 cu. in.	454 cu. in.
Fuel Tank Capacity	60 gal.	69.7 gal.	69.7 gal.

* Not available at time of printing.
** Depends on the optional floor plan configuration.
*** Refer to the "Vehicle Certification" label for applicable weights (GVWR and GAWR) pertaining to the vehicle.
**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.
***** Axle ratio 4:40 when equipped with the 454 cu. in. engine.

SPECIFICATIONS - ITASCA MODELS ICN26RB and ICN29RT

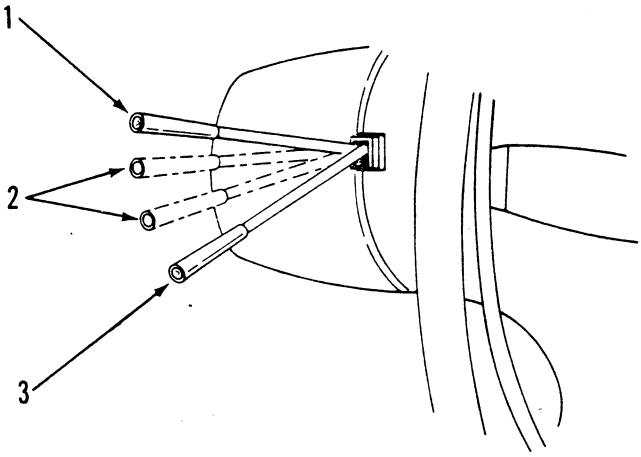
These specifications were accurate at the time of printing. We reserve the right to change specifications or design without notice and without incurring obligation to install the same on products previously manufactured.

	ICN26RB	ICN29RT
Width - Body	94.5"	**94.5"**
Width - Bumper	95"	95"
Height - w/o Roof Air	9'	9'
Height - With Roof Air	10' 1"	10' 1 1/2"
Length - Bumper to Bumper	26.5"	29.11"
Approximate Dry Weight	*	*
Approximate Wet Weight	*	*
Interior Height	77.5"	78.5"
Interior Width (Widest Point)	7' 7"	7' 7"
Water System Capacity (Approximate)	45 gal.	71 gal.
Holding Tank Capacity - Sewage (Approx.)	32 gal.	40 gal.
Holding Tank Capacity - Waste Water (Approx.)	25 gal.	30 gal.
LP Gas Capacity - Standard	80 lbs.	80 lbs.
LP Gas Capacity - Optional	N.A.	N.A.
Water Heater Capacity	6 gal.	6 gal.
Sleeping Capacity - Standard**	4	5
Sleeping Capacity - Maximum**	5	6
Chassis Manufacturer	Chevrolet	Chevrolet
Model	CP31432	CP31832
Wheelbase	158 1/2"	178"
Axle Ratio	4:10	4:10
GVWR***	12,300 lbs.	14,500 lbs.
GAWR - Front***	***	***
GAWR - Rear***	***	***
Maximum Hitch Load	200 lbs.	200 lbs.
Tire Size****	****	****
Tire Rating****	****	****
Engine	454 cu. in.	454 cu. in.
Optional Engine	N.A.	N.A.
Fuel Tank Capacity	69.7 gal.	69.7 gal.

* Not available at time of printing.
** Depends on the optional floor plan configuration.
*** Refer to the "Vehicle Certification" label for applicable weights (GVWR and GAWR) pertaining to the vehicle.
**** Refer to the "Vehicle Certification" label for tire size and inflation pressure.

Lane Change - The first position up or down may be used for changing lanes or when making a gradual turn. The lever must be held in the lane change position; it will return to the neutral position when released.

Full Turn - The fully engaged or second position, up or down, is for use when making a normal turn. The turn signal will automatically cancel when the turn is completed.

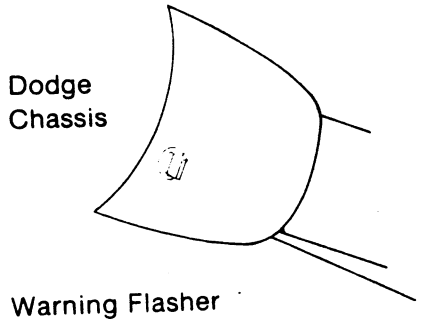


TURN SIGNAL LEVER

1. Right Turn
2. Lane Change Positions
3. Left Turn

IMPORTANT

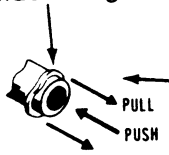
When the turn indicator lights on the instrument panel do not light, it is an indication that the turn signals are not flashing. The probable cause is a burned out bulb, but until the bulb can be replaced or the system serviced the appropriate hand signals should be used.



Dodge Chassis

Slider Ring

Warning Flasher



Chevrolet and GMC Chassis

HAZARD WARNING FLASHER

The hazard warning flasher provides additional safety when the vehicle must be stopped on the side of the roadway and presents a possible hazard to other motorists. When the flasher is on, it serves as a warning to other drivers to approach and overtake your vehicle with caution.

WARNING

Operating the hazard warning flasher system while moving on the highway is prohibited by law.

The front directional signals and the taillights will flash intermittently. Turn signals will not operate when the flashers are on. When it is necessary to leave the vehicle, the flasher system will continue to operate with the ignition key removed.

OPERATION (Dodge Chassis)

The hazard warning flasher switch is located on the right side of the steering column. To operate the flasher, pull the button out and push the button in to cancel.

OPERATION (Chevrolet and GMC Chassis)

The hazard warning flasher switch is located on the right side of the steering column. To operate the flasher push the hazard warning flasher button in to start the flasher and pull the button or slider ring (if so equipped) out to cancel. (See illustration.)

CRUISE CONTROL (Optional on some models)

The cruise control decreases the amount of strain on the driver from constant and steady highway driving. However, the comfort and convenience of the cruise control feature should not substitute for periodic rest stops which allow the driver and passengers to relax.

IMPORTANT

The cruise control system will not function below 30 miles per hour.

WARNING

The use of the cruise control is not recommended on icy or wet roads or in congested traffic.

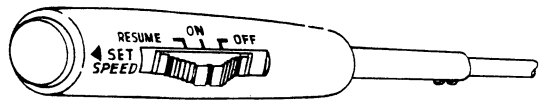
To Activate Cruise Control - Slide switch from "Off" to "On" (located on turn signal lever).

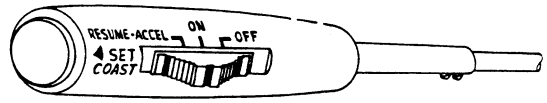
To Engage Cruise Control - Accelerate to desired speed, maintain, depress "Set Speed" button (located in the end of the engagement switch), and slowly release. You may also engage the cruise control by moving the slide switch to "Resume" and releasing. As soon as the speed has been set by either method, you may remove your foot from the accelerator pedal and the speed will automatically be maintained to within two miles per hour of the set speed.

To Disengage Cruise Control - The cruise control system can be disengaged by stepping on the brake, either when stopping or by lightly depressing the brake pedal while driving, returning the slide switch to the "Off" position, or by turning the ignition switch off.

To Increase Vehicle Speed - Speed can be increased at any time with normal pressure on the accelerator pedal. When the accelerator pedal is released, the vehicle will return to the previously set speed.

To Resume Previously Set Speed - When the system is engaged and the brakes have been applied, the previously set speed can be resumed by sliding the switch to "Resume" momentarily and releasing.





CRUISE CONTROL

NOTE: The greater the difference between the previously set speed and the speed at which you engage "Resume", the faster the vehicle will accelerate. Rapid acceleration can be eliminated by accelerating with the gas pedal to within ten miles per hour of the former set speed and then engaging the resume switch.

IMPORTANT

The resume feature will not operate if the slide switch has been moved to "Off" to disengage the system or if the ignition switch has been turned off.

POWER BRAKES

Your motor home is equipped with power brakes to make stopping easier and smoother.

Two types of brake systems are used on Winnebago and Itasca motor homes:

Vacuum Booster Assist (C-Body) - This type of brake system receives booster power from engine vacuum and is controlled and actuated by the brake master cylinder. In this way the booster only supplements manual operation to make brake application easier. Should the vacuum boost fail or the engine stall, booster assist will remain until the amount of stored vacuum is depleted. Then, the vehicle must be stopped manually be applying a greater amount of force to the pedal.

Power Assist (A-Body) - The braking system on these vehicles is combined with the power steering system which in turn provides power assist to the brakes (hydroboost). However, the fluids in each system are separate. Therefore, DO NOT add hydroboost power steering fluid to the brake master cylinder, or brake fluid to the power steering reservoir. If power assist to the brakes is interrupted due to a stalled engine or a system malfunction, reserve power assist is still available for stopping the vehicle. When reserve power assist is exhausted, the motor home can be stopped manually by applying a greater amount of force to the pedal.

Both types of brakes are designed to bring the vehicle to a stop under booster or power assist during a brake failure, when the brake pedal is held down continuously. However, both the power assist and the booster assist are partially depleted each time the brake pedal is applied and released. Do not pump the brake when stopping in this manner, except when necessary to maintain steering control on slippery surfaces.

WARNING

Driving through water deep enough to wet the brakes can affect braking performance and cause the vehicle to pull to either side when the brakes are applied.

AUTOMATIC BRAKE ADJUSTMENT

All individual wheel brakes, with the exception of the parking brake, are self adjusting. The rear wheel drum brake adjustment is made each time the brakes are applied while the vehicle is moving

backwards. Front wheel disk brakes are adjusted automatically each time the brakes are applied.

Should excess brake pedal travel develop, drive alternately in forward and reverse several times and apply the brakes firmly while moving in each direction. See your dealer if this procedure does not restore normal pedal travel.

PARKING BRAKE (C-Body Motor Homes)

The parking brake pedal and release are mounted under the instrument panel to the left of the steering column. To set the parking brake, hold the service brake with your right foot while firmly depressing the parking brake pedal with the left foot. The harder the pedal is pushed, the greater the degree of brake application. To release the parking brake, apply the service brake and pull out on the parking brake release handle, located directly above the parking brake pedal.

PARKING BRAKE (A-Body Motor Homes)

The parking brake control is mounted under the instrument panel to the left of the steering column. The amount of force required to apply the parking brake can be adjusted by turning the adjustment knob on the upper end of the parking brake control lever. This will also adjust the degree of brake application.

Winnebago and Itasca motor homes incorporate two parking brake systems, depending on the motor home model and the chassis on which it was manufactured.

ALL A-BODY MOTOR HOMES (except WDN29RT, WCN29RT and ICN29RT)

To set the parking brake, depress the service brake pedal while pulling the parking brake lever back past the over center position.

Applying pressure to the service brake pedal will allow the parking brake control lever to exert a greater force on the rear wheel brake drum, thereby rendering the rear wheels immobile.

To release, apply the service brake and push the parking brake lever forward.

WCN29RT, WDN29RT, and ICN29RT ONLY

To set the parking brake, depress the service brake pedal to hold the vehicle in a stationary position only. Pull the parking brake lever back past the over center position to activate the prop shaft brake system. This will prohibit drive shaft movement, there-by rendering the vehicle imobile.

To release, apply the service brake and push the parking brake lever forward.

IMPORTANT

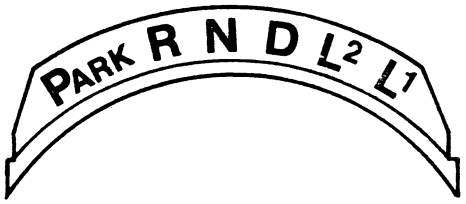
The parking brake should be set before moving the transmission selector lever to the "Park" position whenever leaving the drivers seat. If this procedure is not adhered to, the weight of the vehicle may exert enough force on the parking pawl within the transmission to cause difficulty when attempting to move the selector lever out of the "Park" position.

CAUTION Never drive the vehicle with the parking brake set. Overheating or damage to the rear brakes could occur.

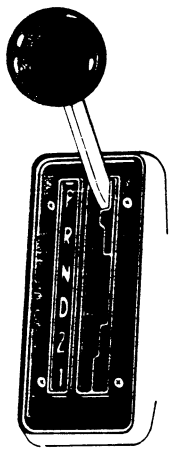
HIGH BEAM INDICATOR LIGHT SWITCH

The foot operated dimmer switch, located on the floor to the left of the brake pedal, is used to change the headlight beams from high to low, or vice versa. Each time the switch is depressed, the beam changes. The high beam indicator light on the face of the speedometer is lighted when the headlights are on high beam.

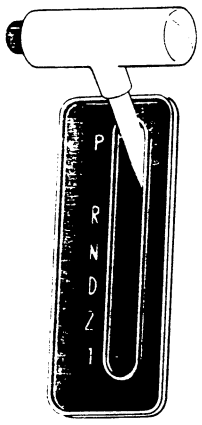
The headlight circuit on your motor home is protected by a circuit breaker in the light switch. An overload on the breaker will cause the lights to flicker on and off. If this condition develops, have the headlight wiring checked immediately.



TRANSMISSION SHIFT LEVER
A-Body Motor Homes
(Chevrolet Chassis)
IC419RB, IC420RG, WC419RB and WC420RG C-Bodies



TRANSMISSION SHIFT LEVER
A-Body Motor Homes
(Dodge Chassis)



TRANSMISSIONS SHIFT LEVER
WC621RB, IC621RB, WC723RB, WC723RH, IC723RB, and IC723RH

TRANSMISSION SHIFT LEVER
C-Body Motor Homes
(Dodge Chassis)

AUTOMATIC TRANSMISSION

An automatic transmission is provided as standard equipment on your motor home. The gear selector lever will be located in one of two positions, depending on your motor home model; on the dash to the left of the steering column or on the steering column.

The selector lever should remain in "Park" position when the vehicle is parked. For driving, a choice of Reverse, Drive, Drive 1 and Drive 2 is available. A neutral position can be used when the vehicle is stopped temporarily, such as at a stop light.

For further information on gear selection for various driving conditions, refer to "Gear Selection", pg. 37

INSTRUMENT PANEL

HEADLIGHT SWITCH

The three position light switch controls the instrument lamps, headlights, marker lights, parking lights, taillights, tag light and interior lights. When the switch is pulled out to the first position, all lights with the exception of the interior lights and the headlights come on. Pulling the switch all the way out to the second position turns on the headlights; however, all lights remain on as well.

WARNING Do not use park lights when vehicle is in motion. Parking lights denote a parked vehicle.

Instrument light intensity can be varied by turning the light switch knob clockwise or counterclockwise. Full counterclockwise rotation will turn on an interior light to illuminate the driver's compartment. The back-up lights operate only when the transmission is in reverse.

WINDSHIELD WASHER AND WIPER (C-Body)

The two speed electric wipers are controlled by a switch located to the left of the steering column. Moving the switch to the first position operates the wipers at high speed. Pushing the lever to the right at any position, including "O" operates the washer and directs water onto the windshield as long as the switch is held there.

WINDSHIELD WASHER AND WIPER (A-Body)

On motor homes manufactured on Dodge chassis, the individual right and left side, two speed windshield wipers, are controlled by two rocker switches located on the right side of the instrument panel. On motor homes manufactured on Chevrolet or GMC chassis, this switch is located on the left side of the instrument panel. 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 on the right of the two wiper switches, operates the windshield washer. With the switch held against the spring loaded side, washer solvent/water is directed onto the windshield.

NOTE: During winter months, a windshield washer anti-freeze solution is recommended.

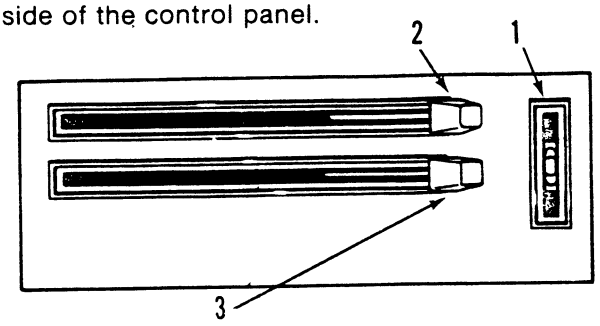
HEATER AND AIR CONDITIONER CONTROLS (All C-Body Motorhomes)

Heater

To provide heat to the driver's compartment, slide the selector control to the "Heater" position, adjust temperature control lever as required to give the desired amount of heat and move vertical fan switch up for the desired fan speed. Moving the temperature control all the way to the right

provides maximum heat. The fan switch provides three speeds in addition to the off position. Moving the switch to the full upward position provides maximum air flow through the heater.

On motor homes manufactured on Chevrolet or GMC chassis, the fan switch is located on the left side of the control panel.



HEATER CONTROLS

1. Fan Switch
2. Temperature Control Lever
3. Selector Lever

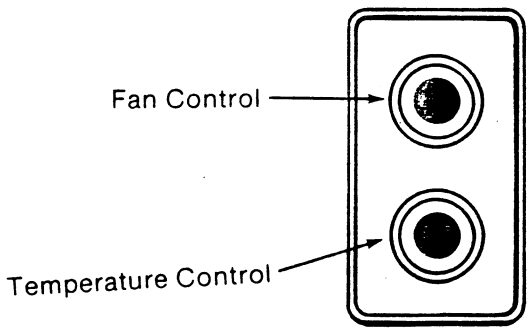
Moving the selector lever to the full right or "Def" position directs the warm air through the defroster vents to defrost or defog the windshield. You can regulate the distribution of warm air between the defroster and heater by positioning the selector lever between "Heater" and "Def".

Automotive Air Conditioner (C-Body)

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

IMPORTANT

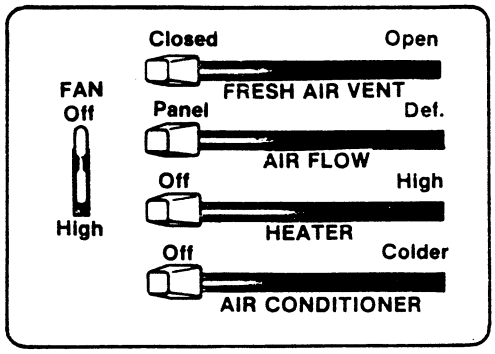
The automotive air conditioner was not designed to cool the entire interior of the motor home, but is meant to cool only the driver's compartment.



HEATER AND AIR CONDITIONER CONTROLS

Heater and Air Conditioner Controls (All A-Body Motorhomes)

Control levers for fresh air vent, heater and air conditioner are all on a single control panel. Refer to the instructions below for the use of the individual controls:



Fresh Air Vent Control - To provide outside air to the interior of the motor home, move the fresh air vent lever full right to the "Open" position. This will allow fresh air to flow into the motor home through the heater vents. The vent is closed when the control lever is in the full left position.

Heating - To heat the driver's compartment, move the air flow selector lever to "Panel" (heat) and the "Heater" lever to "High". Set the "fan" lever to the desired speed and as the interior warms, adjust the "heater" lever to the left to obtain a comfortable temperature. Make sure air conditioner control lever is in the "Off" position when using the heater.

Defrosting and/or Defogging - Move the "Heater" lever to high and the "Air Flow" lever to "Defrost" position. Set the "Fan" lever to the desired fan speed for air flow to the windshield. You can regulate the distribution of warm air between the defroster and the heater by positioning the air flow selector lever between "Panel" and "Def".

Automotive Air Conditioner (Optional) - To cool the driver's compartment, move "Air Conditioner" lever to the right to obtain a comfortable cooling temperature. Then set the "Fan" lever to the desired fan speed. A colder air temperature is obtained by moving the control further to the right. Maximum cooling is obtained with the "Air Conditioner" lever full right and the fan set on high speed. Make sure heater control lever is in the "Off" position when using the air conditioner.

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.

BATTERY CONDITION METER AND SWITCH (Optional on Some Models)

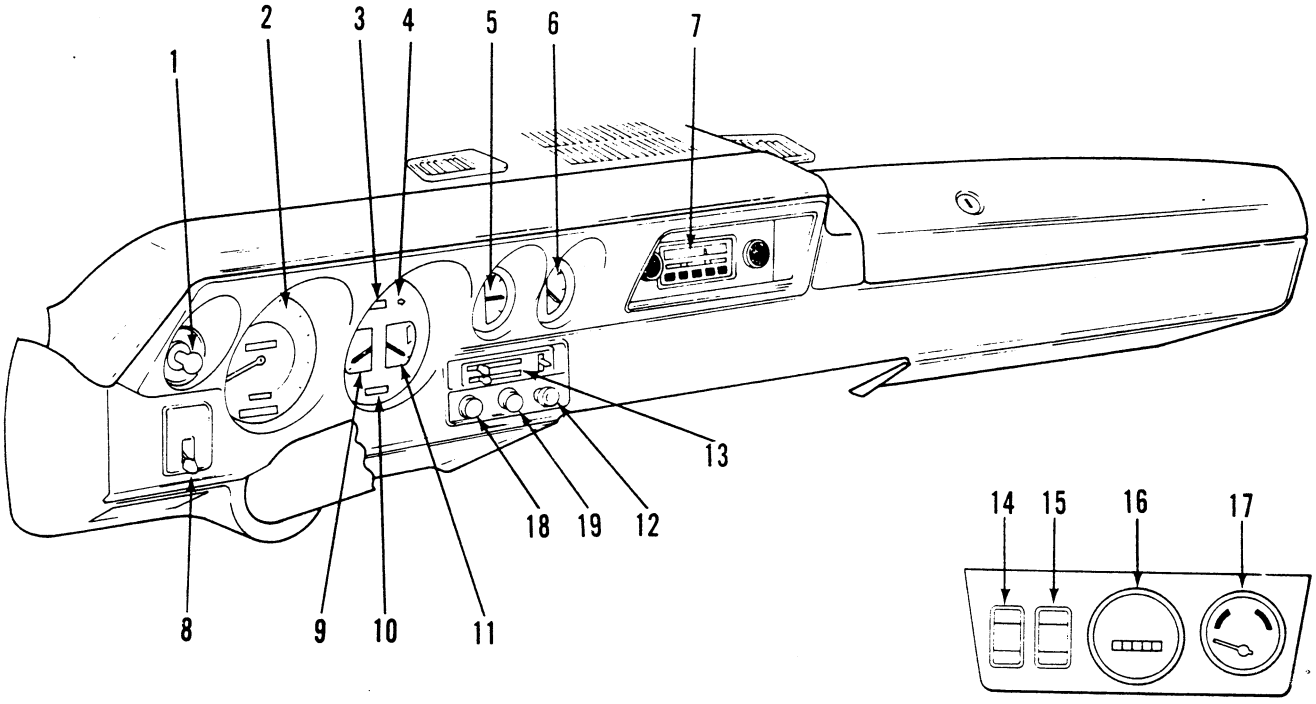
This gauge is a voltmeter which allows the driver to monitor the state of charge in all storage batteries in the motor home. The gauge will indicate the state of charge of the automotive battery when the left side of the switch is depressed or the charge in the auxiliary battery when the right side of the switch is depressed. To obtain an accurate reading, the 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

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

This start/stop switch controls the 110V auxiliary generator. It allows the generator set to be started without leaving the motor home and while the vehicle is in motion.

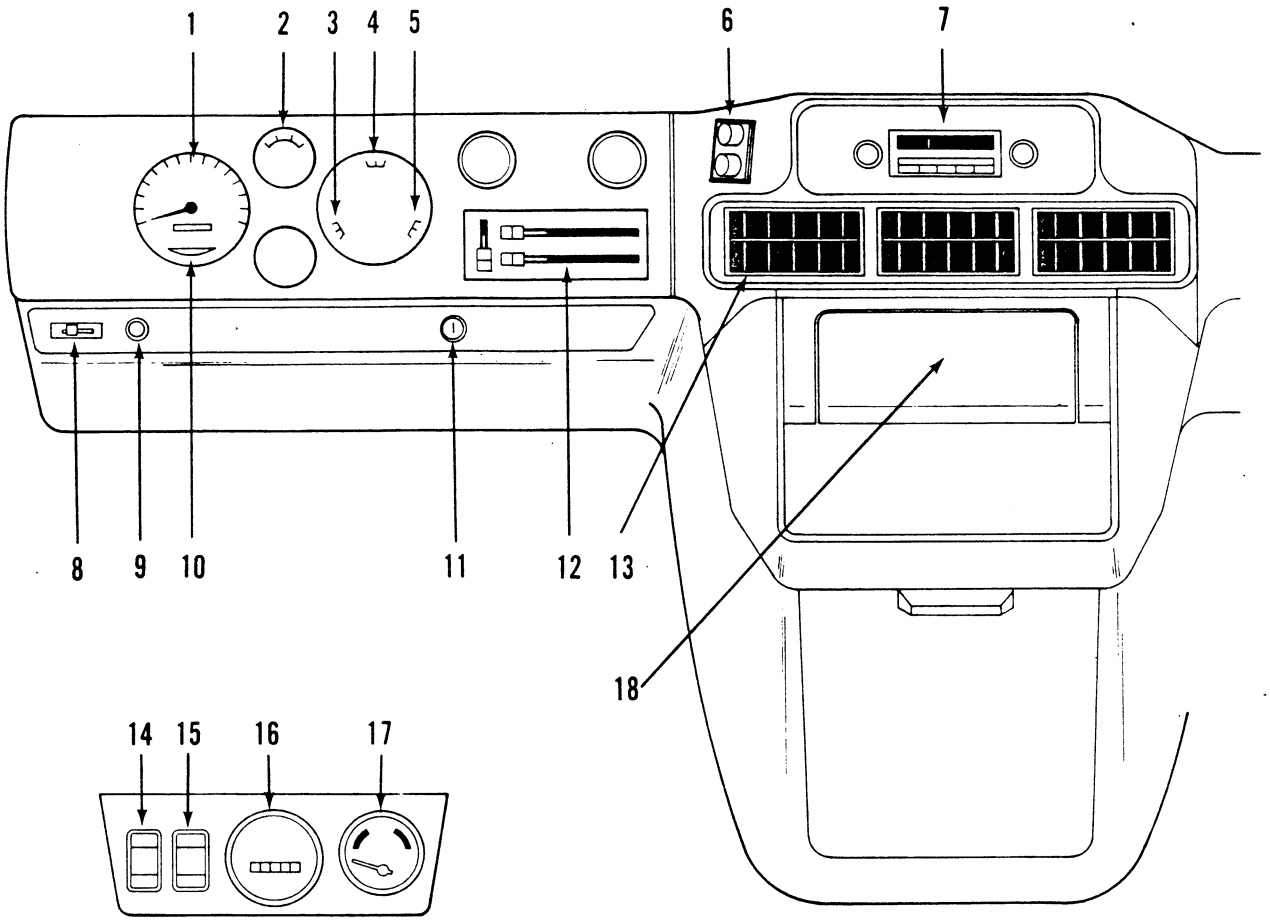
AUXILIARY GENERATOR HOURMETER (On Motor Homes with 110V Generator Option)

This meter registers the number of hours the auxiliary generator has operated. Use it as a reminder of when the generator unit is due for periodic lubrication and routine maintenance. This meter as well as the generator switch is located on an overhead console on C-Body motor homes.



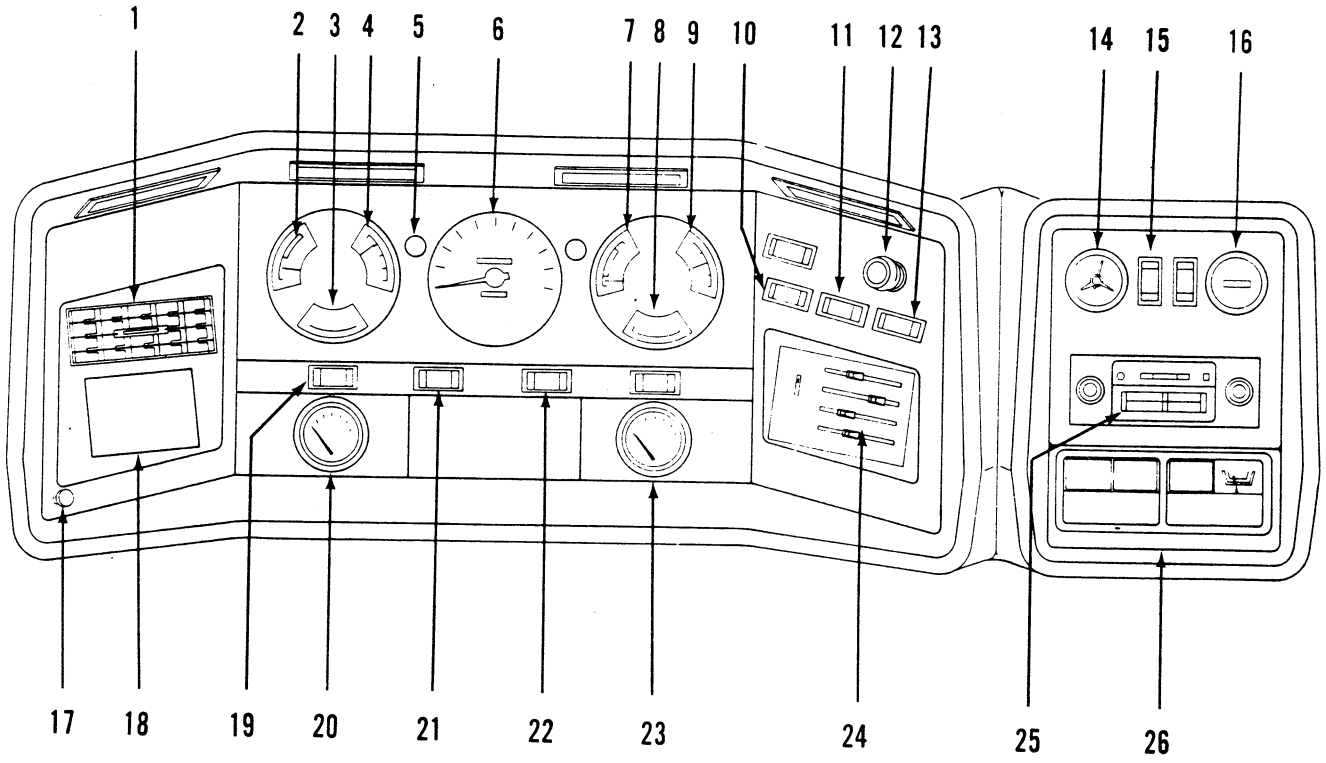
INSTRUMENT PANEL
C-Body (Dodge Chassis)

1. Headlight Switch
2. Speedometer
3. High Beam Indicator Light
4. Turn Signal Indicator Light
5. Ammeter Gauge
6. Oil Pressure Gauge
7. Radio
8. Windshield Washer/Wiper Switch
9. Fuel Gauge
10. Brake Warning Light
11. Temperature Gauge
12. Cigarette Lighter
13. Heater Controls
14. Battery Condition Switch (Optional).
15. 110 Volt Generator Start/Stop Switch (If so equipped)
16. 110 Volt Generator Hourmeter (If so equipped)
17. Battery Condition Meter (Optional)
18. Temperature Control (If so equipped)
19. A/C Fan Control (If so equipped)



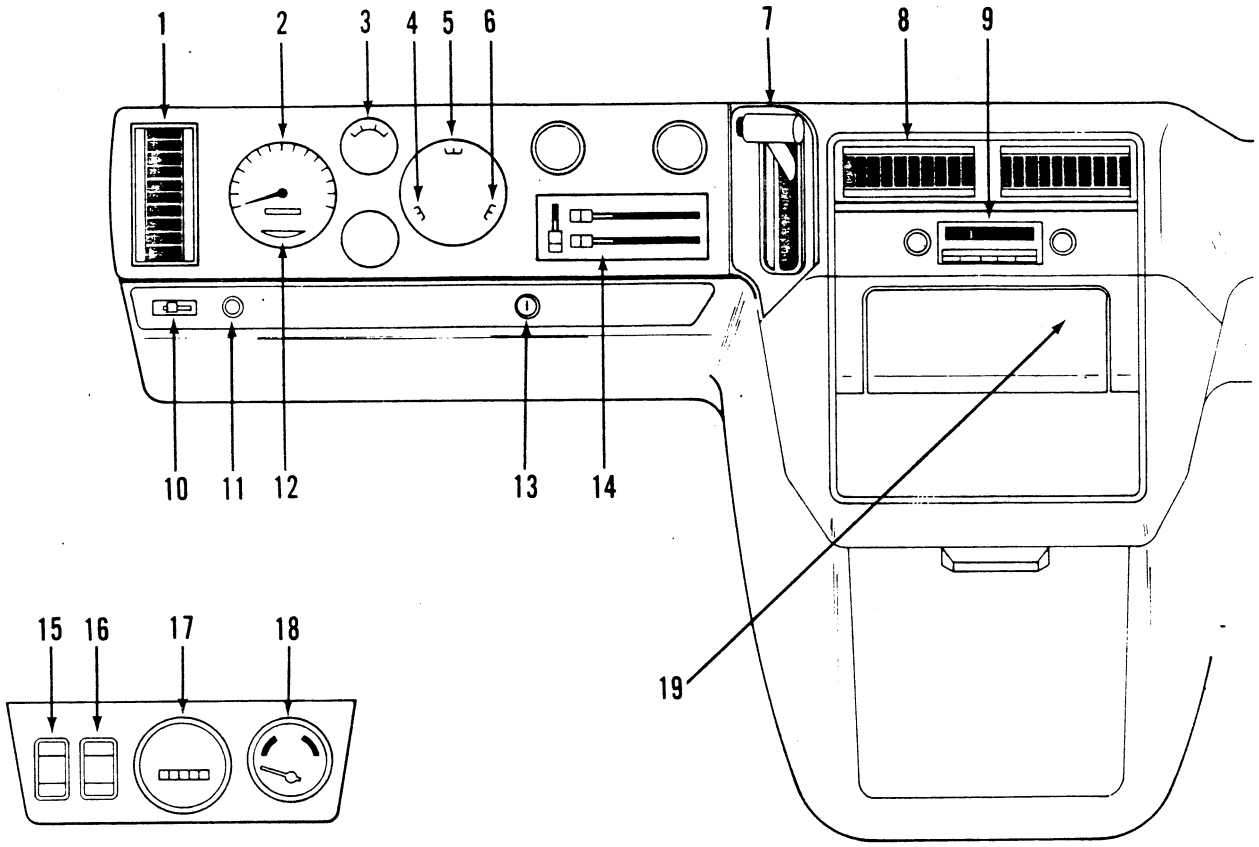
INSTRUMENT PANEL
C-Body (Chevrolet Chassis)

1. Speedometer
2. Fuel Gauge
3. Oil Pressure Gauge
4. Temperature Gauge
5. Voltmeter (Alternator Indicator)
6. Air Conditioner Control (Optional)
7. Radio
8. Windshield Washer/Wiper Switch
9. Headlight Switch
10. Brake Warning Light
11. Ignition Switch
12. Heater Controls
13. Air Conditioner Vents (If so equipped)
14. Battery Condition Switch (Optional)
15. 110-Volt Generator Start/Stop Switch (If so equipped)
16. 110-Volt Hourmeter (If so equipped)
17. Battery Condition Meter (Optional)
18. Cigarette Lighter



INSTRUMENT PANEL
A-Body Motor Homes
(Dodge Chassis)

1. Air Conditioner Vent
2. Oil Pressure Gauge
3. Transmission Level Check Light
4. Fuel Gauge
5. Left Turn Indicator Light
6. Speedometer
7. Right Turn Indicator Light
8. Temperature Gauge
9. Brake Warning Light
10. Ammeter Gauge
11. Windshield Wiper Switch (Left/Right
12. Cigarette Lighter
13. Windshield Washer Switch
14. Clock
15. 110-Volt Generator Start/Stop Switch (If so equipped)
16. 110-Volt Generator Hourmeter
17. Headlight Switch
18. Warning Light Panel
19. Fuel Selector Switch
20. Battery Condition Meter
21. Battery Condition Switch
22. Dual Battery Switch
23. Vacuum Gauge
24. Heater/Air Conditioner Controls
25. Radio
26. Vehicle Sensor Panel

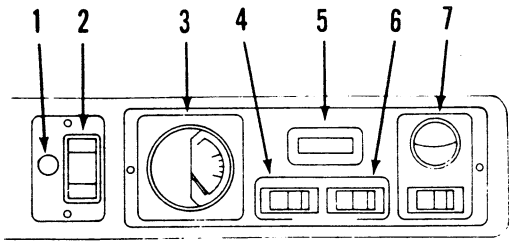


OVERHEAD PANEL

INSTRUMENT PANEL

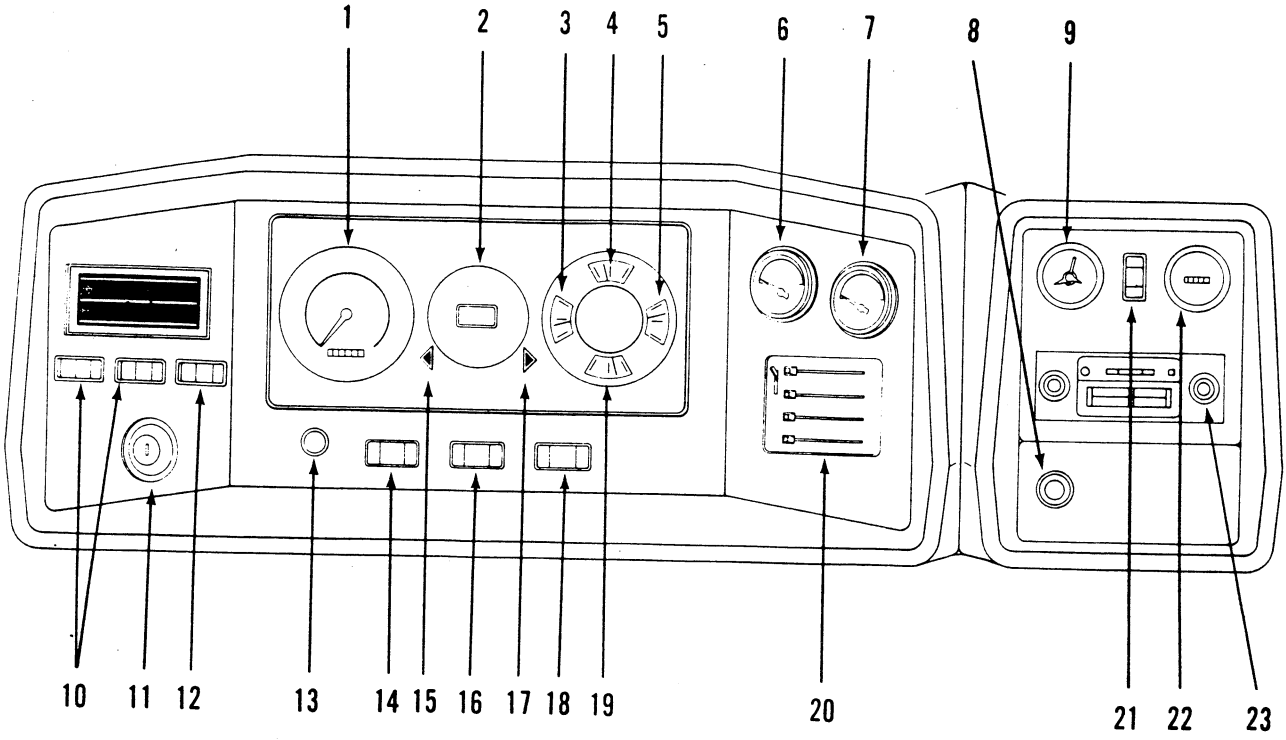
WC621RB, WC723RB, WC723RH, IC621RB, IC723RB, and IC723RH

1. Air Conditioner Vent (If so equipped)
2. Speedometer
3. Fuel Gauge
4. Oil Pressure Gauge
5. Temperature Gauge
6. Voltmeter (Alternator Indicator)
7. Transmission Selector Lever
8. Air Conditioner Vents
9. Radio
10. Windshield Washer/Wiper Switch
11. Headlight Switch
12. Brake Warning Light
13. Ignition Switch
14. Heater/Air Conditioner Controls
15. Battery Condition Switch (Optional)
16. 110-Volt Generator Start/Stop Switch (If so equipped)
17. 110-Volt Generator Hourmeter (If so equipped)
18. Battery Condition Meter (Optional)
19. Cigarette Lighter



TRAVEL CENTER

1. Dual Battery Circuit Fuse
2. Dual Battery Switch
3. Voltage Gauge
4. Digital Clock Switch
5. Digital Clock
6. Digital Clock Set Switch
7. Map Light



INSTRUMENT PANEL
A-Body Motor Homes
(Chevrolet and GMC Chassis)

1. Speedometer
2. Brake Warning Light
3. Voltmeter
4. Fuel Gauge
5. Oil Pressure Gauge
6. Vacuum Gauge
7. Battery Condition Meter
8. Cigarette Lighter
9. Clock
10. Windshield Wiper Switch (Left and Right)
11. Ignition Switch
12. Windshield Washer Switch
13. Headlight Switch
14. Fuel Tank Selector Switch
15. Left Turn Indicator Switch
16. Battery Condition Switch
17. Right Turn Indicator Light
18. Dual Battery Switch
19. Temperature Gauge
20. Heater/Air Conditioner Controls (A.C. is optional)
21. 110-Volt Generator Start/Stop Switch (If so equipped)
22. 110-Volt Hourmeter (If so equipped)
23. Radio

BRAKE WARNING LIGHT

The service brake system in your motor home is a dual system which provides a reserve braking capability if either part of the system fails. Failure of either half of the dual system is indicated by the brake system warning light, which will glow and remain lit until the brake system failure is corrected. The light is connected to the ignition switch and should glow during engine starting to verify that the bulb is operating properly. The light will then go off when the engine starts unless a brake failure is evident.

IMPORTANT

This warning light is not to be used as a substitute for a visual check of the brake fluid level, required as part of normal maintenance.

WARNING

If brake failure is indicated, immediate repair service is necessary. Continued operation of the vehicle in this condition is dangerous.

SPEEDOMETER

The speedometer needle indicates the vehicle's forward speed in miles per hour and kilometers per hour. The six-figure odometer located in the lower center section of the speedometer indicates the accumulated mileage, or on Canadian units, the accumulated kilometers figure.The odometer should be used as a reminder of when the vehicle is due for periodic lubrication and routine maintenance.

CIGARETTE LIGHTER

To use the cigarette lighter, simply push and release the knob. As soon as the element is hot, the knob will "POP" out part way.

CLOCK (Optional)

The optional electric clock operates from the automotive battery. Adjust the clock for proper time by pulling out and turning the reset knob.

OIL PRESSURE GAUGE

The oil pressure gauge indicates the pressure at which oil is being delivered to the various parts of the engine. Upon starting the engine, the pointer should move to the normal range of the gauge. However, higher or lower readings may be indicated because of variable operating conditions such as outside air temperature and weight of oil being used. If the pointer drops below the normal range while the engine is running, it is an indication of a loss of pressure and the motor home should be stopped as soon as possibile and the engine shut off.

Check the oil level in the engine and add oil when necessary. The oil pressure gauge should not be used as a indicator of the engine oil level. Several factors could cause loss of oil pressure even though the oil level is normal. Do not operate the engine when the gauge pointer is below the normal operating band. Operating without oil pressure can quickly destroy the engine bearings and other engine parts.

TEMPERATURE GAUGE

This gauge indicates the engine coolant temperature. As the engine becomes warm, the pointer will move to the normal range of the gauge. Coolant temperature and, therefore, gauge readings, may vary depending on weather and traffic conditions. There is no danger to the engine unless the gauge pointer moves all the way right to the "H" (hot) position. If it does, stop the vehicle or reduce speed to permit the engine to cool.

WARNING

Never add coolant to the radiator when the engine is overheated. Do not loosen or remove the cap to cool an overheated engine. Refer to "Engine Cooling System", page 93 for further cautions and instructions on adding coolant to the radiator.

FUEL GAUGE

With the ignition switch in the "On" or "Accessory" position, the fuel gauge registers the approximate fuel level in the tank. When the gauge registers empty, some fuel is still available as a reserve and when the gauge registers full, some additional fuel can still be added to the tank. It is good practice to keep the fuel tank at least half full at all times to help eliminate condensation in the tank.

If your motor home is equipped with an auxiliary fuel tank, the fuel gauge is capable of registering the fuel level in that tank as well. Whenever the fuel selector switch is changed to a different position, the fuel pickup and fuel gauge sending unit are changed to the selected tank.

ALTERNATOR INDICATOR Ammeter Gauge

This "O" (zero) center meter indicates whether the battery is being charged or discharged. When the battery is being charged properly, the pointer should stay near the center or slightly to the right of the center mark. Should the indicator move to the extreme left, it indicates a malfunction in the electrical system. Have the motor home electrical system checked as soon as possible.

VACUUM GAUGE (A-Body Motor Homes Only; Optional On Some Models)

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 under various operating conditions. However, as a general rule, a high reading usually indicates the most efficient engine operation and best fuel economy. The vacuum level will be high at idle speed, and as speed and load increase, the vacuum level will drop. Operate the motor home in such a way as to maintain vacuum level as high as possible.

WARNING LIGHT PANEL (A-Body Motor Homes Dodge Chassis)

A warning light panel, located on the dash to the left of the steering column, contains reminder lights that illuminate for 15 seconds when turning the ignition switch on as a reminder to check to be sure the appropriate preparation has been made. (Step raised, door secured, park brake off, etc.)

- **Oil Pressure**

Illuminates when the engine is receiving low oil pressure. Visually check oil pressure gauge. Do not continue to drive if pressure registers below the normal range. (See "Oil Pressure Gauge" Pg. 26)

- **Water Temperature**

Illuminates when the coolant temperature has become too high. Check water temperature gauge. If water temperature is above the normal operating range, reduce speed or stop with engine running until engine cools. (See "Water Temperature Gauge", Pg. 26)

IMPORTANT

The oil pressure and water temperature lights are functional only on vehicles equipped with a 440 C.I.D. engine.

DUAL BATTERY SWITCH

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.

NOTE: On the C-Body motor home this switch is located on the left wall panel behind the driver's seat.

WARNING

Do not turn on the optional 110V generator with both batteries connected while driving. This can cause damage to the automotive alternator.

VEHICLE SENSOR PANEL (A-Body Motor Homes Dodge Chassis)

The vehicle sensor panel allows the driver to monitor the vital engine and transmission fluids and the transmission oil temperature from the driver's seat.

Engine Oil Level - Check the oil level before each trip and each time a fuel stop is made. With the engine off, and after waiting a few minutes for the oil to drain back to the crankcase, depress button for about 15 seconds. If the button illuminates, use the under hood dipstick to determine the amount of oil to be added.

Engine Coolant Level - The coolant level light should be checked intermittently while driving. If the light comes on when the engine is running, add the proper antifreeze coolant to the radiator overflow bottle.

NOTE: After draining and refilling the cooling system, the light may be on as the system finishes filling from the overflow bottle. Keep the overflow bottle filled above the "⅛ QUART" MARK AT ALL TIMES. The light should remain off after the system has reached operating temperature the third time.

Transmission Fluid Level - Check the transmission fluid level at every oil change and before each trip. With the transmission at operating temperature, and with the engine idling, move the gear selector to each gear position momentarily, ending in the

"N" (Neutral) position. Observe the light for 30 seconds. If the light glows, remove the engine cover and use the dipstick to determine the amount of fluid to be added. Refer to "Automatic Transmission" on page 93 of vehicle maintenance for fluid replacement procedure.

Transmission Fluid Temperature - Check the transmission fluid temperature gauge intermittently while driving. The pointer will usually register in the "normal" range of the gauge. If the gauge indicates "hot", increase the engine speed by shifting to a lower range, or pull over to the side of the road and allow the transmission to cool. While occasional short duration "hot" readings are not harmful, continuous readings in the "hot" range can lead to transmission failure.

RADIOS

Basically, all radios are tuned and operated in a similar manner. Refer to the directions below and to the specific illustration of the radio in your vehicle.

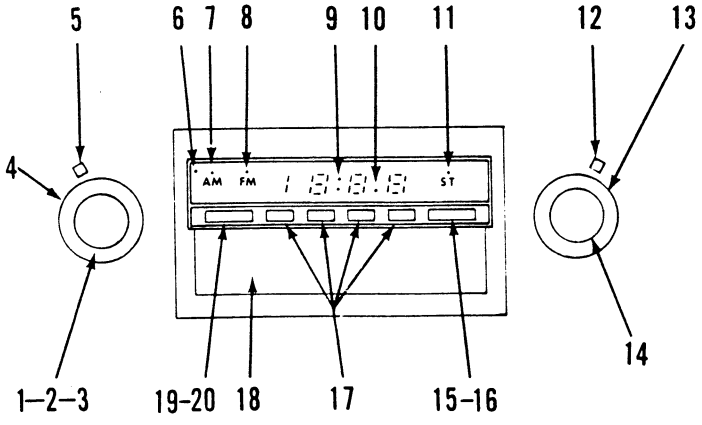
IMPORTANT

All radios have an in-line fuse between the radio and the fuse block to protect the radio wiring. A second protection fuse is located in the fuse block itself. If the radio fails to operate, check both fuses and replace with a new fuse of the same value if found to be defective.

AUDIOVOX

The radio system consists of a digital read-out electronic tuning, AM/FM, FM stereo radio and 8 track stereo tape player with quartz digital clock.

WARNING Do not jump start the vehicle or charge the battery when the radio is on.



1. ON-OFF SWITCH/VOLUME CONTROL

To provide power to the unit, it is necessary to turn this control knob clockwise until a slight "click" is heard.

To increase volume, continue rotating the knob to desired level.

2. LEFT/RIGHT BALANCE CONTROL (PULL)

This control allows you to select stereo balance between left and right speakers. When used in conjunction with the FRONT/REAR STEREO BALANCE CONTROL you have full 4-way stereo balance capability. Adjust this control for left/right sound balance.

3. TRACK SELECTOR

Push this knob to select the desired tape program manually.

Otherwise, the program will be automatically changed in sequence.

3. RADIO RECALL SWITCH

Push the button to read the radio frequencies while the radio is operated. The display will return to clock - Time of Day - after 5 seconds.

3. CLOCK RECALL SWITCH

You can read Time of Day at a glance by pressing this knob even if the ignition key has been switched off.

4. TONE CONTROL

This control allows selection of "Bass" or "Treble" tone.

Since personal taste varies in the choice of tone, adjust for the most pleasing tone or voice sound.

5. LOCAL/DISTANT SELECTOR

This control has two functions; one is for improving FM reception, the other is for selecting the "stop-sensivity" in SCAN or SEAK mode.

* THE FIRST FUNCTION:
  If the FM signal is too strong (when you are near a local broadcast antenna) and reception is very strong and distorted, move this knob to the left in "LOCAL" position. This will limit the strength of the signal and improve the clarity of local stations.
  If driving in a poor signal area or are tuned to a distant station, move this knob to the right in "DISTANT" position. This will allow maximum signal reception in all areas. NOTE: This first function is effective only in FM mode.
* THE SECOND FUNCTION
  Search Sensitivity Selection. Only strong stations can be picked up when this selector is set in "LOCAL" position. If you want more stations, set the selector in "DISTANT" position. This second function is effective for both AM and FM reception.

6. DIGITAL DISPLAY PANEL

Golden-yellow LED's are incorporated for the display element in this unit. Usually, it will show the Time of Day prior to the Radio Frequency even if the unit is in radio mode. It will continue to display the Time of Day in Tape mode or when the unit is turned off by the ON-OFF switch unless the ignition key is switched off. When the ignition key is switched off, the display will be turned off, but you can recall the clock by pressing the CLOCK RECALL SWITCH

* TIME OF DAY:
  This will indicate the present time (hours and minutes) with non-flashing colons.
* RADIO FREQUENCY
  When you turn the radio on or push the RADIO RECALL switch or operate the radio function controls (e.g. Preset Buttons, ME, SCAN, SEEK, Manual Tuning, Band Selector) except the LOCAL/DX switch, the Radio Frequency of the station tuned to will be displayed at once and after 5 seconds it will return to display Time of Day. Radio Frequency can be read in every 10KHz for AM, 0.2MHz for FM.

NOTE: Brightness of the display can be synchronously controlled by the dimmer system of the car.

7. AM INDICATOR

This will light up indicating radio is in AM band.
NOTE: This indicator is kept lit in clock mode as long as the radio is in AM mode.

8. FM INDICATOR

This will light up when the radio is in FM band.

9. COLON

This will light up (but not flashing) when the unit is in Clock mode.

10. DECIMAL POINT

This will light up when you are tuned to an FM station in radio mode.

11. FM STEREO INDICATOR

This will light up when you are tuned to an FM STEREO station.

12. AM/FM BAND SELECTOR

To select either AM or FM broadcast bands, turn this knob CCW for AM and CW for FM. The selected band is shown on the AM or FM INDICATOR in the DISPLAY PANEL.

13. FRONT/REAR FADER CONTROL

This control allows you to balance the stereo output between the front and rear speakers for maximum stereo adjustment.

14. MANUAL TUNING

This control allows manual selection of all broadcast stations. Simply turn the knob CW or CCW for desired station.
NOTE: This control has 12 detents, 10 KHz (AM) or 0.2 MHz (FM) in each detent. Don't rotate it too fast, otherwise some slippage may occur.

CAUTION Never stop this control between detents.

15. SEEK BUTTON

Press this button to search the desired station automatically. Receiving a station by the SEEK button depends on the Local/DX switch. If you press this button while searching, search operation is stopped at once.

15. MINUTES ADJUST BUTTON

To adjust Minutes, Pull this button. "Minutes" will start to count up, release at correct minutes. Or, pull and release in a short period to advance minutes one by one to the exact minutes.
NOTE: Minutes is adjustable only in clock mode. Adjusting minutes in this manner will not advance hours.

16. DUAL AM/FM PRESET BUTTONS

This radio incorporates 8 pushbuttons (4 for AM and 4 for FM). To set any pushbutton, follow the procedures below.

1. Turn the radio on. Turn the Band Selector to the AM position.
2. Tune to the desired AM station by Manual Tuning or SEEK or SCAN.
3. Pull the first button to be set lightly and release.
4. Repeat same procedure for remaining 3 buttons.
5. Now, turn the band selector to the FM position and using the same procedure used for AM stations, you can now reset all 4 pushbuttons to FM stations. Make certain the band selector is in FM position prior to setting pushbuttons.
6. Once all pushbuttons are set to both an AM and an FM station, all you need to do is to turn on your radio, select AM or FM band with the selector, then depress the desired pushbutton.

NOTE: You do not have to pre-set all pushbuttons if you desire not to. This feature will work with any number of pushbuttons.

17. TAPE DOOR

Insert the cartridge tape into the tape slot by pushing the TAPE DOOR down until it locks to play. While the cartridge tape is being played, the display shows the time of day.

18. SCAN BUTTON

Pressing this button will start to search stations automatically. At a strong signal, the unit stops searching and receives the broadcast for about five seconds. If you wish to listen to this broadcast, depress this button again within five seconds. If the button is not depressed, the unit will start to search again after five seconds intervals. You can stop search operation at anytime by pressing this button again while searching. Stop sensitivity in SCAN operation depends on the LOCAL/DX switch.

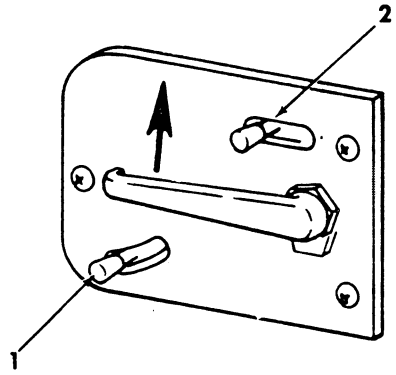
19. HOURS ADJUST BUTTON

To adjust hours, pull and release this button in a short period to advance hours one by one to the exact hours. Hours can be adjusted only in clock mode.

SEAT AND DOOR PANEL CONTROLS

ENTRANCE DOOR LOCK - A and C Body Coach and A-Body w/Driver Side Entrance Door Option

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



INTERIOR ENTRANCE DOOR HANDLE

1. Door Lock
2. Bolt

The bolt lock is for added security and should be used as a security night lock.

CAUTION

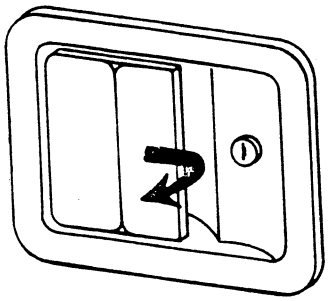
When releasing security night lock, be sure to retract the bolt before opening door latch to prevent drag on the bolt pin. Instruct all passengers in the operation of this door catch system as well as the emergency exit window on page 35

ENTRANCE DOOR HANDLE

The entrance door can 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.

CAUTION

Do not force the inside door handle down, as damage could occur.



EXTERIOR ENTRANCE DOOR HANDLE

DRIVER COMPARTMENT DOOR LOCK (C-Body Only)

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

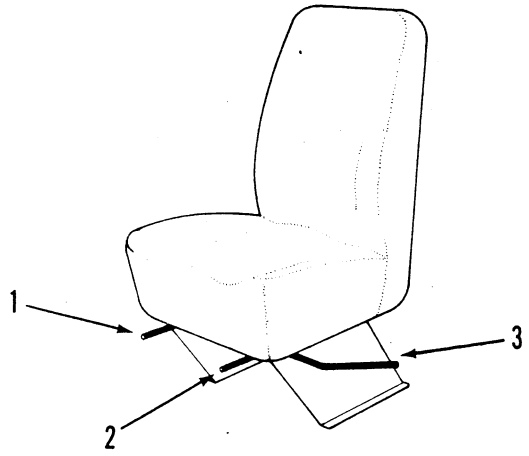
IMPORTANT

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

SEATS

The driver and front passenger seats can be independently adjusted to suit each individual's preference. To move the seat forward or backward, simply move the slide release lever, located under the seat, to the left and exert slight body pressure in the direction desired. Release the lever and the seat will lock in place.

The seats can be swiveled to provide easy entrance and exit. The swivel feature also allows the seats to be turned toward the living area for extra seating when the unit is parked. To swivel the seats, depress the release lever, located below the front of the seat, and rotate the seat with body pressure. The seats are designed to lock only when returned to the forward facing direction.



DRIVER AND PASSENGER SEAT

1. Seat Release Lever
2. Swivel Release Lever
3. Tilt Release Lever

WARNING Do not adjust seat while vehicle is in motion.

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

The seats on some A-Body motor homes include a tilting mechanism which permits the seat to be reclined. To tilt the seat back, lift up on the release lever, located on the side of the seat, and lean backward until the seat has reclined the desired amount. Release the lever and the seat will lock in place.

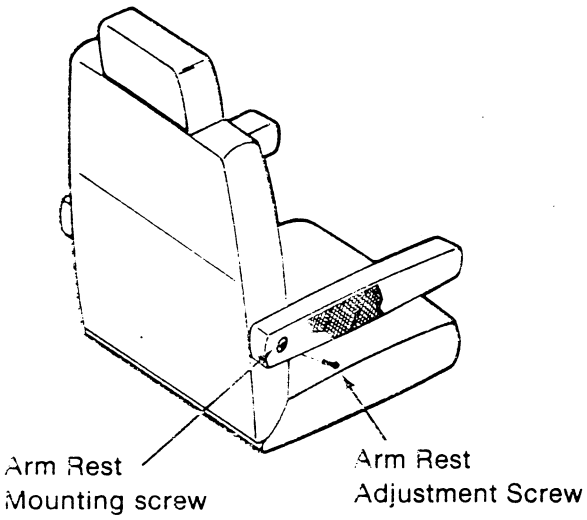
SEAT ASSEMBLY ARM REST ADJUSTMENT

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

1. Unzip the arm rest cover fabric at the rear of the arm rest assembly.
2. Carefully force the foam cushion material away from the inside bottom edge of the arm rest frame. This will allow access to the allen head adjustment screw mounted on the bottom portion of the arm rest frame assembly.

3. Adjust the screw clockwise to lower the arm rest angle. Adjust the screw counterclockwise to raise the arm rest angle.

NOTE: The arm rest may be raised to provide easier access for adjustment.



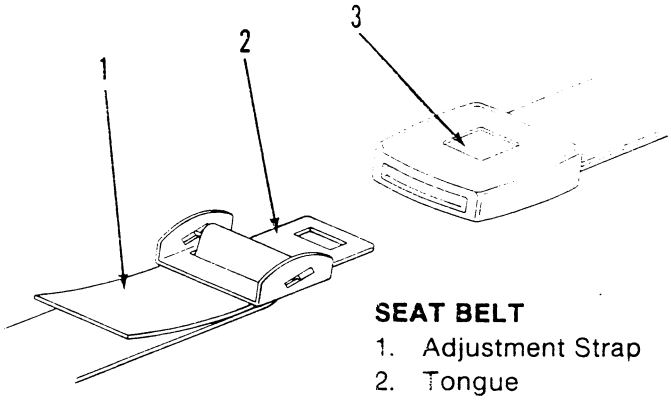
SEAT BELTS

The driver and passenger seat and all seats in the motor home designated to carry passengers while the vehicle is in motion are equipped with seat belts. These are installed for the protection of the driver and all passengers and must be fastened whenever the vehicle is in motion. The lap belts must be worn as low as possible and fit snugly across the hip area. Always sit well back and erect in the seat.

Adjustment: To lengthen belt, turn tongue at a right angle to belt and pull to desire 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.



SEAT BELT

1. Adjustment Strap
2. Tongue
3. Release Button

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.

WARNING

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".

TRAVELING WITH YOUR MOTOR HOME

PRE-TRAVEL CHECKLIST

Before starting the engine in preparation 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.
- 110-Volt Generator (Option) - Check oil level in generator engine.

WARNING Never check oil level in generator while engine is operating.

- Jack - Make sure jack, jack handle and lug wrench are properly stowed.
- Fire Extinguisher - Make sure it is fully charged and secured in mounting bracket.
- Lights - Make sure all exterior lights operate.
- Exterior Door and Step - Make sure doors are closed, locked and step retracted.
- Sewer and Water Supply Hose - Unhook and stow.
- Loose Items Inside the Motorhome - Stow or secure items.
- Pilot Lights - Make sure all pilots are off.
- Fuel Tanks - Check level.
- Water Tank - Fill with fresh water.
- LP Gas Tank - Make sure valve is closed and door latched securely.
- Seats - Adjusted for comfortable position and locked in place.
- Mirrors - Adjust for maximum visibility from driver's seat.

CARBON MONOXIDE WARNING

WARNING Avoid inhaling exhaust gases, as they contain carbon monoxide, which by itself is colorless, odorless and poisonous.

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 OPEN.

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 is noticed in the sound of the exhaust system.
- 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 grille clear of snow, leaves or other obstructions at all times.

SITTING IN A PARKED VEHICLE WITH ENGINE RUNNING FOR AN EXTENDED PERIOD IS NOT RECOMMENDED.

Do not run engine in confined areas such as garages 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.

1. Set fan to medium or high speed and vent control to "air".
2. 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. If the windows must remain open

while driving, or if electrical wiring or cable connections to a trailer must pass through a window seal or the body, the following precautions must be observed:

- Adjust heating or cooling system to force outside air into the vehicle as described in item 1 or 2 above, but with fan set at high speed.
- Fully open outside air vents in or under the instrument panel.
- Seal any holes through which wires or connections pass.

EQUIPPING FOR TRAVEL

When beginning a trip, several items should be taken in addition to the basic clothes, food and recreational items. A checklist is provided for your convenience. Remember, it is important to distribute weight and store all heavy items near the floor.

Emergency Equipment Checklist

Flashlight
First Aid Kit
Road Emergency Flares
Tool Box with Assortment of Hand Tools
Plastic Bucket
Tow Chain or Rope
Wheel Blocks for Leveling or Extra Jacks
Water Hose
100-150 feet of 3 Wire Electrical Cord with at Least 30 Amp Capacity
Fire Extinguisher
Hydraulic Jack and Lug Wrench
Spare Tire

Quick Loading Checklist

LINENS
___ Sleeping Bags
___ Sheets
___ Pillow Cases and Pillows
___ Mattress Pads
___ Extra Blankets
___ Laundry Bags

COOKING
___ Can Opener
___ Bottle Opener
___ Aluminum Foil
___ Matches
___ Plastic Bags
___ Coffee Pot
___ Storage Dishes

CLEANING
___ Scouring Pads
___ Cleanser
___ Dish Soap
___ Sponge
___ Laundry Soap
___ Cleaning Rags

BATHROOM
___ Hand Soap
___ Bath Towels that can double as beach towels
___ Toilet Kits
___ Shaver
___ Toilet Tissue (RV)

BABY NEEDS
___ Porta-Crib
___ Car Bed

PERSONAL
___ Credit Card
___ Traveler's Checks
___ Money
___ Driver's License
___ Proof of Citizenship for Canadian or Mexican Crossing
___ Sun Glasses

PET NEEDS
___ Food
___ Leash
___ Water and Food Dishes
___ Proof of rabies shots

MISCELLANEOUS
___ String
___ Clothes Line
___ Insect Repellant
___ Masking Tape

FOOD

Enough for first couple of days or so - buy as you go. Use plastic, paper or other disposable containers. Remember seasoning.

CLOTHES TIPS

One "good" outfit for each traveler (hang in plastic bag in closet). Remember - it can get cold in the mountains, even during summer. Send for information on the area you are going to visit and plan accordingly.

EMERGENCY EXITS

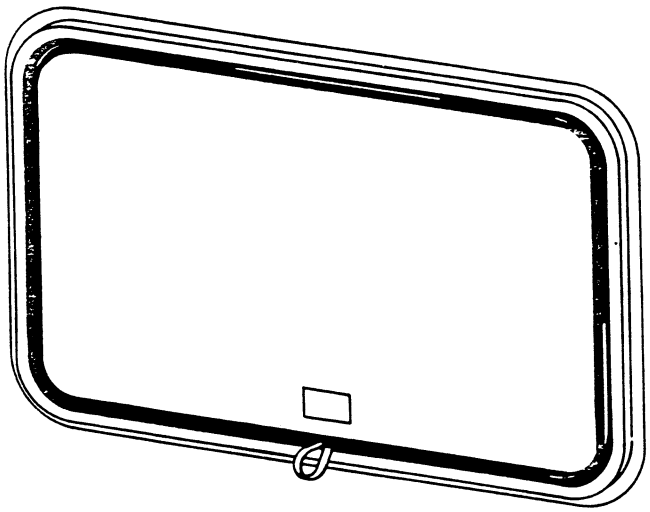
Emergency Exit Window

Your motor home may be equipped with the one piece stationary window at the rear of the motor home 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 plastic ring until the rubber cord is completely removed; then pushing the window out. The instructions for removal are also located on a label on the glass for quick referral and for passengers who may not be familiar with the exit. Be certain the label is not removed.

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

If the cord is released by accident, but the glass does not fall out, 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.

WARNING 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.

LOADING THE MOTOR HOME

When loading the vehicle, it is important that the load be properly distributed over both the front and rear axles within the GAWR (gross axle weight rating) limits. Note that the total of both GAWR figures may exceed the GVWR (gross vehicle weight rating) listed on the certification label. Therefore, both axles must not be loaded to maximum capacity, or the GVWR may be exceeded. If the vehicle weight is greater than capacity, remove unnecessary cargo.

For loading convenience, a computerized list of weight specifications for your vehicle has been attached to the inside of the wardrobe door. It provides: GVWR of the vehicle, base unit weight, weight of liquids when fully loaded, weight of all factory options, total net weight, and most important when loading, the approximate allowable payload which can be loaded to the vehicle without exceeding the GVWR.

It is recommended that before loading, each axle and wheel/tire weight be determined by weighing each location seperately with the vehicle fuel tank(s), LP tank and water tank full, but without passengers and cargo.

Load the heavier items low and toward the lighter side to distribute the weight as equally as possible from side to side. It is possible for the GAW (gross axle weight) of an axle to be below capacity and still experience poor vehicle handling if more of the weight is on one side. Gross wheel weight ratings can be obtained by dividing the GAWR figures in half.

Always maintain tire inflation pressure at the designated value specified in the tire inflation chart. Check pressures after the motor home has been parked overnight and before driving any great distance. Check tire pressure again anytime the load is increased.

WARNING Total loaded motor home weight including options, attachments, personnel, water and waste must not exceed the GVWR or the gross axle weight rating (GAWR) of either axle.

WEIGHING THE MOTOR HOME

The frame and load carrying components of your motor home have been designed to provide satisfactory service as long as the vehicle is not loaded in excess of the gross vehicle weight rating

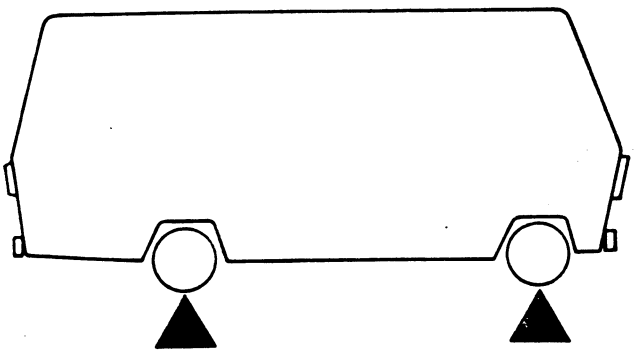
(GVWR) or the gross axle weight rating (GAWR) for the front and rear axles. These ratings are listed on the "vehicle certification" label located on the driver's sidewall to the left of the dash on all A-Body motor homes and on the cab body just above the door striker on all C-body motor homes. The GVWR is the total permissable weight of the motor home, including driver, passengers, the vehicle itself with all options, and the load it is carrying, including all liquids. The GAWR is the total permissable weight allowable for each axle.

Weigh the motor home periodically at any state weighing scale or at a local weighing station. The front and rear axles must be weighed seperately with the vehicle fully loaded (including occupants) and ready for operation. This process will determine the actual gross axle weight (GAW) for front and rear axles. Next weigh the entire motor home fully loaded, or add the front and rear gross axle weights to determine the gross vehicle weight (GVW). The GVW or actual weight of the vehicle must never be allowed to exceed the GVWR, nor should either of the GAW's be allowed to exceed the GAWR figure. Overloading the vehicle can produce safety hazards, poor handling and also reduce the life of all load carrying components such as tires, springs, shock absorbers, etc.

IMPORTANT

The vehicle must be level when weighing either of the axles and when weighing any of the wheel locations separately.

The accompanying figure illustrates a typical vehicle in the loaded condition. Note that the front and rear GAWR's and the GVWR are not exceeded.



EXAMPLE

MAXIMUM GVWR - 12,000 lbs.
FRONT GAWR - 5,000 lbs.
REAR GAWR - 7,500 lbs.

Rear Curb	5480 lbs.
Rear Cargo and Passenger Load	1190 lbs.
	6670 lbs.
Front Curb	3820 lbs.
Front Cargo and Passenger Load	790 lbs.
	4610 lbs

Total Weight at Ground 11,280 lbs.

ROOF LOADING

The roof on your motor home is constructed of Thermo-Panel®, the same as the walls, and 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 permissable.

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, trunk (when existing,) hitch and bumper must not exceed 250 pounds.

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 will all be 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 a tongue load

of 200 lbs. Tongue loads can be adjusted by proper distribution of the load in the trailer.

An auxiliary transmission oil cooler connected in series with the radiator bottom tank cooler is mandatory for trailer towing.

WARNING It is essential that the auxiliary cooler installation does not create an oil flow restriction to the transmission cooling system.

CAUTION Installation of a frame equalizing type hitch is not recommended.

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 permissable weight of any towed vehicle is 2000 lbs. Trailers weighing in excess of 1000 lbs. require trailer brakes. The gross combination weight (GCW), which is the weight of the fully equipped motor home with passengers plus the weight of the trailer with cargo, must not exceed the gross combined weight rating (GCWR) of the motor home. See "Weighing the Motor Home" on page _____

STARTING THE ENGINE

Different climatic conditions, as well as other factors, can play a part in determining what method should be used when starting the engine. The following instructions have been provided for various starting conditions. Read all of them carefully and choose the appropriate method.

The engine will start with the selector lever in the "Neutral" or "Park" position. Before engaging the starter:

- Apply the parking brake
- Make sure the gearshift selector is in "Neutral" or "Park" position.
- Depress accelerator pedal and activate the starter as outlined.

CAUTION The starter should not be operated longer than 15 seconds at a time. If the engine fails to start, always wait a few seconds before trying again to protect the starter from overheating.

Cold Engine

Fully depress accelerator pedal and slowly release. With foot off the pedal, crank the engine by turning the ignition key to the "Start" position and release when the engine starts. If engine starts, but fails to run, repeat this procedure.

When engine is running smoothly (approximately 30 seconds) the idle speed may be reduced by slightly depressing the accelerator pedal and then slowly releasing.

CAUTION Extended running of engine (5 minutes or more) without reducing idle speed, could cause damage to engine or exhaust system due to overheating.

Extremely Cold Weather (Below 0° F.) Or After Vehicle Has Been Standing Idle Several Days

Fully depress and release accelerator pedal two or three times before starting the engine. With foot off the accelerator pedal, start the engine by turning the key to the "Start" position and release when engine starts.

Warm Engine

Depress accelerator pedal approximately halfway and hold while starting the engine.

Engine Flooded

Depress accelerator pedal and hold to floor while starting, until engine is cleared of excess fuel and is running smoothly. Never "PUMP" the accelerator pedal.

Warm-Up

Always let the engine idle for 20 to 30 seconds after starting and drive at moderate speeds for several miles, particularly during cold weather.

GEAR SELECTION

When ready to drive, move the selector lever from "P" or "N" to the desired position. The automatic transmission provides fully automatic operation in the "D" (drive) position or manual control by allowing the driver to start in the "1" (first) or "2" (second) position and shift to higher gears manually. The following explanations of the

selector positions will help determine the best operating position.

"P" Park - This position supplements the parking brake by locking the transmission, whether or not the engine is running. The engine may be started in this position. Make sure vehicle is stopped with the transmission in "P" (park).

"R" Reverse - This position is used to back the motor home from a stopped position. The vehicle should be brought to a stop from forward travel before shifting into reverse, except when rocking the vehicle to free it from mud, snow, sand, etc. Do not spin the wheels in excess of 35 MPH when freeing a stuck vehicle.

"N" Neutral - Shift to neutral when stopping for a prolonged period with the engine running to avoid overheating the transmission. The engine may also be started with the selector in this position.

"D" Drive - This position is used for most normal city and highway driving. As stated previously, the transmission will start in first and shift automatically through second and to drive when the selector is in this position. You may downshift for extra acceleration below 65 miles per hour by depressing the accelerator pedal to the floor, or by depressing the pedal halfway to the floor below 30 miles per hour.

"2" Second - This position is particularly useful when driving in heavy city traffic or on mountain roads where more control over speed is necessary. Use it also when driving up moderately steep grades and for "ENGINE BRAKING" when descending downgrades. To prevent excessive engine speed, do not exceed 45 miles per hour in this range.

"1" First - This position should be used for driving up very steep hills and for "ENGINE BRAKING" at low speeds (25 miles per hour or less) where the "1" position does not prove sufficient. This position is also useful in conditions such as sand, snow or mud where hard pulling at low speeds is required.

To prevent excessive engine speed, do not exceed 25 miles per hour in this range.

CAUTION

Using a driving gear to hold on an upgrade can cause the engine and transmission to become overheated. Do not idle the engine for more than one minute with transmission in gear. Longer periods of idling, while in gear, can cause overheating of engine. Use service brake to hold vehicle.

NEW VEHICLE BREAK-IN

Although your motor home may have already acquired the prescribed break-in miles, it is still a good idea to follow the break-in procedure not only to benefit the motor home engine and chassis, but also to familiarize yourself with motor home driving.

Following a few simple break-in precautions can contribute greatly to a longer life for your motor home chassis and add to its future performance and economy of operation. The road speed should not exceed 50 miles per hour for the first 500 miles. Work up to this speed gradually during the first 200 miles. Then vary your speed periodically rather than driving a steady rate of speed for long periods. During the next 2,000 miles of operation, the speeds may be gradually increased up to the lawful speed limit to complete the break-in process. Follow the recommended oil change schedule in the maintenance section of this manual during the break-in period.

TRAVEL TIPS

As you travel around the country in your motor home, you will pick up various tips from other motor home owners.

A number of tips can also be picked up by reading articles and regular columns in some of the outdoor and camping magazines. Some magazines and publishing companies print an annual park and campground directory. These can be found at your local newsstand or trailer supply dealer. Following are just a few travel tips to start out with.

1. Be sure to always check for sufficient clearance. Remember the height and width of your unit.
2. Taste the water before filling the water tank in an unfamiliar location. The water in some areas contains a salt or a sulfur taste.
3. Never use a new hose to fill the water tank. It leaves a distinct taste.
4. Showers can take a lot of water. Conserve water by taking a "SEA SHOWER". This is done by; wetting down, turning off the water, soaping thoroughly and then rinsing.
5. Dump sewage only at approved dumping stations.

6. Store liquids in plastic containers with tight fitting caps to prevent spills.
7. Keep an eye on the water and holding tank levels. It is a good idea to dump the holding tank at least every two days.
8. When traveling with children, it is helpful to plan their wardrobe for a week. Place each day's clothing in a plastic bag and label the bag with the child's name and day of the week for use.
9. Use sleeping bags whenever possible. They save laundry and take up less storage space than bedding.
10. Make sure all compartment doors have been closed and the door step has been stowed in the correct position before moving the vehicle.
11. Before traveling, make sure the refrigerator door has been secured. Use care when opening the refrigerator door after the vehicle has been stopped. Any articles that have shifted may fall out when the door is opened.
12. During peak tour seasons and holidays, it is best to phone ahead and make reservations at the park where you plan to stop.
13. Some states or cities will not permit you to pass through highway tunnels because of the LP gas containers in your vehicle. If your route includes a tunnel, check with the highway patrol or department of highways before venturing forth.
14. Do not leave food or odor causing material in your vehicle for extensive periods of time. Always allow damp clothing, hunting gear, etc. to dry before putting it away.
15. Become familiar with the fire extinguisher and make sure it is always fully charged. Remove and replace it and read the instructions so you know the correct operating procedure before an emergency.
16. Make a list of all groceries, fresh meats, vegetables, newspapers, etc., that you may need and try to pick them up during your last gas stop of the day. This will prevent leaving a good parking spot once you have arrived at your destination.
17. When you sit over the front wheels while driving, as in the motor home, you have a tendency to crowd the middle of the road. Check the rear view mirror frequently to observe how close you are driving to the center line.

WINTER CAMPING TIPS

Since motor home use has extended beyond the warm summer months and on into the ski and snowmobile season of winter, the following winter use tips may help make your winter motor home travel more enjoyable.

1. Cut out transparent heavy plastic sheets and attach to the inside of the window with duct tape.
2. The holding tank and plumbing system are the most vulnerable parts of the motor home in winter. Exposed piping, etc., can be wrapped with heat tape and covered with insulation and plastic to keep out air and moisture. This same procedure can be used to a limited extent on holding tanks. The best protection for holding tanks is the use of non-toxic antifreeze and limited use of the drainage system.
3. Cover vinyl seats and cushions with towels to absorb cold air.
4. Place newspaper under the entrance door throw rug to soak up melting snow.
5. Position throw rugs against the bottom crevice of the entrance door to cut off cold air blowing in from the outside.
6. Place an old rug outside the motor home and another inside to prevent snow and moisture from being carried inside.
7. Carry an adequate supply of LP gas. A partially filled tank may last only a short time.
8. Carry a can of lubricant or graphite to protect against frozen locks, etc.
9. Try to keep a window partially open to prevent carbon monoxide buildup inside the motor home. Roof vents can easily become covered with snow.
10. For added warmth, insulate the window side of the drapes.
11. A temporary skirting can be made by piling snow up along the lower edge of the motor home to keep air from blowing under the unit.
12. Make sure all heating ducts are clean and lint free. Clogged ducts can restrict air flow and, in some cases, are a fire hazard.
13. To help eliminate low battery and difficult starting during cold weather, place a thick rubber pad under the batteries. This will help prevent cold temperature transfer from the steel support plates to the base of each battery.

FIRE EXTINGUISHER

The dry chemical fire extinguisher is conveniently located in the driver's compartment on both A-body and C-body motor homes.

FIRE EXTINGUISHER

The dry chemical fire extinguisher is conveniently located in the driver's compartment or 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 as displayed on the side of the extinguisher and that the extinguisher be inspected at least once a month in accordance with National Fire Protection Association (NFPA) recommendations as stated on the label.

Before beginning a vacation trip 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.

WARNING

Before beginning a vacation trip or any extended motor home travel, it is strongly recommended that the fire extinguisher be checked for proper charge and inspected to assure proper operating condition.

FLASH FLOOD AND SEVERE WEATHER SAFETY

Motor home travelers and campers often seek the out-of-the-way secluded areas for weekend recreation or extended summer vacations.

One of the more serious conditions affecting the motor home traveler and camper is that of the "Weather". Should you desire the high mountain terrain, the lower desert and flatland or the plain country of the midwest, the weather is always with you and subject to change, sometimes with little or no notice, but usually with adequate warnings broadcasted over local radio and TV stations.

Many recreational areas are vulnerable to severe weather situations, especially flash flooding conditions. A few simple precautions may help lesson the hazards of flash flooding or reduce your immediate involvement.

IMPORTANT

It is recommended that all motor home occupants become familiar with these safety precautions, and be constantly alert for any changes in the weather.

- Be alert, keep an eye to the sky because thunderstorms can form at any time in any month of the year. Thunderstorms can produce heavy amounts of rain over a small area in a short time which may result in a flash flood. Listen frequently to weather reports on radio for weather and flood conditions.
- When camping near a stream, leave plenty of sloping bank between you and the stream.
- Avoid deep canyons and dry washes during stormy or threatening weather (constantly be alert for alternate exits).
- If heavy rain occurs, move to high ground immediately (at least 30-40 feet above the canyon floor or bottom of dry wash).
- During a flash flood, if you can't move your vehicle, abandon it. Don't attempt to return to your vehicle before the water has receded.
- Don't attempt to wade to your vehicle if the water is above your knees - fast moving water exerts an enormous amount of pressure, making it impossible to remain standing or walking.
- Don't try to drive through flooded areas.
- Follow instructions of local authorities. Leave immediately when advised to do so. Many lives have been lost because people didn't heed warnings.
- Have on hand survival supplies for several days, including food, water, first aid equipment and necessary medications. In desert areas during hot weather allow 3-4 gallons of drinking water per day, per person.
- Before you leave home, inform someone of your destination and when you expect to return. Authorities at your destination should be notified immediately if you do not return on time.

REMEMBER THESE TERMS:

Flash Flood Watch: Heavy rains may result in flash flooding in the specified area. Be alert and prepare for the possibility of a flood emergency.

Flash Flood Warning: Flash flooding is occurring, or is imminent in certain areas. Move to safe ground immediately.

It is highly recommended that the motor home operator obtain a weather radio. These radios offer up to date weather condition broadcasts. During good weather, the latest observations and forecasts are tape-recorded by local Weather Service offices in messages that last from three to five minutes. These messages are replayed continually 24 hours a day.

The tape-recorded messages are revised every three to four hours, or more frequently when appropriate. When severe weather threatens, forecasters at the local Weather Service office interrupt the broadcasts with storm warnings, either tape-recorded or "live" as the situation demands.

The frequencies used for NOAA Weather Radio, (National Oceanic and Atmospheric Administration), nationwide, are 162.40, 162.475 or 162.55 megahertz.

NIGHT TIME DRIVING

Make sure all running lights and signal lights are clean and in working order. Periodically have your head lights checked and adjusted.

Although cars can tell when they are clear of you when they pass, longer rigs, such as motor homes have a more difficult time making judgement. Use care when passing other vehicles. Have occupants assist in observing traffic and the vehicle being passed.

MOUNTAIN DRIVING

Special techniques must be used when driving in mountainous or hilly country. When ascending upgrades the transmission will automatically drop into the lowest gear. If the grade of the incline is constantly changing and the automatic transmission is repeatedly upshifting and downshifting, it may be advisable to select the lowest adequate gear range for the duration of the incline.

CAUTION

Observe the engine temperature gauge more frequently than normal. In the event an overheating condition occurs, pull off to the side of the road and allow the engine to thoroughly cool before refilling the radiator and restarting the engine.

UTILITY SYSTEMS

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 when installed 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 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 operates all 12-volt equipment located in the living area of the motor home. This includes: interior lights, range exhaust fan, furnace, water pump, water level and holding tank gauges, 110-volt generator starting, and the refrigerator (when operated on 12-volt mode). 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", page 27

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: optional roof air conditioner, refrigerator (when placed on 110-volt mode), and other 110-volt electrical equipment used at convenience outlets.

EXTERNAL UTILITY SUPPLY

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

To make an external power connection, remove the cord from the storage compartment and plug it into a suitable power receptacle. On some models, a small door allows the cord to be routed out of the compartment without the necessity of leaving the compartment door ajar. Internal switching within the converter will take place automatically when the power cord is plugged into the 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 receptable. 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. It is recommended that the power cord not be plugged in, or adapted to be plugged in, if the receptacle is not designed for the plug on your unit.

Should an overload on an appliance occur because of 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 on the receptacle. This protects the park's wiring, as well as the power cord on your vehicle, from electrical damage. If electrical power is unavailable, contact the park attendents and have them check the fuse or breaker for your supply.

WARNING

When utilizing a 110-volt AC utility supply, the polarity of the motor home must match that of the receptacle to which it is to be connected. To accomplish this, it is recommended that a commercial polarity

tester be obtained. This is an inexpensive, commercially distributed device available through most retail outlets. Improper polarity matching could cause personal injury.

POWER CONTROL CENTER

The 110 volt to 12 volt power converter is located beneath one of the cabinets or beds, depending on the model. All power to the living area of the motor home passes through the control center before going to the individual appliances, lights, outlets, etc. Current draw 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 is routed to the appliances or equipment through the protective circuit breakers in the control center. In addition, a portion of the 110 volt current is changed to 12 volt DC power by the converter. While operating from 110 volt electrical power, all 12 volt equipment is powered through the appropriate fused circuit within the converter unit, and no power is drawn from the automotive or auxiliary battery.

A battery charger circuit in the converter recharges the battery any time 110 volt external power is being used. An indicator light on the fuse panel will glow while the battery is receiving a charge on those units equipped with a Progressive Dynamics power converter.

When the battery attains a 90% charge, the light will begin to flash several times a second or in some cases, the light may go out entirely. This may be attributed to environmental conditions such as temperature and humidity.

To test the charging system, should the indicator light extinguish, discharge the battery for a sufficient period of time to allow the battery charge to drop below 90%. This should take less than 30 minutes. Reconnect the converter/charger to 110 volt AC. The light should come on, indicating that the charging process has again been initiated. Should the light fail to come on again, have your dealer check the converter/charger for proper operation.

NOTE: Units equipped with the Triad-Utrad converter do not have this indicator light feature.

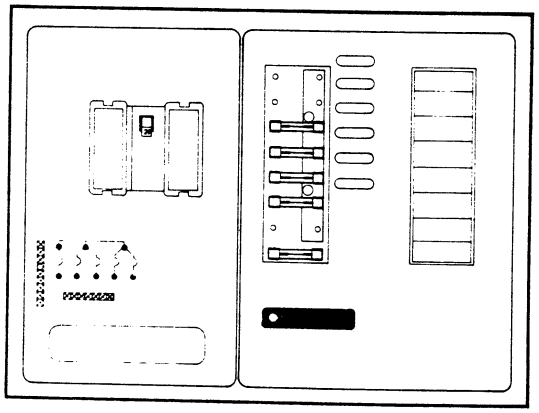
IMPORTANT

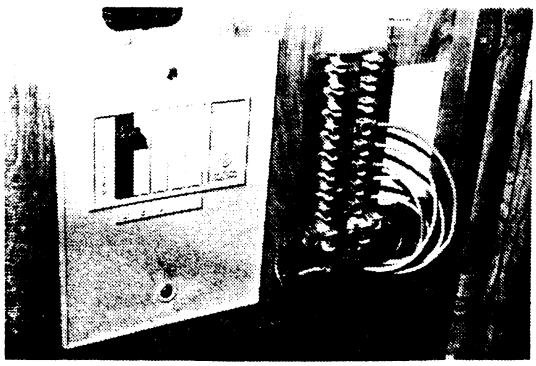
The converter will not change 12-volt DC current to 110-volt AC.

The breaker panel protects all 110-volt components in the motor home from either an overload on the ciruit 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 appliance.

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 again 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.





WARNING

When utilizing the 110-volt supply cord, make sure all three prongs of the supply cord are plugged into the receptacle. If they are not or you suspect for any reason that the motor home is not grounded through the power cord, a metal rod should be securely placed in the ground and attached to the motor home bumper by means of a metal grounding strap. Improper grounding of the motor home could result in personal injury or damage to equipment.

CAUTION

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

GROUND FAULT INTERRUPTER

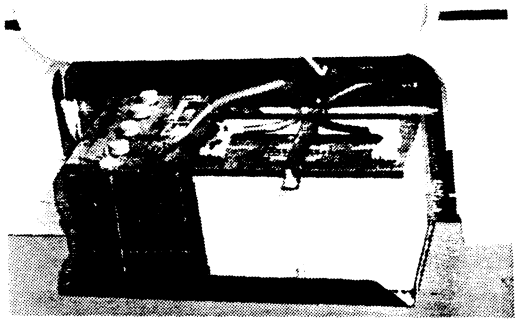
The ground fault interrupter is a device connected to the 110-volt outlet in the bathroom and the 110-volt external receptacle, designed to protect the user against electrocution by a faulty appliance. Should an electrical appliance, equipped with a three prong plug which has an internal short or other electrical defect, be plugged into either outlet, the device will automatically throw and electricity will be shut off.

Test the device once a month by depressing the test button located on the bathroom outlet. If the reset button fails to pop out, have the device checked by your dealer. After the button has popped out to indicate proper operation, push it back in to reset the system.

In the event power is not available at either the bathroom or the external 110-volt outlet, check to assure that the reset button has been pushed in.

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, and the vehicle is properly grounded through the power cord or a metal ground rod connected to the bumper.



BATTERY ACCESS

WARNING

Sufficient cable has been provided to allow the battery tray to be pulled out for service. Care must be taken, however, when sliding the 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.

Exterior A-Body

Depending on the motor home model, the auxiliary and automotive battery are located in a compartment accessible from the exterior of the unit. 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.

CAUTION

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 under 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.

CAUTION

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

Interior A-Body & C-Body

Some motor homes may incorporate a battery storage compartment accessible from the interior of the unit. Generally the motor home models utilizing the interior battery compartment may be 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.

BATTERY MAINTENANCE

The battery is not a source of electricity, but only a storage reservoir. As soon as the energy required to start the engine is removed from the battery, it should be replaced by the alternator system. To ensure that the battery will always properly accept and hold a charge, some minor maintenance practices should be followed.

Make sure that the 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 can 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.

WARNING

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.

CAUTION

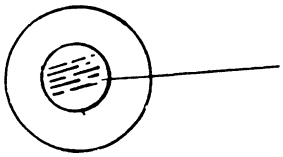
To prevent wiring damage, it is essential when replacing the cables on the battery, or when using a "booster" battery, that the positive post and the positive cable be attached and the negative post and negative cable be attached. The posts are marked (+) plus and (-) minus. If a "faster charger" is 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.

Emergency Starting

Should it become necessary to use assist starting to start your motor home engine, the following instructions and cautions must be followed carefully. Before attempting to use booster or jumper cables for assist starting, always make sure the battery in the other vehicle is 12-volt and has a negative ground.

Never attempt to charge of jump start a maintenance free battery, found in motor homes built on Chevrolet chassis, which exhibits a light colored indicator

Indicator on top of battery



Light yellow or bright indicator. Do not jump start.

WARNING Never expose battery to open flame or electric spark. Batteries generate a gas which is flammable and explosive. To avoid personal injury or damage to your clothing, do not allow battery fluid to contact eyes, skin or fabric. Don't lean over battery when attaching clamps or allow the clamps to touch each other.

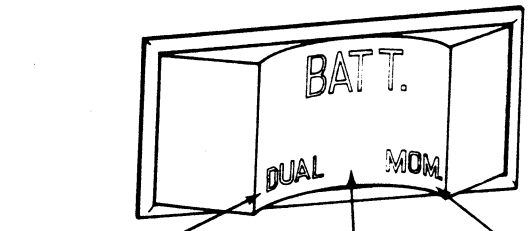
1. Wear eye protection and remove rings, metal watch bands and other metal jewelry as it could conduct an electric current.
2. Turn off the lights, heater and other electrical loads. Place transmission in park in both vehicles. Don't let the vehicles touch.
3. Remove the vent caps from the booster and discharged battery and lay a cloth over the vent wells. If either or both of the batteries are equipped with flame arrestor type filler/vent caps, the vents on that battery need not be covered with a cloth and the caps should be left in place to take advantage of the safety feature.
4. Make sure electrolyte is at proper level. If electrolyte is not visible or appears to be frozen - DO NOT ATTEMPT ASSIST STARTING! A battery might rupture or explode if the temperature is below the freezing point or the battery is not filled to the proper level.
5. Connect one end of positive jumper cable (red cable) to the positive terminal of the booster battery. Connect the other end to the positive terminal of the discharged battery.
6. Connect the negative cable (black cable) to the negative terminal of the booster battery and then to a location at least 12 inches from the battery on your vehicle.
7. Start the engine in the vehicle that is providing the jump start (if it is not already running). Let it run for a few minutes, then start the engine in your vehicle.
8. Reverse the above sequence EXACTLY when removing the jumper cables, taking care to remove the cable from the ground location on the motor home first. Discard the cloth used to cover the filler holes of each battery and replace the filler caps.

DUAL BATTERY SWITCH

C-Body Motor Home

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.

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



Press in to connect automotive and auxiliary batteries while driving.

Middle Position: Auxiliary battery disconnected. (Use when parked)

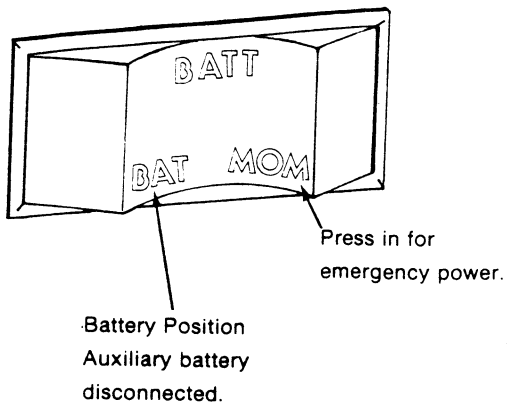
Press in for emergency power.

DUAL BATTERY SWITCH

A-Body Motor Home

The auxiliary battery and the automotive battery are automatically charged by the autmotive charging system.

The dual battery system incorporates a solid state battery isolator that prevents the automotive battery from being drained when the auxiliary battery is in use. 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.



AUXILIARY 110-VOLT GENERATOR (Optional on some models)

The optional auxiliary 110-volt generator allows use of all 110-volt appliances when utility services are not available. The generator may be operated when the vehicle is moving or stationary and can be run continuously, if necessary.

Gasoline for operation of the generator engine may be taken from either the main fuel tank or the auxiliary fuel tank depending on the unit model. Consult your dealer to determine the correct generator fuel supply configuration for your particular model motor home.

The generator fuel line does not draw from the bottom of the tank, thus preventing generator operation from draining the tank. There are two start/stop switches which control the generator. The remote control switch, located on the dash or overhead console panel, allows the generator engine to be started from within the motor home and while the vehicle is in motion. A light incorporated in the switch will glow when the generator is running. A second switch, located on the unit itself, can be used to start the engine at the generator location.

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.

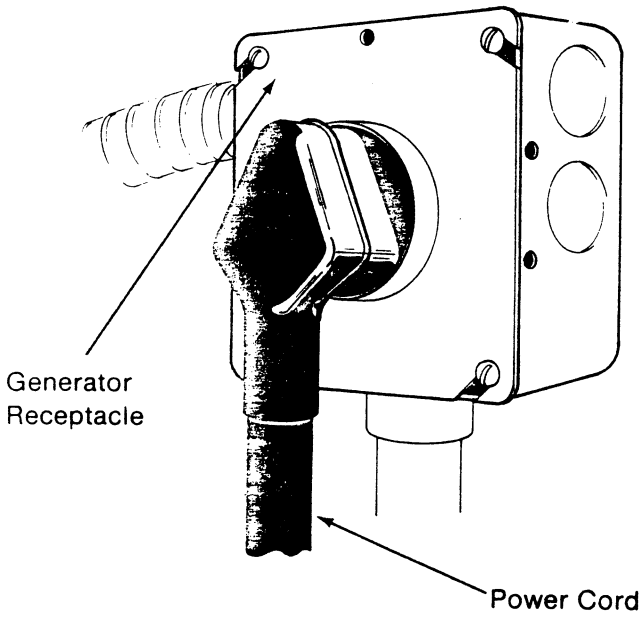
Exhaust Spark Arrester

Exhaust spark arresters are provided to assure auxiliary generator operation. To maintain efficient generator operation, it is recommended that the spark arrester be cleaned out every 50 to 100 operating hours.

To clean the spark arrester, remove the pipe plug in the bottom of the muffler. Run the generator for approximately 5 minutes in an area clear of dry grass, leaves and other combustibles. Replace the plug.

110-Volt Generator - Preparation For Use (All Units)

Before using the generator, make sure the external power cord has been plugged into the generator receptacle, located inside the cord storage compartment. This step is not necessary on Chieftain 29RT and Sunflyer 29RT models.



110 VOLT POWER CORD

The existance of an automatic conversion circuit on Chieftain 29RT and Sunflyer 29RT units makes it unnecessary to disconnect the external power cord when using the generator. The outside power source and internal 12-volt system are automatically disconnected when the generator is started. Before driving off, make sure power cord has been disconnected and properly stowed.

WARNING

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 a dealer or authorized service center.

Next, start the generator engine using either the dash located start/stop switch or the one located on the generator engine itself. Refer to the starting instructions in this section for the generator unit in your vehicle.

The 110-volt generator may be started and operated while the motor home is in motion as long as the power cord has previously been plugged into the generator receptacle. The dual battery switch, located on the dash (or driver's sidewall in C-Body motor homes) must be in the middle or "single" position prior to generator operation.

CAUTION

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

Operation Cautions

WARNING

There is carbon monoxide (CO) in the exhaust of all internal combustion engines. 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.

1. Do not simultaneously operate the generator engine and a ventilator which could draw air into the vehicle, resulting in the entry of exhaust gases.
2. Do not open windows or ventilators on the end or side of the vehicle where exhaust of the generator is located.
3. When parked, orient the vehicle so that the wind will carry the exhaust away from the vehicle. Also, note the position of other vehicles.
4. 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 done.

Overload Circuit Breaker

The auxiliary 110-volt generator is equipped with a circuit breaker to protect the generator and wiring from damage by an electrical overload.

All Onan generators are equipped with a circuit breaker built into the control box with a reset button located on the side. Should an overload on the generator or a short in the wiring occur, the button will pop out. Allow a brief cooling period and depress the reset button to the "IN" POSITION.

If the overload button or switch is continously tripped, have your dealer determine the problem and correct it immediately.

Onan 110-Volt Generator - Operation

To start the generator, move start/stop switch to the "Start" position; release as soon as the engine starts. If the engine fails to start the first time it is used, rust inhibitor oil, used at the factory, may have fouled the plugs. Remove the plug(s), clean in a suitable solvent, dry thoroughly and reinstall. Heavy exhaust smoke when the engine is first started is normal and caused by the inhibitor oil.

CAUTION

Do not hold the switch down for an extended period if the engine fails to start. Always allow a few seconds interval before reenergizing.

IMPORTANT

Allow the unit to warm up before connecting a heavy load.

Stopping

When possible, allow the set to operate a few minutes without load to cool before stopping. Then move the start/stop switch to the "Stop" position and hold until the unit stops completely.

Break-In Procedure

To ensure satisfactory service from your generator, proper oil and the recommended service schedule should be used. Use the following break-in procedure to ensure a long operating life for your unit:

1. One-half hour at 1/2 load. On 3,000 watt sets, half load can be considered one air conditioner, while on 4,000- and 6,500- watt sets, half load is equal to one air conditioner and 500 watts additional load.
2. One-half hour at 3/4 load. On 3,000 watt sets, three-fourths load can be considered one air conditioner and 500 watts additional power while on 4,000- and 6,500- watt sets, three-fourths load is equal to one air conditioner and 1,500 to 2,000 watts additional power.
3. Change crankcase oil after the first 50 hours of operation.

Onan 110-Volt Generator - Maintenance

Engine Oil Check (4,000- and 6,500- Watt Generator Units)

Check the engine oil level daily prior to operation of the unit. The oil dipstick is part of the oil fill cap located on the outboard side of the engine. Oil level should be between low and full marks. If necessary, add oil to the crankcase to bring the level to the full mark. DO NOT overfill.

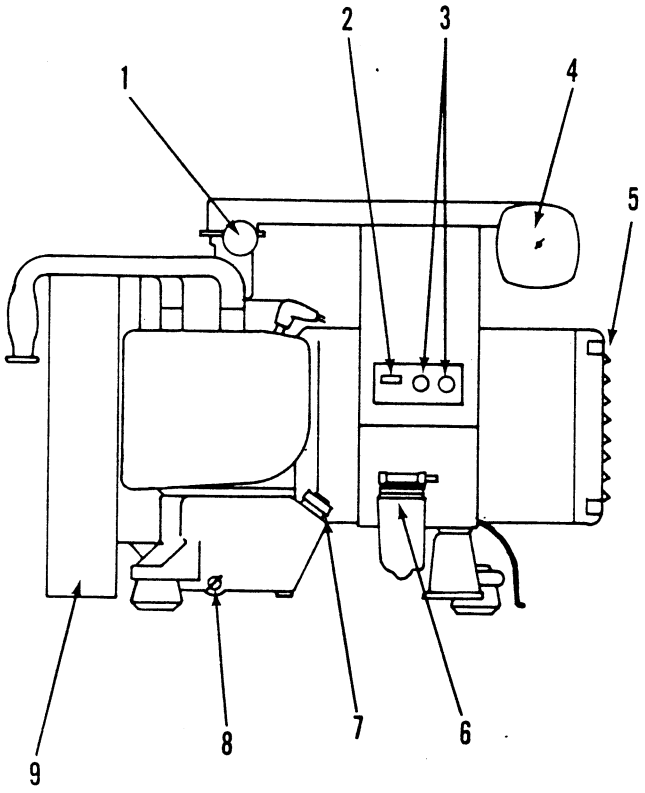
WARNING Do not check the oil level when the generator is operating. Hot oil may be forced out the filler neck.

After checking the oil, always reinstall the dipstick and tighten the oil fill cap securely.

Engine Oil Check (3000 Watt Generator Unit)

Check oil level daily prior to operation of the unit. Be sure the motor home is level when checking oil. The oil level should be maintained to the bottom of the oil fill hole. If necessary, add oil until the crankcase just starts to overflow out the fill hole.

WARNING Do not remove oil fill cap when engine is running; oil will blow out, possibly resulting in injury.



ONAN 110-VOLT GENERATOR

1. Electric Choke
2. Start/Stop Switch
3. Short Circuit Protection Fuses (DC)
4. Air Cleaner
5. Air Intake Ducts
6. Fuel Pump
7. Oil Fill and Dipstick (Dipstick is absent on single cylinder engine)
8. Oil Drain Valve
9. Air Discharge Scroll

NOTE: Two cylinder generator unit shown. 3000 watt unit with single cylinder engine is similar in appearance.

OIL CHANGE

Change the engine oil every 100 hours of normal operation or more frequently if extremely dusty or dirty conditions exist. Use a good quality oil with the API (American Petroleum Institute) designation of SE or SE/CC. Use the table provided on page 50 to choose the appropriate weight of oil for expected climatic temperature.

Oil capacity is:
3000 Watt - 2 quarts
4000 and 6500 Watt sets - 4 quarts

AIR CLEANER ELEMENT

Under normal operating conditions, the air cleaner element should be removed and cleaned every 100 hours of operation. Tap the element on a clean flat surface to dislodge dirt particles. Do not use liquids or compressed air to clean the element, as damage to the filter material may occur. Replace the element after each 200 hours of operation or more often in dusty conditions.

IMPORTANT

Always use the proper air filter for replacement.

IMPORTANT

Since the generator engine is air cooled, it is important that nothing obstructs the air flow to and from the engine and generator. Make sure the cooling fins always remain clean and that the air housing is properly installed and undamaged.

FUSE REPLACEMENT

The generator is protected from short circuits in the 12-volt wiring by two 5-amp fuses located on the generator control box. The F1 fuse protects the remote wiring to the generator "on" light and hourmeter. Failure of the hourmeter and light on the dash mounted switch to operate may indicate that the F1 fuse has blown.

F2 fuse protects the ignition circuit from shorts or overloads. If the starter operates but the engine will not start, or if the engine suddenly stops, failure of this fuse may be indicated.

Use an identical 5-amp fuse for replacement of either the F1 or F2 fuse. Should the problem occur again, have the set checked by your dealer or by an authorized Onan service center.

Storage Procedure (All Units)

If the generator set is to be out of service for more than 30 days, the following steps should be taken to preserve the set before placing it in storage:

1. Run the generator set until thoroughly warm.

2. Shut off fuel supply and allow the engine to run out of fuel. Also operate the choke manually as the engine stops to help drain the carburetor.

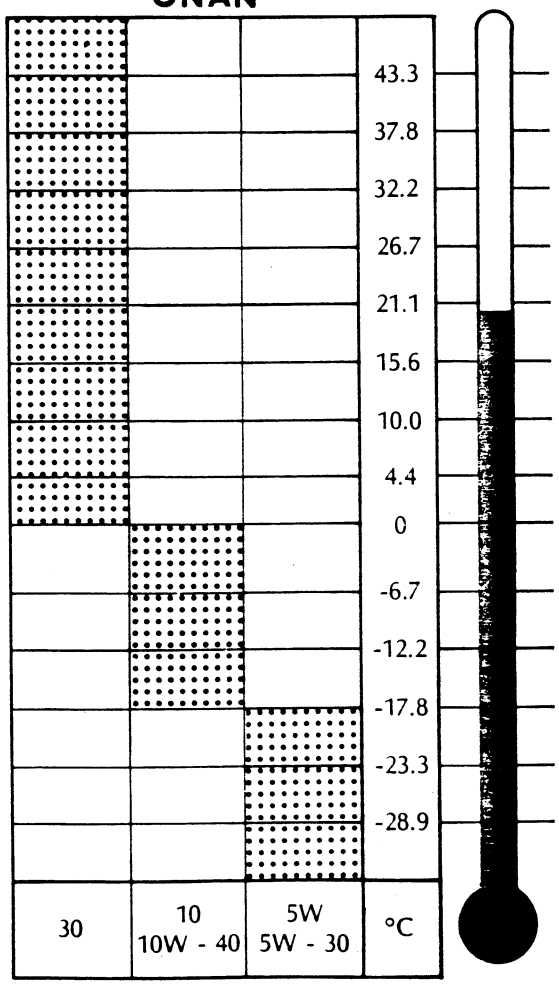
3. Drain oil from crankcase (while hot) then flush with clean lightweight oil. Refill crankcase with regular weight oil after flushing with light oil. Replace oil filter on those engines so equipped.

4. Remove the spark plug, pour one tablespoon of oil into the hole, crank the engine several times, then reinstall the spark plug.

5. Clean exterior surfaces of generator set, then coat any unpainted metallic surfaces with light oil.

6. Plug the exhaust outlet to prevent entrance of moisture, dirt, insects, etc.

110-Volt Generator
ONAN



Recommended Oil Viscosity

IMPORTANT
Regularly scheduled maintenance is the key to lower operating costs and longer service life for the unit. The following schedule can be used as a guide. However, actual operating conditions under which a unit is run should be the determining factor in establishing a maintenance schedule. When operating in very dusty or dirty conditions, some of the service periods may have to be reduced. Check the condition of the crankcase oil, the filters, etc., frequently until proper service time periods can be established.

SERVICE SCHEDULE FOR ALL ONAN GENERATORS

DAILY (OR BEFORE EACH START-UP)

- General Inspection (Check exhaust system audibly)
- Check Oil Level

EVERY 100 HOURS

- Clean Spark Arrester
- Check Spark Plugs (Replace annually or prior to storage)
- Check Breaker Points
- Change Crankcase Oil
- Clean Governer Linkage
- Check Air Cleaner Element

EVERY 200 HOURS

- Replace Air Cleaner Element
- Clean Cooling Fins
- Change Oil Filter (On those units so equipped)
- Replace Breaker Points
- Clean Crankcase Breather
- Remove Carbon Deposits From Heads

EVERY 400 HOURS

- Adjust Tappets
- Replace Fuel Filter
- Clean Carburetor

AS REQUIRED

- Check Generator Brushes (Replace if necessary)

SERVICE SCHEDULE FOR ALL AUXILIARY GENERATORS

LP GAS SYSTEM

LP GAS SUPPLY

LP gas (Liquefied Petroleum Gas) is a true gas, compressed into liquid form for easy transportation and storage. It is also known as bottled gas or tank gas; or simply as butane or propane which are the two types of LP gas.

The LP gas system supplies fuel for the range, water heater, furnace and the refrigerator (when placed on the LP gas mode).

Under proper conditions and handling, the system is safe, economical and provides modern living conveniences wherever you travel.

Butane and propane gas are commonly used in recreational vehicles. Butane burns hotter than propane, but will not become a usable gas vapor at temperatures lower than 32°F. Propane will not become a usable gas vapor at temperatures lower than -44°F. For this reason, propane is popular in cold climates, while butane and mixtures of butane and propane are used most widely in mild climates. LP gas is stored in the tank under very high pressure. The pressure is reduced to under one pound when it passes through the regulator system. When LP is used in the vapor form, it expands many times. Your motor home uses the LP in a vapor form only.

IMPORTANT

Most LP dealers normally handle only the type of LP gas used in their area and climate. Mixtures of butane and propane will normally be sold in the warmer southern states, while propane, which vaporizes down to -44°F, will be sold in northern states. If you are having your tank filled in one of the warmer states, but anticipate traveling into a colder area, it is advisable to request propane. Otherwise your LP gas system may fail to operate the first time the temperature drops below 32°F since the butane will not vaporize below this point.

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, lighting, water heating and refrigerating.

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.

IMPORTANT

All LP gas tanks must bear a red triangular sticker labeled: Flammable Liquefied Petroleum Gas. Have tank properly inspected and labeled if necessary, before making a trip.

TROUBLE-FREE AND SAFE USE OF THE LP GAS SYSTEM

Use caution at all times. Know the distinctive 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. In an emergency the tank valve must be accessible.

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 be closed leak-tight by hand. If a wrench is required to stop a leak, replace the valve.

Never allow the tank to be filled above the 80 percent level indicated by the flow of liquid gas out the overflow valve.

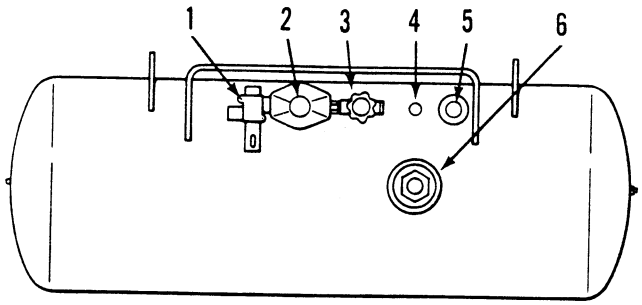
BULK TANK SYSTEM

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 is not done, LP gas could accumulate inside the motorhome creating a fire or explosion hazard. The recommended procedure for opening the control valve is to turn the knob counterclockwise until it is open all the way, then close it one quarter turn. This will enable you to tell if the valve is open or closed.

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 at the regulator outlet. Refer to "Leak Detector" on page 54 for operating procedures.

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 about 10 per cent of the full capacity.



BULK LP TANK

1. Leak Detector
2. Regulator
3. Control Valve
4. 20% Fixed Level Overflow Valve
5. Filler Valve
6. Float Gauge

WARNING 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-Liquefied 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.

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 area must remain empty to allow the gas to vaporize.

WARNING Make sure all pilot lights have been extinguished before refilling LP gas tanks.

WARNING 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.

TRAVEL WITH LP GAS

It is recommended that all LP gas appliances 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 about LP tanks and their use. For example, it is illegal for motor homes to pass through certain tunnels in the nation because of the LP tank aboard, even if the outlet valve is

closed. We suggest you always check the local regulations of the states through which you plan to travel.

REGULATOR FREEZE-UP

Regulator freeze-ups are caused by the presence of moisture in the 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 keep moisture out, but sometimes only a fraction of an ounce in a tank of gas 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 of fuel 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 the point that the demand becomes too great. 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 and using less hot water will help as well.

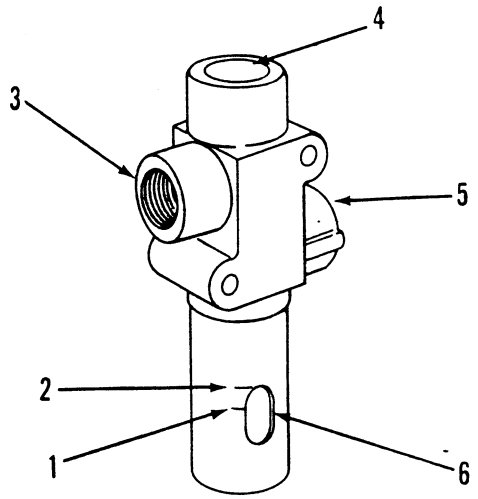
LP GAS SYSTEM MAINTENANCE

Leak Detector (Rosan)

An LP gas leak detector is installed on all Winnebago and Itasca motor homes as standard equipment to detect gas leakage in the gas plumbing and appliance system. The leak detector is installed next to the LP tank regulator with the outlet port of the detector connected to the plumbing system into the motor home. In this way, every joint beyond the leak detector is quickly checked whenever the detector is activated.

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

The connections at the regulator and at the tank control valve should be checked with a soapy water solution each time the tank is refilled.



LEAK DETECTOR

1. Minimum Liquid Level
2. Maximum Liquid Level
3. Inlet Port from Regulator
4. Red Actuation Plunger
5. Outlet Port to LP Gas System
6. Sight Glass Port

1. Close LP gas tank valve.
2. Ventilate the motorhome by opening doors and windows.
3. Shut off all LP gas appliances, including pilots.
4. Open one stove burner valve and light burner to deplete any pressure in the LP system (This will take a minute or two depending on the size of your vehicle.) Close valve when the flame goes out. (If the flame continues to burn, the LP gas tank valve may not be closed.)
5. While depressing red button on top of leak detector, open LP gas tank valve. A stream of bubbles will be visible in the leak detector sight glass immediately, but these should disappear in about two seconds. Continue to depress the plunger for 5 to 10 seconds.

   A. If no bubbles are visible during the 5 to 10 second period, your system is secure at this time.
   B. If bubbles are visible during the 5 to 10 second period, there is a leak. Proceed with step 6.

IMPORTANT
Liquid level in the leak detector must be between minimum and maximum marks for proper operation. If a burner is left on during a test or if the red button is depressed while the gas system is in operation, significant bubbling may occur which blows the liquid up into the body of the detector. To correct the situation, close the LP gas tank valve and deplete the pressure in the system as outlined in steps 1 through 4. Then depress the red button to allow the trapped fluid to return to the sight glass. If this procedure does not refill the sight glass to the level line, the lost fluid must be replaced by your dealer.

6. Conduct a soapy water test at all joints. Tighten if necessary and retest system.

WARNING

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.

7. If test still indicates a leak, contact your Winnebago dealer or a qualified LP gas service facility.

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

WARNING

Never use an open flame to test for gas leaks.

Leak Detector (Marshalltown Inst.)

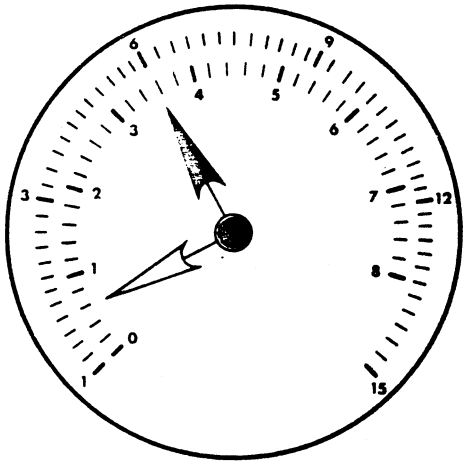
Your motor home may be equipped with the Marshalltown Instrument LP gas leak detector.

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.

WARNING

Do not smoke or expose the unit to open flame or extreme heat when conducting an LP gas leak test.



1. Close LP gas tank or cylinder valve(s).
2. Ventilate the vehicle. Open doors and windows.
3. Shut off LP gas appliances, including pilots.
4. Now, slowly open the LP gas tank or cylinder valve(s).
5. Observe the pressure reading on the gauge as indicated by the black pointer and match this position with the moveable red pointer.
6. Close the LP gas tank or cylinder valve(s).
7. With the LP gas tank or cylinder valve(s) in a closed position, monitor the 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.
   B. If the black pointer does move to a lower setting on the gauges as compared to the red pointer, your system has a leak.
8. Conduct a soapy water test at all joints. Tighten, if necessary, and retest.
9. If test still shows a leak, contact your Winnebago /Itasca dealer.

Air in the LP Gas Tank

Air in LP gas containers must be removed prior to the 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 with LP gas vapor prior to filling.

WINTER USE OF LP GAS

Due to the vaporization characteristics of LP gas, it is important that the winter camper knows how to most efficiently use the LP system. The vaporization rate of LP gas decreases in a direct relationship to a decrease in temperature. As described in the "LP Gas Supply" 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 three fourths empty. Therefore, it is to your advantage to keep the tank as full as possible (not to exceed the full level of 80% during cold weather).

Tank Level	BTU's Available at 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.

WARNING

Make sure the filling attendent 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.

WATER SYSTEM

The water system in your motor home can 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 hot water heater.

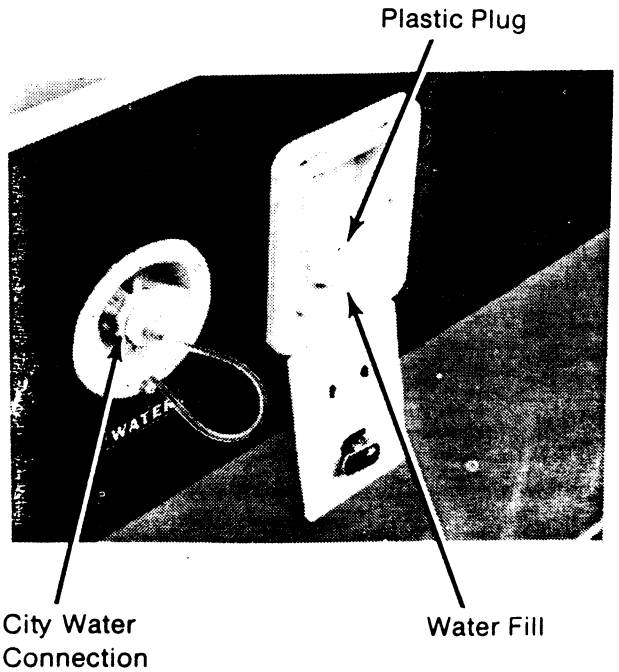
INTERNAL WATER SYSTEM

The internal water system consists of a lightweight polyethylene water storage tank, a water filter and a self priming water pump which automatically provides water pressure when and where it is needed. A check valve is included in the system to prevent water from flowing back through the pump when hooked up to city water line.

Filling Procedure

The tank fill access is located on an exterior sidewall or backwall 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 FILL

Water Pump

Pressure for 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 gauge 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. As long as 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

1. 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.
4. Close each faucet as it starts to deliver a steady stream of water. (Close cold water first). Leave hot water faucets on until they too deliver a steady stream of water. This will ensure that the water heater is filled with water as well. Make sure hot water heater drain valve is closed.
5. Check to be sure pump stops soon after all faucets have been closed.
6. Pump is now ready for automatic operation. Pump will start when a faucet is opened and stop when a faucet is closed.

Demand Water Pump -Maintenance

Your motor home may be equipped with either a direct drive demand water pump or the belt drive demand water pump.

The water pumps should be inspected at three month intervals to insure proper operation and correct any apparent service conditions that may develop.

Belt drive water pumps should be checked for belt wear and proper belt tension. The motor mounting is slotted for belt tension adjustment. When properly adjusted, the belt can be moved or deflected about 1 / 4" half way between the pulleys. Also check to be sure the pulleys are tight on the shaft.

Water Pump Location - The water pump is located in one of the following locations, depending on the motor home model and floor plan:

1. Beneath the galley sink.
2. Beneath the left rear dinette seat.
3. Beneath the left slide-out couch.

Access to the pump is either through a galley cabinet door or under a dinette or couch seat cushion.

Water Filter

A pump guard located between the storage tank and the water pump contains a screen for filtering out any foreign material that may have entered the tank. This prevents damage to the pump and avoids clogging of any of the components of the water system.

The filter screen in the pump guard should be checked visually (the cover is transparent) at regular intervals to make sure it does not become clogged. When necessary, remove the cover from the guard and clean the filter thoroughly by rinsing with clean water. Then reinstall filter and cover.

TROUBLESHOOTING DEMAND PUMP

PROBLEM	PROBABLE CAUSE	SOLUTION
Pump will not prime (It should do this automatically).	Insufficient water supply.	Check water tank level and refill if low.
	Auxiliary battery is discharged.	Recharge battery.
Pump operates but no water flows through faucet.	Insufficient water supply.	Check water tank level and refill if low.
Pump cycles on and off when faucets are closed.	Water leaks in plumbing.	Check for leaks and have them repaired immediately.
	Toilet valve not shutting off.	Check for foreign material in groove into which the blade seats. Remove any material.
		Have your dealer check to be sure valve isn't defective.
Pump fails to stop when faucets are closed.	Water tank is empty.	Shut off pump and refill water tank.

SANITIZING THE POTABLE WATER SYSTEM

To sanitize a new potable water system, systems that have not been used for a period of time, water systems 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:

1. 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 into tank. Use one gallon of solution for each 15 gallons of tank capacity.
2. 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.
5. 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.
6. Agitate the solution by driving vehicle 3-4 miles or more, including stops and starts.
7. Drain the tank and flush with fresh water.
8. 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

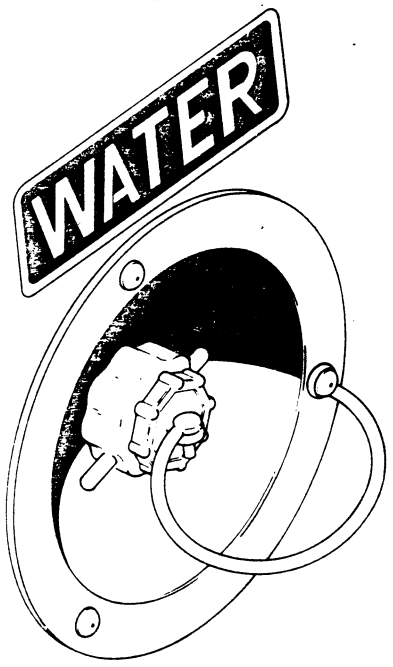
To operate from a city water supply, first turn the demand pump switch "Off". Then attach a hose to the hose connection on your vehicle and to the source of water.

CAUTION

Because of the variance of water pressures, it is suggested you install a pressure regulator. The pressure should not exceed 60 pounds on the line, as the lines could rupture or the fixtures could leak.

A regulator should be installed at the water hook-up where the hose is connected and the hose 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 the 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 the external water supply, first turn off the water at the source. Open one of the faucets inside the motor home to relieve line pressure and disconnect the hose from the vehicle. Be sure to replace plug on connection after hose has been disconnected.



CITY WATER CONNECTION

Drainage System

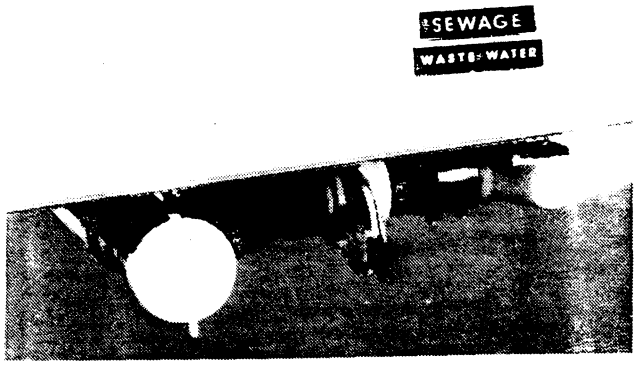
The drainage system has two separate holding tanks and dump valves; one for sewage waste from the toilet and on some models, the lavatory sink. The other is for waste water from the galley, shower and on most models, the lavatory sink. Each of the systems and holding tanks empty through a common fitting located on the left side of the vehicle. The drainage system is self contained, allowing use of the toilet, sinks or shower even in areas where sewage hook-up is not available.

DUMPING HOLDING TANKS

1. Remove drain hose from rear bumper or exterior storage compartment.
2. Open dump valve cover door on driver's side of vehicle, if so equipped.
3. Remove dust cap from drain and connect drain hose. Be sure it is firmly attached.
4. Place the other end of sewer hose into disposal opening.
5. Open the valve with a quick pull. Move hose gently about to dislodge any waste and to ensure complete drainage.
6. 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 as soon as tank is empty.
7. 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.
8. It is advisable to add approximately a half gallon of water and a tablespoon of dishwashing detergent or some odor control chemical to the sewage holding tank.

CAUTION Although many detergents and bleaches have a deodorizing effect, they should not be used to clean or deodorize the toilet or holding tank. These could damage the seal in the toilet or the holding tank valve.

9. Rinse sewer hose thoroughly with water and stow.



SEWAGE DUMP VALVE

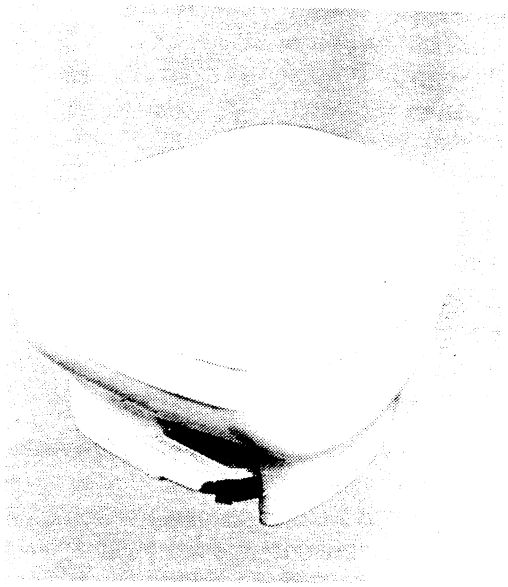
USE OF IN-PARK SEWER SYSTEM

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 will aid in this process. Then reconnect the hose and drain in the normal manner.

FRESH WATER TOILET (Model SL)

The fresh water toilet operates on the same principle as a household toilet except that it is designed to use a small amount of water. It utilizes high velocity water injection which produces a swirl effect in the bowl. Since each flush uses fresh water, chemical additives are not required. Refer to the appropriate instruction for the toilet in your vehicle.

To flush the toilet, step on the large pedal until water swirls, completely rinsing the bowl, then release the pedal. Additional water may be added to the bowl by depressing the small pedal, located on the right side of the large pedal. This pedal should be used when it is necessary to add water to the holding tank for rinsing.



IMPORTANT
Do not put facial tissue or regular toilet tissue in the toilet. They will not deteriorate and often cling to the sides of the holding tank. Toilet tissue made specifically for use in recreational vehicle toilets is available from a recreational vehicle equipment dealer. Do not put automotive antifreeze, laundry bleach, or heavy detergents in the toilet or the sewage holding tank. These products may damage the plastic or rubber parts in the system.

Toilet Maintenance

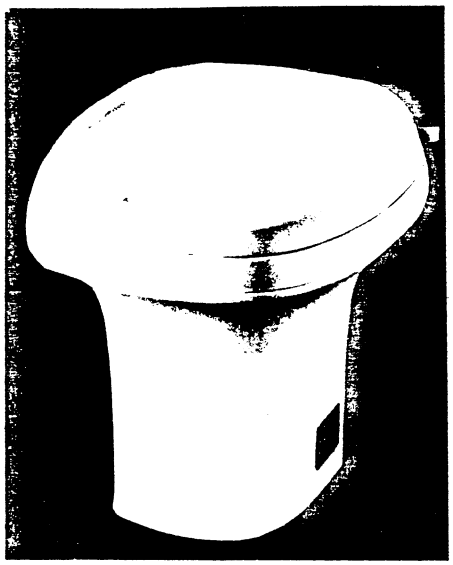
Routine maintenance of the toilet is not required. To clean the fresh water toilet, use a high grade non-abrasive cleaner, or a commercially prepared product intended for use in RV toilets. Do not use conventional bowl cleaners, as they can damage or scratch plastic surfaces.

If after extended use, the bowl sealing blade on the foot operated toilet, does not slide freely, it can be restored to its original smooth operating condition by applying a light film of silicone spray to the blade.

IMPORTANT
Do not use highly concentrated or high acid content household cleaners on the toilet. They may damage the seal.

TOILET TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Water keeps running into bowl.	The blade in the bottom of the bowl is not closing completely because the groove into which the blade seats is clogged. This in turn keeps the water control valve partially open.	Carefully remove the foreign material. Use care to avoid damaging the rubber seal.
	Defective valve.	Have toilet valve replaced by your dealer.
Pedal operates harder than normal or the blade sticks.	Blade does not slide smoothly in the guide.	Apply a light film of silicone spray to the blade.
Poor flush.	Foot pedal is not being held for sufficient flush.	Fully depress pedal.



FRESH WATER TOILET (Aqua-Magic IV)

The fresh water toilet operates on the same principle as a household toilet, except that it is designed to use a small amount of water. It utilizes high velocity water injection which produces a swirl effect in the bowl. Since each flush uses fresh water, chemical additives are not required.

The toilet is equipped with two operating levers located on the right side of the toilet when facing the unit. To flush the toilet, pull the black lever forward (clockwise) until the rinse clears the bowl and release the level slowly. Movement of the flush lever simultaneously opens the waste valve and allows waste to pass into the holding tank and simultaneously activates water flow. The lever should be held open for several seconds to allow an adequate flush to develop. The water fill lever (white) can be operated independently of the flush lever (black) if more than the normal 2' automatic bowl refill is desired.

IMPORTANT

Do not put facial tissue or regular toilet tissue in the toilet. They will not deteriorate and often cling to the side of the holding tank. Toilet tissue made specifically for use in recreational vehicle toilets is available at most recreational vehicle dealers.

Do not put automotive antifreeze, laundry bleach, vinegar solution or heavy detergents in the toilet, the water system or the sewage holding tank. These products may damage the plastic or rubber components in the system.

TOILET MAINTENANCE

Routine maintenance of the toilet is not required. To clean the fresh water toilet, use a high grade non-abrasive cleaner, or a commercially prepared product intended for use in RV toilets. Do not use conventional toilet bowl cleaners, as they can damage or scratch plastic surfaces.

IMPORTANT

Do not use highly concentrated or high acid content household cleaners or cleansers containing abrasives to clean the toilet. These products may damage the waste valve or the plastic parts of the toilet.

TOILET TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Water keeps running into bowl.	Sticking of the seal may be caused by foreign material on the waste valve blade or blade seal at the bottom of the bowl.	Check to see that the levers return all the way to the left. Carefully remove any foreign material from the seal or blade. Use care to avoid damaging the rubber seal.
Poor flush.	Lever is not being held for sufficient flush.	Hold the lever for 2 to 3 seconds for a good flush.
	Water supply flow rate may not be adequate.	Check to be sure water supply is adequate.
		Make sure lines or water filter are not clogged obstructing flow.

EQUIPMENT AND APPLIANCES

Gas Furnace

Furnaces used in Winnebago and Itasca motor homes are equipped with either a pilot light ignition or an automatic ignition circuit which lights the main burner when the thermostat calls for heat.

The standard equipment furnace on most motor home models uses a pilot light which is manually lit with a piezo (spark) ignitor. The automatic ignition furnace is standard on some models and optional on all other models. Refer to the operation instructions for the type of ignition on your motor home furnace.

The gas furnace is designed to provide safe and efficient heat throughout the interior of your motor home through the use of the LP gas and 12-volt electrical systems. The LP fuel is converted to heat at the burner and heats the metal heat exchanger. The blower then distributes this heat by way of connected heat ducts.

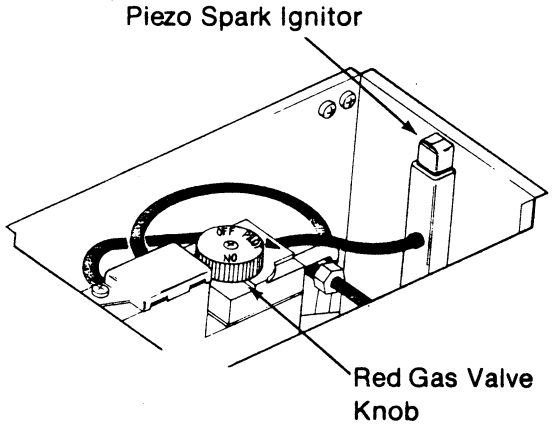
A fan switch, incorporated in the furnace, turns on the blower automatically when the temperature of the heat exchanger reaches a pre-set point. It is normal at the end of an operational cycle for the blower to cycle on once or twice to extract all the heat possible from the exchanger.

The furnace in your motor home also includes several safety features. The gas valve and pilot system are linked on the pilot ignition model. Positive shutoff of the LP gas occurs if the pilot goes out. Each furnace also includes an over-temperature safety (limit) switch which will shut down the burner temporarily if overheating occurs for any reason.

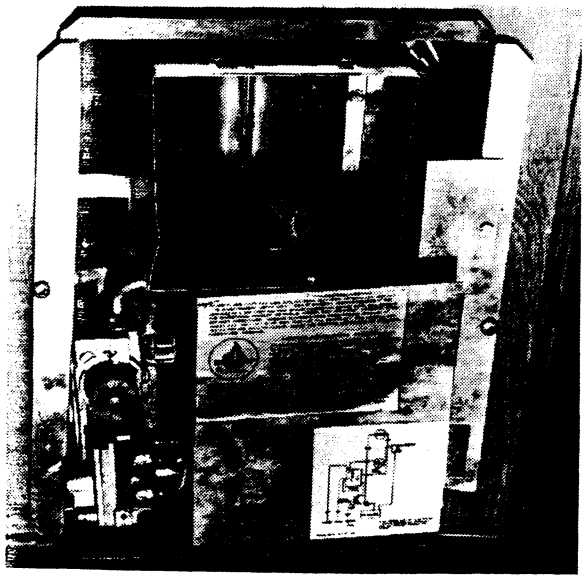
Operation - Pilot Ignition Furnace

Lighting Instructions - Piezo Ignitor:

1. Turn on gas at outside LP gas tank.
2. Turn wall thermostat to highest setting. Blower will start, purging the system of any gas build-up.
3. Remove front louvered panel. Make sure toggle switch, located to the right of the red gas valve knob, is in the "On" position
4. Depress red gas valve knob, turn to "Off" position and wait five minutes.
5. Reset thermostat to lowest setting. Blower will stop.
6. Turn red gas valve knob to pilot position. Depress red knob and light pilot by depressing ignitor. Several strokes may be required before pilot ignites. If the LP tank has been refilled, air may be present in the lines, making it necessary to hold the gas valve in a minute or more before the pilot ignites.
7. Continue to hold gas valve knob for one minute or until pilot remains lit after knob is released.
8. Turn gas valve knob to "On" position.
9. Replace front louvered panel.
10. Set wall thermostat to desired setting.



FURNACE CONTROL - COLEMAN



IMPORTANT

If the ignitor should fail for any reason, the pilot may be lit manually.

Lighting Instructions - Manual:

1. Turn on gas at outside LP gas tank.
2. Turn wall thermostat to highest setting. Blower will start, purging the system of any gas build-up.
3. Remove front louvered panel. Make sure system switch, located to the right of the red gas valve knob, is in "On" position.
4. Depress red gas valve knob and turn to "Off" position, remove observation window and wait five minutes.
5. Reset thermostat to lowest setting. Blower will stop.
6. Turn red gas valve knob to "Pilot" position. Depress red knob and light pilot using lighter rod and match.
7. Continue to hold in red knob for one minute after pilot has ignited or until pilot remains lit after knob is released.
8. Replace observation window.
9. Turn red gas valve knob to "On" position.
10. Replace front louvered panel.
11. Set thermostat to desired temperature.

IMPORTANT

Since the main burner valve is opened by an electro-magnet, the furnace will not operate unless there is sufficient electrical charge in the auxiliary battery or the 110-volt power cord is connected to an outside electrical source or optional 110-volt generator.

Shutdown Instructions

Furnace shut down is recommended when your motor home is left unused for any length of time:

1. Set wall thermostat control at "Off" position.
2. Turn red gas control valve to "Off" position.
3. Turn system switch located inside the front louvered panel to "Off" position.
4. Turn off gas at outside LP gas tank.

Operation - Automatic Ignition Furnace

The automatic ignition furnace eliminates the need for a pilot light or manual lighting. When heat is called for, an electric circuit opens the gas valve, activates the spark ignitor and starts the burner flame. When the interior temperature of the motor home has warmed to the thermostat setting, gas flow will be cut off and the flame will be extinguished. The furnace will continue to cycle on and off as long as the thermostat calls for heat.

WARNING

This furnace is sealed and cannot be lighted manually. Failure to follow the instructions exactly, may result in possible damage to the furnace and possible injury to the operator.

Starting the Automatic Ignition Furnace:

1. Turn on gas flow at outside LP tank.
2. Set wall thermostat to "Off" position.
3. Remove front louvered panel from furnace. Set system toggle switch, located to the right of red gas valve knob, at "Off" position.
4. Turn red gas valve knob to "Off" and wait five minutes.
5. Set system toggle switch to "On" position.
6. Turn red gas valve knob to "On" position.
7. Turn thermostat up until blower comes on.
8. Allow 20 seconds or more for furnace to light. A pre-purge cycle designed into the ignition system operates the blower for a few seconds before ignition to remove any gas accumulation from the chamber. On initial start-up in cold weather, it may take up to two minutes for the furnace to light.
9. If burner does not light, set thermostat to "Off" wait 30 seconds and repeat steps 7 and 8.
10. If after three tries, there is no ignition, turn the unit off and check the following items.
    A. If spark ignitor is not operating, check to be sure the charge in the auxiliary battery is sufficient. Recharge battery, connect motor home to external 110-volt power source or start the optional 110-volt generator.
    B. Check to be certain LP gas tank valve is open and that the tank is not empty.
11. After the furnace lights, replace front panel and set thermostat to desired temperature.

IMPORTANT

Care should be exercised when leaving the furnace unattended for any extended period of time.

1. The pre-purge system operates the blower prior to ignition to eliminate hazardous gas build-up in the chamber.
2. If the furnace does not obtain main burner ignition, the blower will continue to run and the possibility of discharging the battery exists.
3. Damage to the water system could occur because of lack of heat during freezing weather.

Shutdown Instructions

1. Set wall thermostat to "Off".
2. Turn red gas valve knob to "Off" position.
3. Set system toggle switch, located to the right of gas valve knob to "Off".
4. Turn off gas at outside LP tank.

Thermostat

After the furnace pilot has ignited, the operation of the furnace is controlled by the thermostat. The furnace main burner and blower will automatically cycle on and off to maintain the motor home interior temperature at the desired setting.

Furnace Maintenance

Since all burner adjustments are preset, field adjustments normally are not required. If adjustments are necessary, contact your dealer.

WARNING When performing maintenance on the furnace, shut off gas at the tank. Perform a gas leak test on tank valves and check connections using leak detector before relighting.

To keep the furnace in top operating condition, occasionally vacuum out the inside of the furnace casing to remove lint and dust that has accumulated. At least annually, have your dealer inspect the furnace and clean the internal components including the blower and main burner.

Furnace Troubleshooting

Should difficulties occur with the furnace, contact your dealer for assistance. However, a great number of service calls are unnecessary and could be avoided by first checking these areas of the LP gas and electrical systems:

1. Make sure there is gas to the furnace. Turn all gas valves to "On" position.
2. Make sure system switch, located inside front panel, is at "On" position.
3. Make sure electrical fuse for furnace, located on control panel, is not blown. Replace if necessary.
4. When operating on battery power, make sure auxiliary battery is fully charged.
5. Check gas supply to make certain tank is not empty or that regulator is not frozen.
6. If pilot continuously goes out, make sure observation cap with gasket is secure.
7. Check pilot flame - If not easily seen and a blue color, have serviceman adjust to proper size and color.
8. Make sure registers are fully open and not blocked, pinched or bent closed.

RANGE AND OVEN

The range and oven in your motor home are operated on LP gas and will provide nearly all of the functions that the range in your home does. One of the features of gas burners is that heat is available as soon as a burner is lit; as opposed to an element heating up. The opposite occurs when the burner is turned off, as no heat remains when the flame is extinguished. The range has a "Pilot Off" position on the oven control which allows the oven pilot to be turned off when traveling or refilling the LP tank.

OVEN CONTROL

1. "Pilot Off" Position
2. "Off"
3. Temperature Range
4. "Broil" Position

Use of Top Burners

1. Light match.
2. Turn control knob left (counterclockwise to the full "On" position.
3. Apply lighted match immediately to the burner.
4. Adjust the flame height by turning the knob toward the "Off" position.

WARNING Do not turn burner control knob to "On" and allow gas to escape before lighting match.

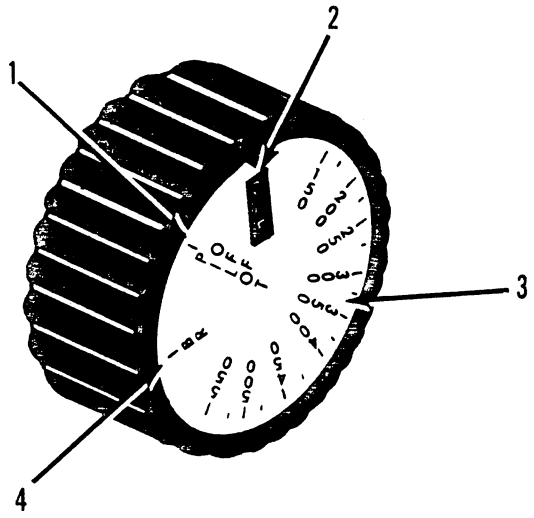
BURNER CONTROL

Use of the Oven

The oven is controlled by a low temperature thermostat which has no by-pass setting and will cycle off and on at all temperature settings except broil ("B").

Lighting Instructions:

1. Make sure oven thermostat dial is set at "Pilot Off" position.
2. Make sure LP gas tank valve is open.
3. Depress and turn oven thermostat dial to the "Off" position.
4. Open door and light oven pilot with a match. A small flame will be noted at the top of the pilot burner.



OVEN CONTROL

1. "Pilot Off" Position
2. "Off"
3. Temperature Range
4. "Broil" Position

Operating the Thermostat

Depress and turn the thermostat dial left (counterclockwise) to the desired temperature setting. There is a delay of about 45 seconds before the main burner ignites; this is also normal and no gas is escaping at this time. It is also normal for the oven burner flame to cycle off and on at all temperature settings except broil. This is to maintain a constant temperature in the oven.

Using Low Temperature

The oven in your motor home is capable of maintaining temperatures in the low range of 140 to 225 degrees. This feature allows the appliance to be used as a warming oven.

Shut Down Instructions

Turn the thermostat dial to the "Off" position. In this position, the oven standby pilot flame will remain lit.

When the motor home is not in use, or while traveling, turn the thermostat dial to the "Pilot Off" position and turn off the gas supply at the LP tank.

Care and Cleaning of the Range and Oven

To keep the range looking bright and new, wipe all surfaces after use with a warm detergent solution and a soft cloth. Porcelain enamel is glass which has been fused to metal. Properly maintained it will provide years of dependable service. Steel wool pads, wire scours and gritty cleansers will scratch or wear the surface, and therefore should not be used. Use a gentle cleansing powder or chemical grease remover. Some foods contain acid which will dull the porcelain finish. Among these are vinegar, lemon juice, tomatoes and milk. Wipe up all spills immediately.

IMPORTANT

Make sure glass surfaces are cool before wiping with a detergent and water solution.

The brushed chrome range top can best be cleaned with a damp cloth, and dry thoroughly. Stubborn stains may be removed with chrome polish.

IMPORTANT

Brushed chrome range tops may show signs of rust on underneath side due to certain atmosphere conditions and oxidation from the top burners. This is especially true in areas of high humidity and salt air areas. Keep the underneath area as dry as possible under these conditions or coat with a high heat tested rustolium or silicone paint if necessary.

Range Troubleshooting

With proper care, your range should provide several years of trouble-free service. Should difficulties occur, contact your dealer for assistance. However, before seeking service, it may save time and money to check to be certain the problem is not caused by misuse:

1. Air Circulation - Gas ovens must have free circulation of air to operate properly. Heated air comes in through openings in the oven bottom for even - temperature cooking. Anything which blocks or changes this air flow can cause poor results. A pan touching the side of the oven can block air flow, as well as conduct heat from the side which it is touching. This can

result in uneven baking on one side. The use of pans that are too large or sheets of aluminum foil to catch drippings or spillover will have the same effect and block air flow, as well as reflect heat from the bottom.

IMPORTANT

There should be at least one or two inches between the edge of a utensil and any oven surface.

2. Oven Cleaners - Oven cleaners (particularly the spray type) can coat the thermostat sensing device and cause it to malfunction. If oven cleaners must be used, protect the sensing device from the spray or wipe it off immediately.

CAUTION

If a commercial oven cleaner is used, protect aluminum gas tubing, thermostat sensing bulb and electrical components from the cleaner. (Masking tape can be used.) Thoroughly rinse oven with a solution of one tablespoon of vinegar to 1 cup of water.

POWER RANGE HOOD AND VENT (Optional on some models)

The power range hood is used to eliminate cooking odors and to expel gas fumes. A vent to the outside of the motor home automatically opens and closes when the fan is turned on and off. There are two knobs or switches on the top panel of the hood, one for the light and the other for the fan. The fan should always be operated when the range or oven is in use.

The filter located on the underside of the vent must be cleaned periodically for efficient operation. Remove the filter and wash with hot water and any household detergent, rinse thoroughly and dry. While the filter is removed, clean dust and grease from the fan blades.

NON-POWERED RANGE HOOD AND VENT

The non-powered range hood has a vent cover located beneath the hood which must be opened when the range or oven is in use to expel cooking odors and gas fumes. The cover is spring loaded to hold open when unlatched and will seal out outside air when closed. A light with an on /off switch is also located on the underside of the hood.

MICROWAVE OVEN (Optional)

The microwave oven is equipped with many features that make cooking fast, simple and efficient. In addition to the time, which allows selection of the recommended cooking time, a heat control is provided for regulating the amount of heat being used. A series of numbers located around the dial, corresponds with the setting (Example: Simmer - 5). Each of the numbers on the dial is a percentage of full power. "Low" on the control is approximately 10% of full heat or the "High" setting, 5 is 50%, etc. Heat control is attained by the cycling on and off of the heating device at any setting below "High".

Operating Cautions

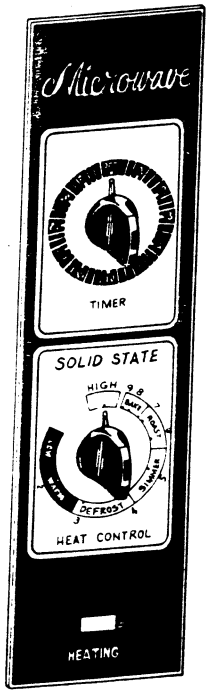
Do not attempt to operate the oven with the door open.

Do not place any object between the oven front and the oven door or allow material to build up on the seal.

Do not operate the oven if it has been damaged. It is particularly important that the door seal tightly and is not damaged in any way.

The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

Do not attempt to dry clothing or other material in the microwave oven.



Operating Instructions

1. Open the door; the interior light will come on automatically when the door is opened.
2. Place food in the oven using a suitable container made of paper, plastic or glass.

CAUTION

Do not place metal items or containers in the microwave oven as damage to the appliance may occur. If a glass container becomes excessively hot or sparks occur around the container, it may be an indication of lead content in the glass or in any paint on the glass surface. Discontinued use of the container is recommended.

3. Turn the heat control to the setting required. Refer to the cookbook for recommended cooking and defrosting settings. Each numbered setting is a percentage of full heat.
4. Determine cooking time by consulting the cookbook and set the time accordingly.

IMPORTANT

When setting the time for less than one minute, turn past one minute; then return to desired time setting.

5. Close the door and cooking will begin. The blower and heating indicator light come on as soon as the door is closed and latched. The interior light stays on during the cooking time. The timer will gradually return to zero as cooking time elapses.

Note: The oven light may flicker and the sound of the oven cycling on and off may be heard when the heat control is at a setting below "High". This is normal and is not cause for alarm.

6. If the oven door is opened during the cooking process, the timer and all microwave energy stops instantly. As soon as the door is closed, the blower and heating indicator light come back on and the timer resumes its countdown.
7. When cooking time has elapsed, a bell will sound and the light, blower and heating indicator will all go off.
8. Be sure to set the time at zero when the oven is not being used.

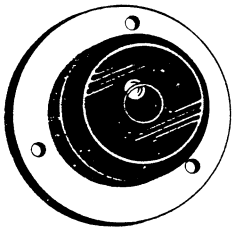
Care of the Microwave Oven

Both the inside and the outside of the oven may be cleaned with a mild soap and water solution. Do not use harsh detergents or abrasives. Make sure that water does not get into the top or back ventilation openings, as this can cause damage to the unit. The window should be washed with mild soap and water. Never use a window cleaner. The oven has a ceramic bottom which is sealed to the oven sides for easy cleaning. It is, however, breakable and should be treated the same as glass in this respect.

REFRIGERATOR (Sibir)

The refrigerator in your motor home is an absorption type which uses an ammonia-water solution for cooling. Basically, ammonia vapor is distilled from the solution by heat, produced from either gas or electricity. It is then carried to the finned condensor where it liquefies. The liquid flows to an evaporator where it creates cold temperatures by evaporating into a circulating flow of hydrogen gas. If the refrigerator, and consequently the evaporator coil, is not level, liquid readily accumulates forming pockets which can impair or block gas circulation and cause cooling to stop.

Before operating the refrigerator when the vehicle is stationary, place bubble level provided, on a flat surface on the top shelf of the food storage compartment. The refrigerator should not be operated with less than one half of the bubble showing inside the circle.



CAUTION

To obtain proper performance from the refrigerator and prevent damage to the cooling unit, make certain the motor home is level side to side and front to rear when parked. When the vehicle is in motion, the continous movement will not affect the

refrigerator since the rolling and pitching action will prevent pockets of liquid from forming. If the vehicle is parked in an out of level position for more than one hour, the refrigerator must be turned off.

Keep in mind that as convenient as RV refrigerators are, they are not as efficient as the larger unit in your home. The absorption refrigerator relies on a free circulation of air for cooling. When placing items in the refrigerator, be careful not to fill the compartment too full or place too many items around the evaporator fins, thereby blocking necessary air circulation. Also, a longer period of time is required to cool the storage compartment on an absorption refrigerator as compared to a Freon cooled model in your home. For this reason, it is recommended that the refrigerator be started up 12 hours before any items are placed in the cabinet, whenever possible. Do not place warm items in the refrigerator and expect them to cool within a few hours. Transfer foods from your refrigerator at home, or buy items, such as soft drinks, that have been cooled at the store, for maximum efficiency.

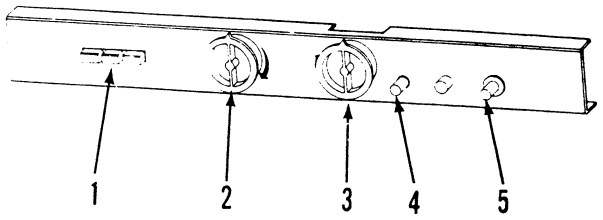
IMPORTANT

Any attempt to measure the temperature of the cooling compartment should be made by placing a thermometer in a food substance or liquid. Measuring the air temperature may result in a false reading.

OPERATION

The refrigerator controls are mounted on the front of the refrigerator and are accessible by opening the food storage compartment door. Selection of LP gas, 12-volt electric or 110-volt electric operation is made with the use of push button switches which are interlocked to prevent the accidental use of more than one system at a time.

Once pushed in, the button will remain in until pushed again and released, at which time it will pop out, shutting off the unit.



SIBIR REFRIGERATOR CONTROLS

1. Mode Selector Switches
2. Electric Thermostat Knob
3. Gas Thermostat Knob
4. Gas Valve Button
5. Ignition Button

GAS OPERATION

1. Make sure refrigerator is level.
2. Turn on gas supply at the LP tank.
3. Turn gas thermostat knob to maximum.
4. Depress gas selector button
5. Push in and hold the gas valve button.
6. Push the ignition button several times.
7. Observe spark through the lens at rear of cabinet interior (behind vegetable bin). When flame shows clearly, release ignition button but hold gas valve button for 20 seconds more to activate safety valve.
8. If flame goes out or there is difficulty in lighting burner, wait five minutes before repeating steps 5, 6 and 7.

IMPORTANT

Air may be present in the gas lines after refilling the LP gas tank, making it necessary to repeat the lighting procedure several times.

9. If after a few hours the refrigerator compartment is found to be too cold, turn gas thermostat to a warmer setting.

NOTE: To stop gas operation, push and release the gas selector button. It will then pop out and shut the refrigerator off.

12-VOLT ELECTRIC OPERATION

1. Make sure refrigerator is level.
2. Turn electric thermostat knob to maximum.
3. Push electric selector button marked "12 V". The switch should stay in.
4. If after a few hours the refrigerator compartment is found to be too cold, turn electric thermostat knob to a warmer setting.

NOTE: To turn off the 12V electric system, push and release the selector button. It will then pop out and shut the refrigerator off.

CAUTION

Do not use the 12-volt system to cool the refrigerator down to operating temperature from a warm state. The low voltage (12V) operation is intended for use when the vehicle is in motion and after the refrigerator has been pre-cooled on either LP gas or 110-volt electricity operation.

The refrigerator draws current from the auxiliary battery which can be recharged by the vehicle alternator while the engine is running. When the refrigerator has not been used for some time and the interior storage space is warm, maximum amperage drain on the battery occurs when an attempt is made to cool the interior temperature to a point where the thermostat begins to cycle to maintain a set temeprature.

Before starting the unit when it has not been operated for a day or more, the refrigerator should be pre-cooled by operation on gas or 110-volt electricity for 12 hours. This will ensure the refrigerator has reached operating temperature and will conserve battery power for in transit use. When the motor home is parked, switch the refrigerator to either LP gas or 110-volt electric operation to conserve battery power. Excessive electrical drain on the auxiliary battery also eliminates its availability for emergency starting power, should the automotive battery become discharged.

110-VOLT ELECTRIC OPERATION

1. Make sure refrigerator is level.
2. Turn electric thermostat knob to maximum.
3. Push electric selector button marked "110V". The switch should stay in.
4. If after a few hours the refrigerator compartment is found to be too cold, turn thermostat to a warmer setting.

NOTE: To turn off the 110V electric system, push and release the selector switch. It will then pop out and shut the refrigerator off.

CHANGING OPERATION MODE

To change from gas operation to electric or vice versa:

1. Push and release selector button presently being used.
2. Set thermostat for desired system at maximum.
3. Follow starting instruction, previously outlined, for desired mode.

DEFROSTING AND CLEANING

Frost will gradually form in the refrigerator and freezer compartments and on the cooling fins. Since excessive frost accumulation may reduce cooling efficiency, defrost the refrigerator at regular intervals (about every ten days when used continuously). Turn the thermostat control knob to a low setting to allow the storage and freezer compartment temperature to rise. Carefully remove frost accumulation from interior surfaces of the unit and soak up melted water with a cloth or sponge. Thoroughly dry all surfaces with a soft cloth.

CAUTION

Do not use metal or sharp objects to remove frost accumulation, as damage to the interior surfaces may result.

IMPORTANT

Be sure to return thermostat to the normal setting when placing the refrigerator back in operation. Also ensure that the interior has been pre-cooled on LP or 110 volt electrical operation before placing the unit on 12 volt operation.

Clean plastic and aluminum surfaces of the refrigerator interior regulary with a mild soap and water solution. After cleaning, rinse the interior with a mild solution of baking soda and water and wipe dry with a soft cloth.

IMPORTANT

To avoid oxidation, and the resulting discoloration of the aluminum lining of the freezer compartment, thoroughly clean and dry all surface areas before returning the refrigerator to operation.

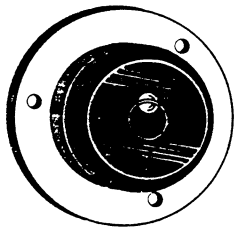
Avoid the use of abrasives or caustic cleaning powders or solvents on plastic material. These products may scratch or damage the plastic.

REFRIGERATOR (Norcold)

The refrigerator in your motor home is an absorption type which uses an ammonia-water solution for cooling. Basically, ammonia vapor is distilled from the solution by heat, produced from either LP gas or 110 Volt electricity and then carried to the finned condensor where it liquifies. The liquid flows to an evaporator where it creates cold temperatures by evaporating into a circulating flow of hydrogen gas. If the refrigerator, and consequently the evaporator coil is not level, liquid readily accumulates, forming pockets which can impair or block gas circulation and cause the cooling process to stop.

Before operating the refrigerator when the trailer is stationary, place a small level on the freezer plate and make certain the unit is level. Normal refrigeration installation is such that the freezer plate is parallel to the trailer floor. If the refrigerator is unlevel, then leveling the trailer in the proper direction will automatically level the refrigerator, and cooling performance will be satisfactory.

CAUTION

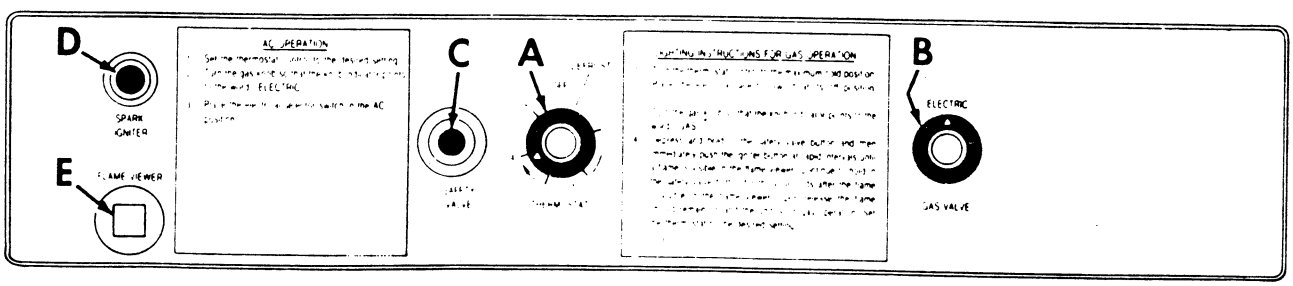


To obtain proper performance from the refrigerator and prevent damage to the cooling unit, make certain the trailer is level side to side and front to rear when parked. When the tow vehicle and trailer are in motion, the continuous movement will not affect the refrigerator since the rolling and pitching action will prevent pockets of liquid from forming. If the trailer is parked in an out of level position for more than one hour, the refrigerator must be turned off.

Keep in mind that as convenient as RV refrigerators are, they are not as efficient as the larger unit in your home. The absorption refrigerator relies on a free circulation of air for cooling. When placing item sin the refrigerator, be careful not to fill the compartment too full or place too many items around the evaporator fins, thereby blocking necessary air circulation. Also, a longer period of time is required to cool the storage compartment on an absorption refrigerator as compared to a freon cooled model in your home. For this reason, it is recommended that the refrigerator be started up 12 hours before any items are placed in the cabinet, whenever possible. Do not place warm items in the refrigerator and expect them to cool within a few hours. Transfer foods from your refrigerator at home, or buy items, such as soft drinks, that have been cooled at the store, for maximum efficiency.

IMPORTANT

Any attempt to measure the temperature of the cooling compartment should be made by placing a thermometer in a food substance or liquid. Measuring the air temperature may result in a false reading.



NORCOLD REFRIGERATOR CONTROLS

CONTROLS

All refrigerator controls are mounted on the front of the cabinet and are accessible by opening the food storage compartment door. Controls consist of a selector switch and a single thermostat that regulates the desired cooling temperature on gas and electric operation. The electric and gas controls are so designed that single operation of the refrigerator on either of the heat sources is assured. It is not possible to operate the unit on both LP gas and electricity simultaneously.

GAS OPERATION

1. Make sure refrigerator is level.
2. Turn on gas supply at LP bottle.
3. Turn thermostat to (A) maximum cold or full clockwise position.
4. Turn the operational selector knob (B) so the knob indicator is pointing to the word "gas".
5. Depress and hold in the safety valve button (C) for approximately 15 to 30 seconds after the flame is visible. Upon release, the flame should remain on the unit if on gas operation.
6. If after a few hours the refrigerator compartment is found to be too cold, turn the thermostat to a warmer setting (lower number).

ELECTRIC OPERATION

1. Make sure refrigerator is level.
2. Turn thermostat to maximum cold or full clockwise.
3. Turn the operational selector knob so the knob indicator is pointing to the word "electric".
4. If after a few hours the refrigerator compartment is found to be too cold, turn the thermostat to a warmer setting (lower number).

CHANGING OPERATION MODE

To change from LP gas operation to 110 volt electric operation, simply turn the selector to electric and the change will have been made. Since the thermostat controls both the gas and electric operation, the necessity of resetting the temperature when a power source is change is eliminated. To change from electric to gas operation, turn the selector to the word gas and follow the lighting instructions for gas operation.

REFRIGERATOR SHUT DOWN

To shut off the refrigerator for extended periods, follow the procedure.

1. Turn the thermostat to the "off" position (full counterclockwise). This will interrupt the AC power. If the unit has been operating on LP gas, turn the operational knob to "electric" to ensure the gas supply is shut off at the control manifold.
2. Disconnect the AC power supply and turn off the LP gas supply at the bottle.
3. Remove, empty and thoroughly dry the ice cube trays.
4. Remove all foodstuffs from the freezer and food compartments.
5. When the refrigerator has defrosted, clean the entire interior of the unit using mild soda solution. After cleaning, the door should be left slightly ajar.

DEFROSTING THE REFRIGERATOR

After a period of operation, frost may gradually accumulate on the freezer plate and the cooling fins in the food compartment. This frost accumulation, if not periodically removed, will impair the efficiency of the refrigerator. Should frost be allowed to continually build up on the cooling plates, it acts as an insulator preventing the cooling plates to efficiently remove the heat created by door openings and the storage of foods. Periodic defrosting is therefore necessary for efficient and economical operation.

To defrost the refrigerator on gas or electric operation, turn the thermostat to the "Off" position. Empty the ice cube trays and fill them with hot water placing them on the cooling plate. This will accelerate the defrost cycle. When all frost has melted, empty the drip tray from beneath the finned evaporator and wipe up the excess moisture with a clean cloth. Replace the drip tray and all the food stuffs; then place the refrigerator into operation. Set the thermostat to its coldest setting for a few hours for maximum cooling before returning it to its normal position.

CAUTION Do not use metal or sharp objects to remove frost accumulation, as damage to the interior surfaces may result.

CLEANING THE REFRIGERATOR

Cleaning the interior of the refrigerator should only be done using a mild soda solution. Do not use harsh or abrasive type cleaners as they will attack the surface of the plastic and aluminum surfaces.

It is important to maintain the cabinet in a cleanly state to eliminate the possibility of food odor.

REFRIGERATOR TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Food items are not cooled sufficiently in spite of thermostat being set at "coldest".	Cabinet area has been filled too full and air circulation has been blocked.	Remove unnecessary items and rearrange to provide circulation of air around the evaporator fins.
	Warm items have been placed in the cabinet.	Allow more time for cooling warm items. Utilize items that were previously cooled in the home refrigerator or a store cooler.
	Cooling compartment was not allowed to cool sufficiently before filling.	In the future, start the refrigerator and allow it to cool a few hours before filling.
	Refrigerator out of level.	Level the motor home, if it cannot be leveled. shut the refrigerator off.
	Insufficient LP gas supply.	Check LP tank and refill if necessary or switch to 110-volt electric operation.
	Thermostat failed.	Have your dealer replace thermostat.

WATER HEATER

Pilot Ignition Water Heater

Access to the water heater and its controls is on the outside of the vehicle. A safety valve on the water heater automatically shuts off the gas should the pilot blow out from vehicle motion.

Controls

Two types of gas valves are used on the water heater units, depending on availability. When lighting the pilot and operating the controls, refer to the instructions and illustrations pertaining to the type of control valve used in your motor home.

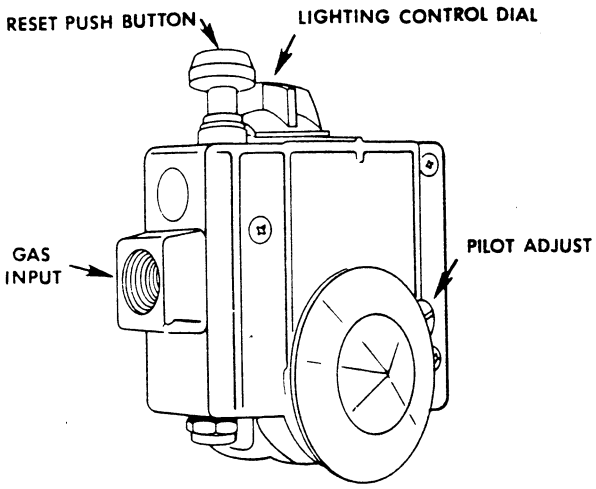
ROBERTSHAW CONTROL

Control Functions

Gas Control Dial - The dial has two positions in addition to "Off". Gas flows to the pilot only when the dial is in the "Pilot" position for lighting. The "On" position allows gas flow to the pilot and main burner after the pilot has been lit. The "Off" position is used for complete shutdown

Reset Button - When held down, the reset button allows gas flow to the pilot and resets the thermostat safety valve.

Temperature Dial - Allows selection of the desired water temperature.



ROBERTSHAW

ROBERTSHAW CONTROL

1. Reset Button
2. Gas Control Dial
3. Temperature Control Dial

Lighting Instructions

WARNING

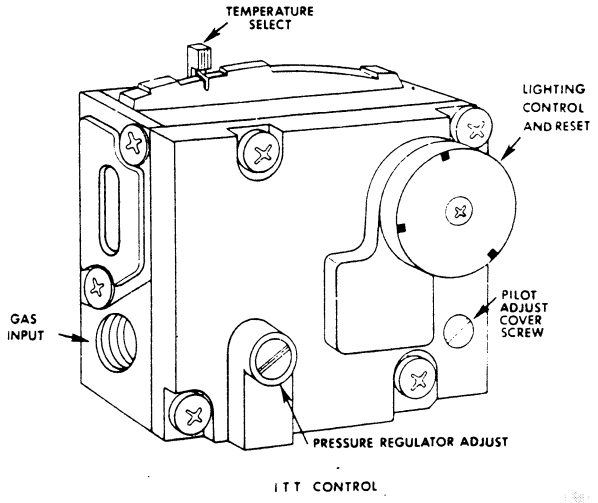
When relighting extinguished pilot flame, turn gas control valve to "Off" and wait five minutes before proceeding.

1. Turn gas control valve to "Pilot" position.
2. Depress and hold reset button while lighting pilot burner. Allow pilot to burn approximately 30 seconds before releasing reset button. If pilot does not remain lit, repeat operation and wait longer before releasing reset button.
3. Turn gas control dial to "On" position and turn temperature dial to the desired position.

ITT CONTROL

Control Functions

Lighting /Control Dial - This dial has three positions which control gas flow to the pilot and burner. The "Off" position is used for complete shutdown. When the dial is placed in the "Pilot" position, gas is permitted to flow to the pilot only. Holding the dial against the spring loaded stop at "Pilot" opens the gas flow and resets the thermomagnet for lighting. The "On" position allows gas flow to the pilot and the main burner after pilot has been lit.



ITT CONTROL

ITT CONTROL

1. Temperature Selection Lever
2. Lighting /Control Dial

Lighting Instructions

WARNING

When relighting extinguished pilot flame, turn control dial to "Off" and wait five minutes before proceeding.

1. Turn lighting /control dial counterclockwise against spring loaded stop while lighting pilot burner. Continue to hold against stop 30 to 60 seconds until pilot remains lit after releasing dial.
2. Turn control dial clockwise to "On" for automatic control.
3. Set selection lever for desired water temperature.
4. Ensure main burner cycles on and off to maintain water at desired temperature. If burner does not cycle on and completely off, have your dealer check water heater control.

NOTE: Water temperature must be above 50° F before the burner will cycle on and off.

Temperature Control Lever - This lever permits selection of the desired water temperature by setting the lever at a position between the "Hot" and "Warm" markings. Approximate temperatures for the two positions are 160° F at the "Hot" setting and 115° F at the "Warm" setting.

ELECTRONIC IGNITION WATER HEATER, MOTOR AID AND REAR AUTOMOTIVE HEATER - OPTIONAL

Some motor home models can be equipped with the electric ignition water heater, motor aid and rear automotive heater package.

Electronic Ignition Water Heater

When a flame is needed, an electrical circuit opens the gas valve, operates a spark ignitor, and starts the burner flame. When water has been warmed to the set temperature, the gas flow will be cut off and the flame will be extinguished. The burner flame will continue to cycle, as long as the control switch is on, each time there is a demand for hot water.

To start the water heater:

1. Place switch to the "On" position.
2. If switch light comes on, place the switch to the off position, and wait 30 seconds. Repeat step 1. The appearance of the light indicates the burner has not ignited.

IMPORTANT

It may take more than one start attempt when the unit is being used for the first time or after the LP tank has been refilled.

3. Leave the switch in the "On" position as long as hot water is desired.

IMPORTANT

Always return the switch to the "Off" position when the water heater is not being used.

The water heater is also equipped with a manual reset automatic gas shutoff which is actuated by high temperature and shuts down whenever overheating occurs. To reset the unit:

1. Position control switch in "Off" position.
2. Remove junction box cover at rear of unit.
3. Depress red button on limit switch.
4. Replace cover on junction box.

IMPORTANT

Be sure cover insulation is in place when replacing cover.

Motor Aid

The motor aid acts as a heat exchanger between the water heater and the vehicle engine. Two hoses from the water heater connect to the hoses which deliver hot water between the engine and the driver's compartment heater. A heat exchanger unit in the water heater then circulates the water from the engine block around the water heater tank. Therefore, it is not necessary to have the water heater on while the motor home is in motion. Under normal conditions, the entire contents of the water heater tank will be heated to approximately 140° F in about two hours or 100 miles of driving.

In addition, the motor aid heat exchanger helps the vehicle engine to operate at cooler temperatures by dispersing heat from the engine. This reduces the possibility of overheating, particularly when operating in hot climates.

Auxiliary Rear Automotive Heater

The rear automotive heater is provided to heat the rear of the unit while the vehicle is in motion.

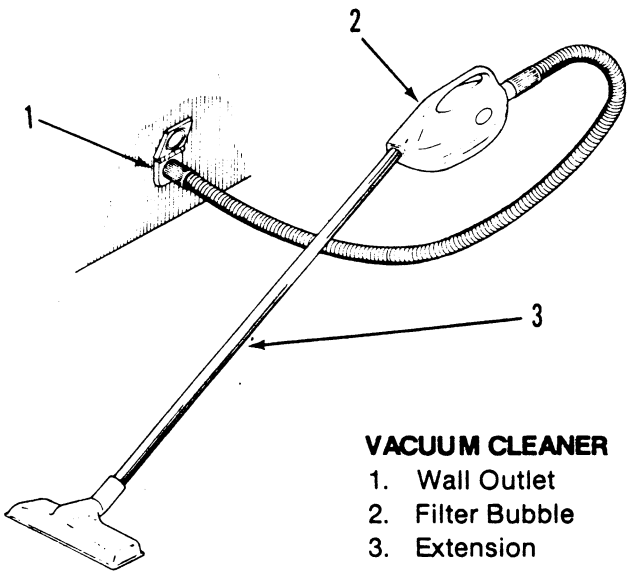
The left control operates the three speed fan with the high speed being obtained when the knob is rotated to the full clockwise position. The right knob controls the volume of air flow. The amount of heat increases as the knob is pulled out. Pushing the knob all the way in shuts off all heat.

VACUUM CLEANER (Optional)

The vacuum cleaner requires 110-volt current for operation. To use the vacuum cleaner, connect the motor home to an external power source or start the 110-volt generator.

The vacuum cleaner has no on and off switch, but is started simply by raising the flap on the outlet and inserting the hose with a slight twist. Make sure the dust bubble has been connected to the hose; then connect the wand and the desired attachment to the bubble. To shut off the unit, remove the hose from the outlet and close the cover flap; the vacuum motor will stop automatically.

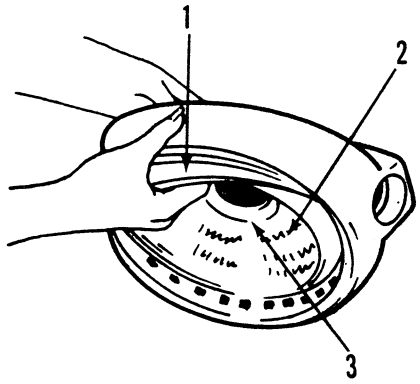
The dust bubble is easily opened to empty contents and change filters when necessary. To open, hold the dust bubble over a trash container and twist the lid carefully. Empty the contents and tap the two halves to release any dirt trapped on the filters. The dust bubble can be rinsed out with water after upper and lower filters have been removed. After rinsing, wipe the bubble dry and return both filters to their original positions.



VACUUM CLEANER
1. Wall Outlet
2. Filter Bubble
3. Extension

Removal and Repositioning of Filters

To Remove Filters - With the lid removed, grasp the large outer ring in the upper bubble half and pull gently until free. Lift out the small inner ring from the center of the bubble and carefully remove the upper filter. To remove the lid filter, grasp the lid filter ring and remove by pulling gently.



FILTER REMOVAL
1. Large Outer Ring
2. Filter
3. Small Inner Ring

To Reposition Filters - Slide the small inner ring onto the red collar on the upper bubble half and push in all the way. Position the large outer ring on the flange (lip) just below the dust bubble ring. Make sure the ring engages the flange all around the bubble. When properly positioned, the large outer ring should rotate freely on the flange. To replace the lid filter, position the filter ring on the flange and push in.

WARNING Electric shock could occur if the vacuum is used outdoors or on wet surfaces.

ROOF AIR CONDITIONER (Optional)

The roof air conditioner is operated totally from the control panel on the inside ceiling assembly. The temperature control regulates the on and off temperature setting at which the compressor (or heater, on the Elect-A-Heat model) will operate. The selector switch operates the air conditioner on the desired mode ("Off", "Heat" on Elect-A-Heat models, "Fan Only" and "Cooling"). Those air conditioner units with the controls on one end, have a lever control which operates the damper to regulate the volume of air being circulated during the "Fan Only", "Cooling" or "Heating" (on the Elect-A-Heat model) cycle. Those units with two dial controls on the bottom of the ceiling panel, have the damper (air volume) control incorporated in the selector switch. Moving the control within the "Fan Only" or "Cooling" range on these models, opens and closes the damper.

The 13,500 BTU roof air conditioner incorporates a rotary compressor as compared to a reciprocating compressor. The rotary compressor is much smaller and therefore several pounds lighter in weight.

The housing of a reciprocating compressor contains suction gas and will run cool. The rotary compressor however, contains discharge gas and will run hot to the touch. This condition is normal.

The torque required to start the rotarty unit is much lower, therefore there will be less incidence of starting failure, should low voltage conditions occur.

The 13,500 BTU rotary compressor unit will tend to run quieter and smoother and will also start and stop more smoothly.

To Operate For Cooling

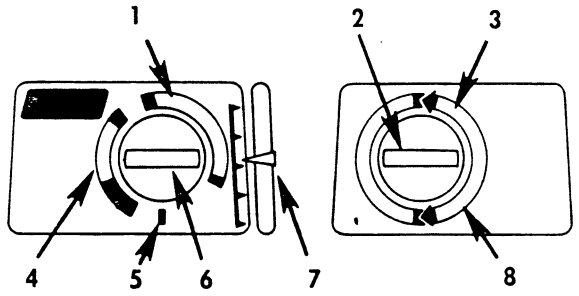
Set the selector switch to the "Cooling" position of the dial. The fan will run continuously to filter and circulate the air throughout the vehicle. Setting the selector switch or damper control lever, when so equipped, at "High" will provide the greatest volume of air circulation, while setting it at "Low" will provide a lower volume of air. Setting the control any place between "High" and "Low" can provide almost unlimited control over the volume of cooling air flowing from the air conditioner.

Set the temperature control to provide a temperature level that is comfortable. The com-

pressor will automatically turn on when the temperature of the air entering the air conditioner rises a few degrees above the selected setting. The compressor automatically turns off when the temperature of the air entering the air conditioner drops a few degrees below this setting. The air conditioner will keep cycling the compressor on and off in this fashion until the selector switch is changed to another mode of operation. During this time, both the air recirculation system and the refrigerant system will be in operation to provide filtered, dehumidified, cold air in the volume desired.

IMPORTANT

On Chieftain and Sunflyer 29 foot model motor homes, the optional front roof air conditioner will operate from the 110V external power supply only and the rear roof air conditioner will be powered by the auxiliary generator.



COOLING ONLY MODEL

1. "Cooling" Range
2. Temperature Control Switch
3. Temperature Range
4. "Fan Only" Range
5. "Off" Position
6. Selector Switch
7. Damper Control Lever (Air Flow)

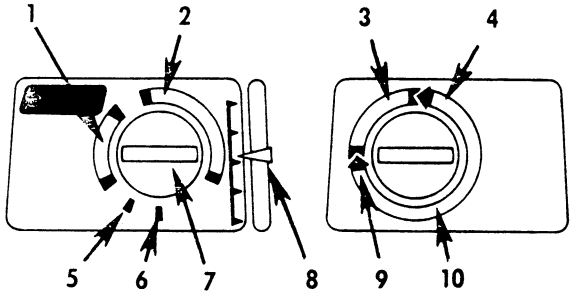
(Incorporated in selector switch on some models)

8. "Colder"

To Operate For Heating (Elect-A-Heat Model Only)

Set the selector switch to the "Heat" position. The fan will automatically start circulating air continuously at a low volume.

Set the temperature control to the temperature level that is comfortable. The heater automatically turns on when the temperature of the air entering the air conditioner drops below this setting a few degrees and automatically turns off when the temperature of the air entering the air conditioner rises a few degrees above the selected temperature setting. The air conditioner will keep cycling the heat on and off in this fashion until the selector switch is changed to another mode of operation.



ELECT-A-HEAT MODELS

1. "Fan Only" Position
2. "Cooling" Position
3. Temperature Control Switch
4. "Warmer"
5. Heat Position
6. "Off" Position
7. Selector Switch
8. Damper Control Lever (Air Flow)
9. "Colder"
10. Temperature Range

To Operate For Air Recirculation Only

Set the selector switch to the "Fan Only" position on the dial. The fan will run continously and filter the air without either cooling or heating it. To obtain a lower or higher volume of circulating air, simply turn the selector switch to a lower or higher setting in the "Fan Only" range of the dial, or raise or lower the damper control lever depending on the type of control on your unit. This will close or open the damper in the air conditioner unit to provide almost umlimited control over the volume of air being recirculated in the motor home.

To Operate As A Dehumidifier

In some areas where higher relative humidities are experienced, it is desirable to operate your unit primarily for humidity control. To operate the air conditioner as a dehumidifier, set the selector switch at the "Cooling" range with the air damper at either medium or high setting.

Set the temperature control to the warmest position at which the compressor will cycle on and off for cooling. When operated in this position, your air conditioner will remove high quantities of moisture from the air without cooling the motor home.

Any time the unit is operated on either full cooling or as a humidity control appliance, the excess moisture removed from the air stream in the motorhome will be diverted onto the roof. Do not be alarmed as this excess moisture is allowed to escape from the area of the air conditioner to the ground.

Roof Air Conditioner Maintenance

FILTERS

The filters are located in the interior ceiling shroud and are easily accessable for changing and /or cleaning. Remove and clean filters approximately every two weeks of operation:

1. Remove shroud attachment screws.
2. On units with controls on one end, pull down on shroud at end opposite controls.
3. On units with controls on bottom, lower shroud from ceiling.
4. Remove filters, clean with soap and water and rinse clean.
5. Dry the filter carefully and reinstall.
6. Replace ceiling shroud.

CAUTION Do not operate the air conditioner for extended periods of time without the filters installed.

CIRCUIT BREAKER

The air conditioner unit is protected from current overload by a circuit breaker located on the motorhome electrical control panel. Mover switch to "Off" position and back to "On" to reset breaker.

TV ANTENNA (Optional on some models)

The TV antenna is a full size model which can be easily raised, rotated a full 360°, and lowered from inside the motor home by simply turning the crank. Always lower the antenna when driving. Overhead obstructions striking the antenna can strip the antenna lift gears.

To Raise Antenna - Pull handle down and rotate it counterclockwise (looking up) until the stop is contacted.

WARNING Observe antenna height while parked, to prevent contact with electric wires, power lines, etc.

To Rotate Antenna - Turn handle clockwise at least half a turn and then grasp the body of the crank. Push crank up with a slight clockwise turning motion to engage the rotation pin. Then with the TV on, turn the body of the crank counterclockwise until the best TV picture is received. For best results, the antenna must be pointed toward the station.

To Lower Antenna - Turn the antenna clockwise to stop. Then pull handle down and crank it clockwise until the antenna drops into the travel support. There is a lower stop on the crank, but the antenna will be heard contacting the travel support at the same time the stop is contacted.

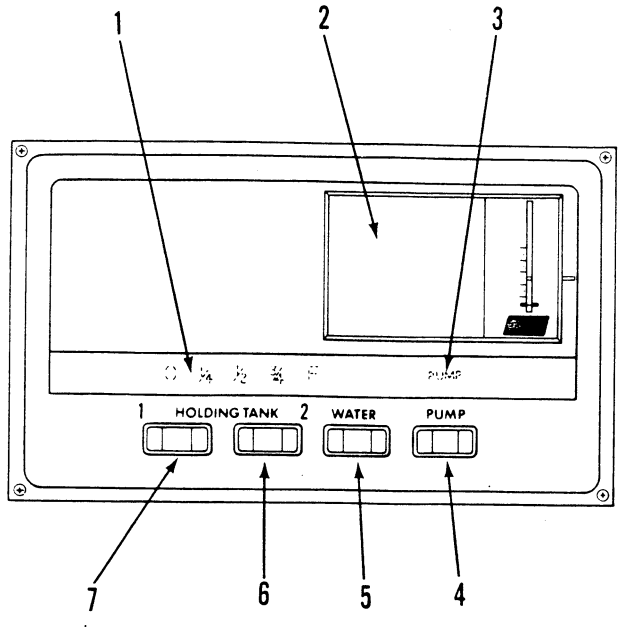
NOTE: Due to the mobility of motor homes and the variation in terrain encountered throughout the country, TV reception will not be as consistent as in a fixed location. Generally, TV and FM radio signals travel in a straight line. Therefore, hills, mountains or buildings between your vehicle and the transmitting station may severely reduce the amount of signal reaching the antenna.

MONITOR /CONTROL PANEL

The monitor /control panel has three rocker switches which are used to check the liquid level in each of the two holding tanks and the water tank. A fourth switch, located on the extreme right, controls the water demand pump. When use of the internal water system is desired, simply place the switch in the "on" position. A light above the switch is lit when the pump switch is "on" and the system is operable. Water will be available as soon as a faucet is opened. Refer to "Internal Water System" on page 57 for more information on the water pump and initial start-up of the system.

Each of the tank monitor switches is linked to a series of five indicator lights directly above them. When any of the switches are depressed, all lights to the correct level will illuminate to indicate the liquid level in the corresponding tank. If a tank is more than half full but less than three-quarters, the gauge will register half full. This applies for all other markings on the gauge as well. Since the level is measured by electric probes in the tank, the liquid must be level with, or above the probe to be registered. There may or may not be water left in the storage tank when the gauge registers "O" (empty), since the "1 /4" light will go out as soon as the water level falls below the one quarter level.

For convenience and central location of controls, the furnace thermostat is located on the panel. Refer to furnace operation on page ____ for operation of the thermostat.



WATER LEVEL /HOLDING TANK INDICATOR PANEL

1. Level Indicator Lights
2. Furnace Thermostat
3. Pump "On" Indicator Light
4. Demand Pump On /Off Switch
5. Water Tank Switch
6. Waste Water Tank Switch
7. Sewage Tank Switch

MONITOR /CONTROL PANEL - DELUXE (Optional)

The monitor /control panel provides a centralized location of holding tank, water tank and LP gas level switches. Controls for the demand water pump and 110-volt generator as well as the generator hourmeter and a digital clock are located on the panel. For operating procedures, refer to the Monitor /Control Panel illustration and associated functional descriptions

Water Pump Switch - When use of the internal water system is desired, simply place the switch in "on" position. A light above the switch is lit when the pump switch is on and the system is operable. Water will be available as soon as a faucet is opened. Refer to "Internal Water System" on page 57 for more infomation on the water pump and initial start-up of the system.

Water Tank, Holding Tank and LP Gas Level Switches - Each of the tank monitor switches is linked to a series of five indicator lights on the panel. When a switch is depressed, all lights to the correct level will illuminate to indicate the liquid level in the corresponding tank. If a tank is more than half full, but less than three-quarters, the gauge will register half full. This applies for all markings on the gauge as well. Since the level is measured by electric probes in the water and holding tanks, the liquid must be level with, or above the probe to be registered. There may or may not be water left in the water tank when the gauge registers "O" (empty), since the "1 /4" light will go out and only the "O" light remains illuminated as soon as the water level drops below the one-quarter level. LP gas level is registered on the panel via a pressure sending unit on the tank. The LP gas level is also registered by a gauge at the tank location.

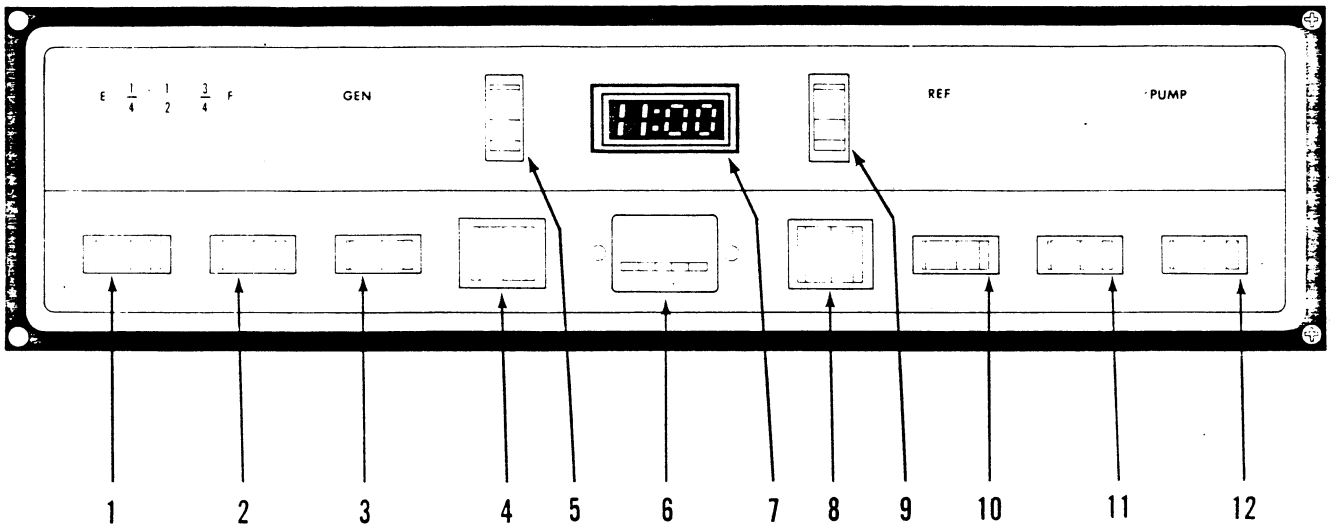
Generator Switch - This switch allows control of the 110-volt generator from within the motorhome. To start the generator set, depress the spring loaded side of the switch marked "Start". Release the switch as soon as the "Gen" light, located above the switch, illuminates to indicate the set is running. To shut off the unit, depress the side of the switch marked "Stop" and hold until the generator stops and the light goes off.

Generator Hourmeter - This meter registers the number of hours the 110-volt generator has operated. Use it as a reminder of when the generator unit is due for periodic lubrication and routine maintenance. Failure of the hourmeter to operate usually indicates failure of one of the fuses in the generator control. Refer to Onan generator maintenance on page 50 for fuse replacement.

Refrigerator Alarm. - Should the burner on the refrigerator go out while operating on LP gas, the "Ref" light on the panel will illuminate. This provides a warning to restart the unit or change to electric operation before food spoilage can occur. Place the switch in "off" position to shut off the alarm; restart the refrigerator, and place the refrigerator alarm switch to the "on" position.

Clock and Controls - A digital clock is located on the panel for your convenience. A switch on the right side allows the clock to be reset to the correct time. Depress the "hours" side of the switch to advance the hour setting and the "minutes" side of the switch to change the minutes reading. A switch on the left side allows the clock display to be shut off. However, the clock mechanism will continue to operate, keeping the correct time.

Panel Switch - This switch allows all monitor switches on the panel to be shut off when the motor home is not in use. The clock, water pump, generator and refrigerator alarm switches must be turned off individually when not in use.



MONITOR /CONTROL PANEL - DELUXE

1. Sewage Tank Level Switch
2. Waste Water Tank Level Switch
3. Water Tank Level Switch
4. 110-Volt Generator Switch
5. Clock Display Switch
6. Generator Hourmeter
7. Digital Clock
8. Panel Switch
9. Clock Reset Switch
10. LP Gas Level Switch
11. Refrigerator Alarm Switch
12. Water Pump Switch

INTERIOR FURNISHINGS

Due to various floor plans available on motor homes, the following interior furnishings may or may not be applicable to your vehicle.

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

FRONT PULL-DOWN BUNK

A pull-down bunk is optional on all A-body motor homes to provide additional sleeping capacity. The spring balance bunk is mounted above the driver's compartment and is moved into position by pulling downward in an arc. The bunk has two seat belt type or velcro fasteners which ensure against bunk movement while traveling. Before moving the bunk into the lowered position, unsnap the fasteners and make sure the sunvisors are out of the way. When returning the bunk to the raised or stored position, check to be sure there are no loose items on the mattress which might strike the ceiling when raised; then snap fasteners to secure the bunk against the ceiling.

DINETTE /BED

A combination dinette and bed is provided in some models. To convert to a bed:

1. Fold table leg up against bottom side of table by releasing catch.
2. Relocate table by lifting the end nearest the aisle to release it from support bracket on sidewall. Then lower table to rest on cleats attached to each dinette bench.
3. Arrange dinette back and seat cushions over bed area.
4. To convert dinette /bed back to a table, reverse the above procedure.

OVERHEAD BUNK (C-Body Motor Homes Only Except WC723RB, WC723RH, IC723RB, and IC723RH)

The overhead bunk located above the driver's compartment allows easy access to and from the driver's compartment seats when in the stored position, but easily converts to a full-size bed as follows:

1. Grasp loop on top section of mattress and carefully unfold to cover driver's compartment.
2. To stow bed after use, fold rear mattress section forward onto front section.

SIDE PULL-DOWN BUNK (Optional on WC723RB, WC723RH, IC723RB, and IC723RH Models Only)

A side pull-down bunk is optional on the above models only. The bunk provides additional sleeping accomodations for one (1) person and is moved into position by pulling downward in an arc. When returning the bunk to the raised or stored position, check to be sure there are no loose items on the mattress which might strike the ceiling when raised.

WARNING The side pull-down bunk on these models is designed to accomodate one (1) average adult only. Damage to equipment may result if more than one (1) person uses this bunk at one time.

WARNING The side pull-down bunk is intended for use only when the vehicle is parked. Use of this bunk while the vehicle is in motion can cause damage to equipment and /or personal injury.

SLIDE-OUT COUCH

To convert the slide-out couch to a bed;

1. Grasp edge of slider assembly, lift up and pull out to the full extent as you would a drawer. The bottom cushion will be pulled out with the slider.

IMPORTANT

On some models, it will be necessary to remove the pedestal tables before pulling out the slider assembly. Refer to steps 1 to 3 of "Pedestal Dinette Table".

2. While pulling out the tray, lower back cushion support board to rest on couch frame.
3. Make sure all cushions lay level over the bed area.
4. To convert the bed back to a couch, simply lift back support board while sliding support tray back against the wall.

PEDESTAL DINETTE TABLE

To remove and store the pedestal dinette table;

1. Remove table top by lifting while also giving a gentle twisting or rocking motion to the top.
2. Remove pedestal(s) from the socket with a gentle lifting, turning motion.
3. Store the pedestal(s) in one of the closets or wardrobes.

PULL-OUT TABLE

The pull-out table is stored in an assembly against the wall between the swivel chairs. To use or store the table;

1. Grasp table at finger grip and pull up until it stops. Lower the table down between the swivel seats.
2. To store, lift table toward the wall and lower it into storage assembly.

MOTORHOME CARE AND MAINTENANCE

ROOF

Like the walls and floor, the roof is made of Thermo-Panel® construction. It will support your weight, 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 cracks in the roof seams or damage to the roof area repaired by your dealer immediately. Putting off roof repairs can result in further damage to interior ceiling panels, upholstery, etc., by water leakage.

CAUTION

It is recommended that the roof seams be checked once a year and resealed if necessary.

UNDERBODY

Corrosive materials such as those used for ice and snow removal and dust control often accumulate on the underside of the vehicle. The buildup of mud under the body not only can cause rust, but also adds weight which contributes to the gross vehicle weight of the vehicle. This, in effect, reduces the amount of cargo you can carry to stay within the GVWR and GAWR limits.

These materials should be removed by flushing the underbody regularly with water, especially those areas where mud and other foreign materials collect.

EXTERIOR

The exterior surface of your motor home has an automotive enamel 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 with hot water, in the direct rays of the sun or when the sheet metal is hot. Never wipe dirt from a dry painted surface without first washing the vehicle, as this may scratch the paint.

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.

CAUTION

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

CAUTION

Always check for sufficient overhead clearance before entering a car wash area.

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 AND CARPETING

Dust and loose dirt that accumulates on upholstery and carpeting should be removed frequently with a vacuum cleaner, whisk broom, or soft brush. Wipe any vinyl plastic surfaces with a soft damp cloth. Always remove spots and stains as soon as possible. Stains or soils such as lipstick, inks, grease and mustard are extremely difficult to remove. Consult a professional carpet and upholstery cleaner for assistance.

WARNING

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.

When cleaning any stain, use a small amount of cleaner, light pressure and a clean cloth. Work from the outside of the stain toward the center, frequently changing the cloth to a clean section. Immediately wipe the area briskly with a clean absorbent towel or cheese cloth to dry the area. Any stains or soils in the carpet should be removed by following the directions on a good quality carpet cleaner or shampoo.

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.

FABRIC DRAPERIES

The fabric draperies used are of polyester knit material and are washable.

It is recommended that they be washed in moderately warm water with a mild detergent.

WOVEN WOOD DRAPERIES (Optional on some models)

Vacuum the draperies frequently to prevent dust build-up. If the draperies become soiled, sponge off the fabric with a solution of warm water and mild detergent. Use care not to soak the fabric, especially the fringe trim. Very stubborn or ground in stains can be removed with a household stain remover. Test stain remover on a small hidden area before using it on the entire shade. Bleach or strong household cleaners must never be used.

The wrap around curtains and front bunk curtains are of polyester knit and are washable. It is recommended that they be washed in a moderately warm water with a mild detergent.

If cords become difficult to pull, check alignment of cords in pulley mechanism on shade or traverse rod of drapery. Do not force the mechanism as further binding will occur. Should one side of the shade raise more than the other, simply adjust the cord equalizers. If a strand of yarn slips off the edge of the wood slats, remove that strand entirely.

WORK SURFACES

Work surfaces are covered with a plastic laminate that is resistant to solvents, stains and abrasions. A coat of 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.

WALLS AND CEILING

Wall and ceiling paneling can be cleaned with a mild soap or detergent solution. Use a damp cloth, but do not saturate the walls with water. To minimize fingerprints and smudges on the walls, use a cleaner on the paneling that leaves a film of thin wax. Wipe the wax cleaner on and then remove any excess with a dry cloth. After this application, fingerprints and etc., can be wiped off with a dry cloth, or one moistened with a little additional wax cleaner. Always clean the wall surface thoroughly before applying the wax.

RANGE AND REFRIGERATOR

For care and appearance maintenance of the range and refrigerator, refer to the operation and maintenance section for each of the individual appliances.

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 Plexiglas door, it is extremely important that abrasives or solvents and aromatic spirits that contain a petroleum base or additive 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 and a soft cloth to clean the Plexiglas surfaces.

For instructions on the care of the fresh water toilet, refer to "Toilet Maintenance", page 61

The bathroom vanity in some models is constructed of a plastic material and should be cleaned with a mild soap and water solution. Abrasive cleaners or harsh detergents should not be used. If the vanity sink is stainless steel, follow the directions given for care of the kitchen sink.

Doors and Windows

Windows can be periodically cleaned with a good quality glass cleaner or mild soap solution and 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.

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

CAUTION

It is recommended that the windows and door seams and joints be checked once a year and resealed if necessary.

NOTES

STORAGE

It is the owners responsibility to prepare the vehicle for winter storage. Your motor home is equipped with many vital systems that could be damaged due to improper storage or freezing conditions.

Proper winter storage procedures will not only lessen the possibility of costly repairs, but assure the units reliability and your continued motor home enjoyment.

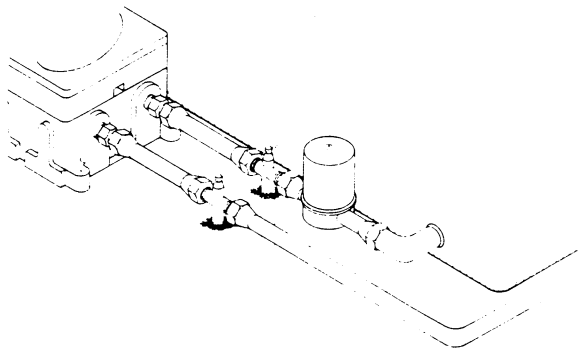
After each use, it is advisable to prepare the motor home for non-use just as you would if you left your house or apartment for a period of time. Make sure all perishables have been removed from the cabinets and refrigerator. Also, make sure that proper ventilation has been provided. Always check to 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 shades to protect upholstery from the 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, the drainage system, the water heater and the batteries. Perform each of the following steps to ensure that all systems have been completely drained or protected.

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



WATER SYSTEM DRAINAGE

NOTE: Location of the water pump and all drain valves is shown on the water system schematic on page 86

A. Open all needle valves. Refer to water system schematic for valve location.

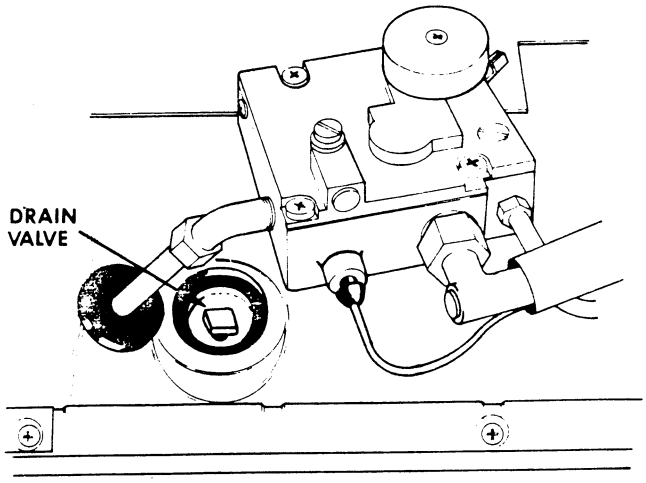
B. Open all faucets and the shower head valve.

C. Allow demand water pump to operate until all water lines have been drained.

D. 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 in draining and prevent air locking in the tank.

F. After water has stopped draining at all faucets and valves, use a hand pump or service station air hose at the city water connection to force air through the water system.



CAUTION To avoid possible damage to the pump or water lines, limit air pressure to 30 psi.

G. 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.

H. Pour dealer recommended non-toxic antifreeze into the bathroom sink drain, shower drain and kitchen sink drain(s).

WARNING Do not use automotive type radiator antifreeze. It is poisonous.

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.

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 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 discharged battery, or even one with one half charge or less, can freeze. Since the discharge time varies with temperature, battery age and other conditions, batteries should be checked at least every two weeks.
14. Make sure the antifreeze level in the automotive radiator is sufficient to protect against freezing at the lowest anticipated temperature.
15. Winterize the fresh water toilet by one of the following methods.

    A. Leave water line disconnected at ball valve. Depress foot pedal and insert an object such as a soft drink bottle, or, ideally a tapered block of wood into the outlet located at the bottom of the bowl. Release pedal or knob slowly until the blade touches and holds the object. This will hold the water control valve open and prevent any water residue from being trapped there where it can freeze.

IMPORTANT
If a small item, such as a soft drink bottle is used, tie it securely to prevent it from dropping into the tank.

B. Use non-toxic antifreeze to winterize the entire motor home fresh water plumbing system. Follow the directions on the antifreeze container.

16. To extend the life of the automotive air conditioner unit when so equipped, start the motor home engine and run the air conditioner a few minutes every two weeks.
17. Prepare the optional 110 volt generator for storage by following the instructions given in the generator maintenance section. See "Storage Procedure" on page 50

REMOVAL FROM STORAGE AND NEW SEASON PREPARATION

1. Completely air out the motor home.
2. Check window operation.

3. Check cabinet and door hinges. Lubricate with penetrating oil, if necessary.
4. Close all faucets and drain valves that are open. If necessary, reconnect toilet water line and close flush valve.
5. Fill water tank and check for leaks. Sanitize the water system as outlined under "Sanitizing the Potable Water System" on page 59
6. Check operation of all faucets to be sure faucet washers have not hardened during storage.
7. Check sealing valve in the toilet for proper operation and lubricate with silicone spray.
8. Add water to the holding tanks and check to be sure dump valves seal tightly.
9. Check the entire LP gas system and appliances for leaks using the leak detector. Check LP tanks for leaks using soapy water.
10. Check around all appliances for obstructions and ensure that all vent openings are clear.
11. Start refrigerator and check for proper cooling.
12. Clean paneling and counter surfaces and apply a thin coat of wax.
13. 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.

NOTES

VEHICLE MAINTENANCE

FUEL REQUIREMENTS (Dodge Chassis)

The engine of your motor home is designed to operate on regular gasoline only.

The engine on all models should be operated on gasoline having a 91 and an average octane rating of at least 87. Federal Energy Administration regulations require that the average octane rating be posted on service station pumps.

WARNING Make sure all pilot lights have been extinguished before refilling the fuel tank(s).

FUEL REQUIREMENTS (Chevrolet and GMC Chassis)

Engines incorporated in motor homes with a Gross Vehicle Weight (GVW) of greater than 8600 lbs., will operate on regular grade gasoline. Vehicles with a Gross Vehicle Weight (GVW) of 8600 lbs. or less will operate on unleaded gasoline.

The engine should be operated on gasoline having a research octane number of at least 91 and an average octane rating of at least 87. Federal Energy Administration regulations require that the average octane rating be posted on service station pumps.

WARNING Make sure all pilot lights have been extinguished before refilling the fuel tank(s).

FILLING FUEL TANK

When filling the fuel tank, allow fuel to enter the tank until the automatic pressure regulator on the gasoline pump activates and stops the flow of fuel, indicating a full tank. This provides a predetermined vapor space at the top of the tank to allow for expansion of the fuel. Filling above this level may cause fuel to be forced out through the fuel tank vent due to internal expansion, especially on warm summer days.

WARNING An over fill condition could create a fire hazard due to the fuel runoff being present on the exterior of the fuel tank and on the ground beneath the vehicle. Safety being of the utmost importance, care should be taken to prevent this condition when refueling all motor vehicles.

ENGINE ACCESS (C-Body Motor Homes & Dodge Chassis)

The release lever to open the hood is located under the dash to the left of the steering wheel. Pull the lever and the hood will raise slightly. Lift safety catch handle, located above the grille to the right of center. The hood can then be completely raised. While holding the hood in the fully open position, lower the support rod from the hood and insert the end in the hole in the hood latch cross member.

With the hood open, the radiator fill and overflow, oil fill, oil dipstick, brake fluid reservoir, power steering fill, windshield washer reservoir, air conditioner, transmission fluid fill tube, and the automotive battery (some models) are accessible.

ENGINE ACCESS (C-Body Cheverolet Chassis)

The release lever to open the hood is located on the exterior of the vehicle, below the center portion of the hood.

Apply upward pressure to release the hood latch and raise the hood fully. While holding fully open, attach the support rod to positioning hole in the raised hood.

With the hood open, the radiator fill and overflow, oil fill, oil dipstick, brake fluid reservoir, power steering fill, windshield washer reservoir, and air conditioner are accessable. The automotive battery is also accessable on some models.

IMPORTANT

Refer to the appropriate sections in this manual for the requirement of the fluid level and the maintenance schedule for each of the above components. When closing the hood, push firmly down to ensure that it latches.

Engine Cover

The cover for the engine, 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)

On all models, the oil dipstick, oil fill, radiator fill and the windshield washer fluid reservoir are accessable through a door above the grille. Open the access door as follows:

Move the spring loaded door latch, located in the bottom center of the door, to the down position. Swing the door up and secure with holding rod. To close the access door, reverse the above procedure.

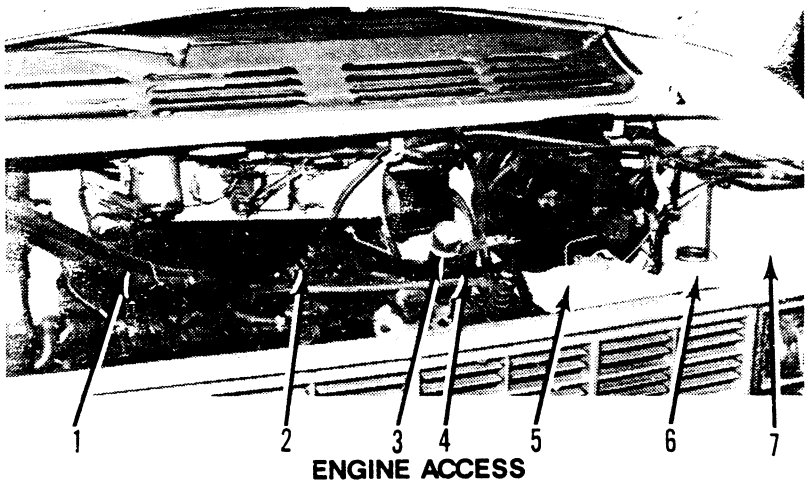
Engine Cover

The carpeted engine cover located in the driver's compartment can be removed by releasing the latches located near the floor and then lifting it off.

Once the engine cover has been removed, the power steering fluid reservoir, transmission dipstick and fill tube, engine air cleaner and other engine parts are accessible for servicing.

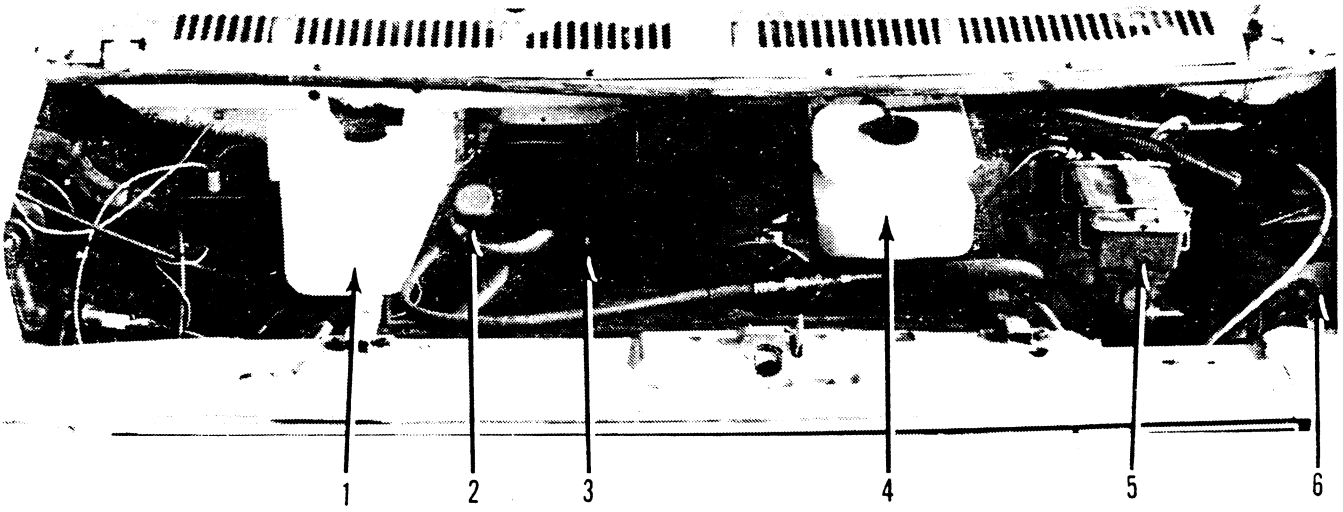
BRAKE FLUID RESERVOIR (A-Body Motor Homes)

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 ACCESS
C-Body Motor Homes - Dodge Chassis

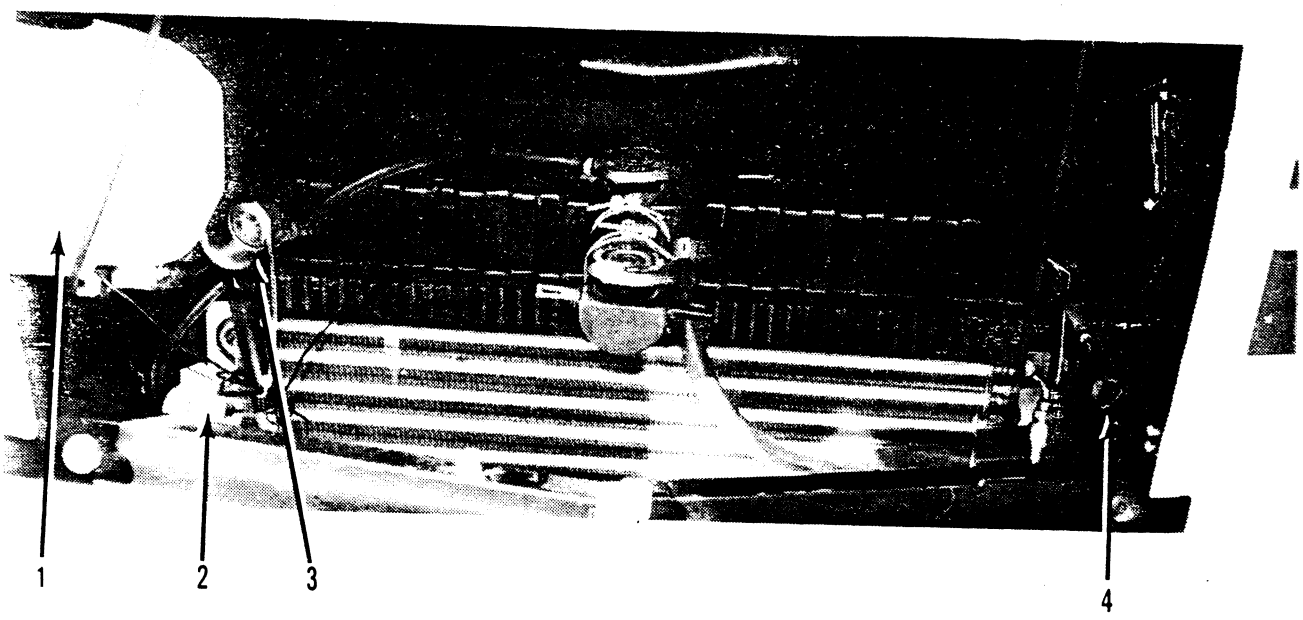
1. Engine Oil Dipstick
2. Brake Master Cylinder
3. Engine Oil Fill
4. Transmission Fill Tube
5. Radiator Coolant Fill
6. Windshield Washer Fluid Fill
7. Automotive Battery



ENGINE ACCESS
C-Body Motor Home - Chevrolet Chassis

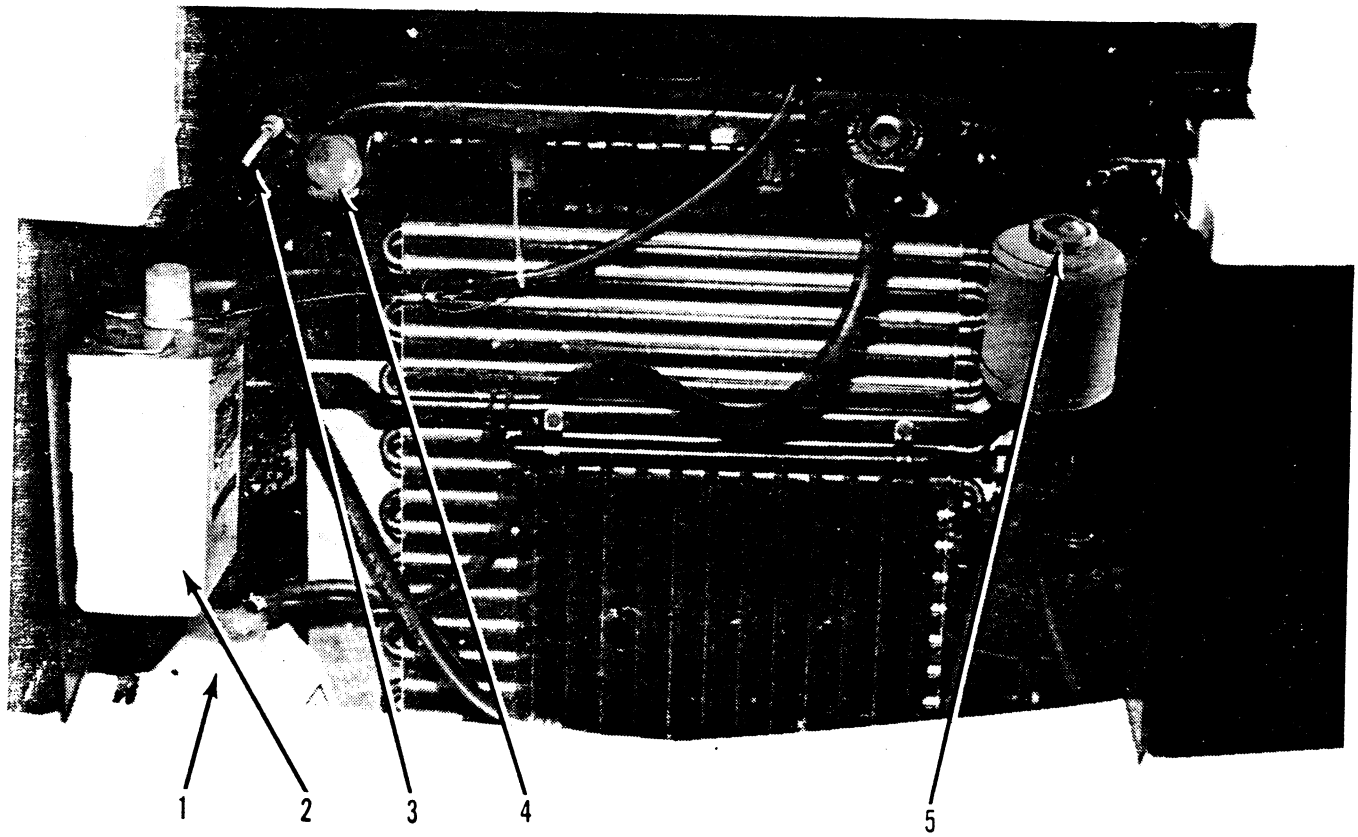
1. Radiator Coolant Fill
2. Engine Oil Fill
3. Engine Oil Dipstick

Windshield Washer Fluid Fill
5. Brake Master Cylinder
6. Automotive Battery



ENGINE ACCESS
A-Body Motor Homes - Dodge Chassis

1. Windshield Washer Fluid Fill
2. Radiator Coolant Fill
3. Engine Oil Fill
4. Engine Oil Dipstick



ENGINE ACCESS
A-Body Motor Home - Chevrolet and GMC Chassis

1. Radiator Coolant Fill
2. Windshield Washer Fluid Fill
3. Engine Oil Dipstick
4. Engine Oil Fill
5. Power Steering Fluid Fill /Dipstick

ENGINE OIL

Checking Oil Level

The engine oil must be maintained at proper level. The best time to check oil level is as the last step in a fuel stop. This will allow the oil accumulation in the engine to drain back into the crankcase. To check the level, remove the oil dipstick, wipe it clean, reinsert it firmly and remove again for an accurate reading. The dipstick is marked "FULL" and "ADD". Maintain the oil level in the safety margin, neither going above the "FULL" line nor below "ADD" line. Reseat the dipstick firmly after taking reading.

Oil and Filter Change

Engine oil must be changed at regular intervals to ensure a long and troublefree engine life. If the motor home is driven only a few miles at a time and at low speeds, moisture will condense in the crankcase and form a sludge. Under these conditions, which includes frequent or prolonged idling, oil changes are recommended every 1,000 miles. Operating in very dusty conditions also calls for more frequent oil changes. Since the frequency will depend on the severity of the dust conditions, no definite recommendation can be made. However, operatin in a severe dust storm may require an immediate oil change. When changing engine oil, always use an oil that conforms to the requirements of the API (American Petroleum Institute) classification for Service SE. The oil should also be of the proper SAE number to meet the climatic temperature range that is anticipated before the next oil change. Refer to the accompanying chart when selecting oil viscosity. Under normal operating conditions, oil changes should be made at the intervals listed for the various models:

- All Motor Homes - Change engine oil every six months or 6,000 miles, whichever comes first.

Replace the oil filter on all models the first oil change and every second oil change after that time. When changing the oil filter, add one additional quart of oil.

IMPORTANT

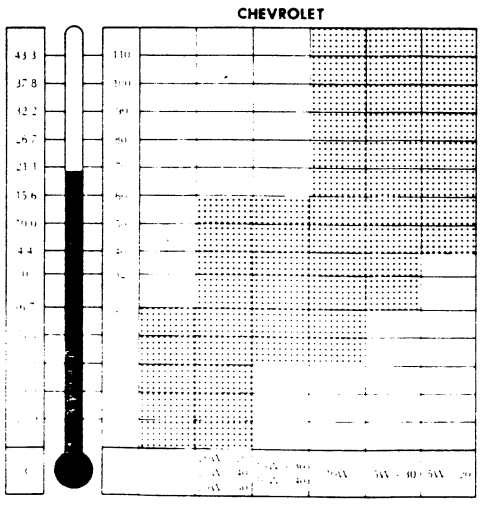
SAE 5W-20 motor oil is not recommended for sustained high speed vehicle operation.

- All Motor Homes - Change engine oil every four months or 6,000 miles, whichever comes first.
- Replace the oil filter on all models the first oil change and every second oil change after that time. When changing the oil filter, add one additional quart of oil.

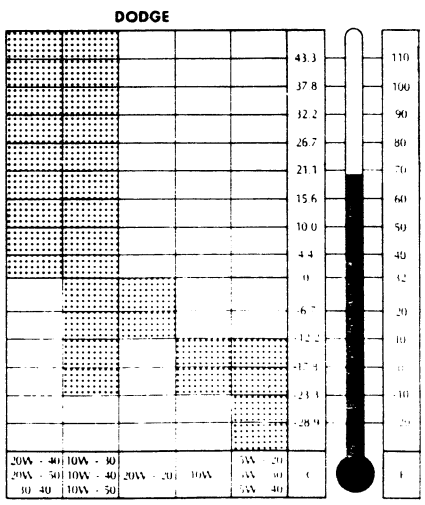
BRAKE FLUID RESERVOIR (All A-Body Motor Homes)

The brake master cylinder is located above and to the right of the left front wheel and is covered by a metal shield for protection against mud and foreign material. Have your dealer or local garage remove the shield and check master cylinder fluid level in both reservoirs every 4 months or 6,000 miles.

RECOMMENDED OIL VISCOSITY
CHEVROLET & GMC CHASSIS



RECOMMENDED OIL VISCOSITY
DODGE CHASSIS



IMPORTANT

SAE 5W-20 motor oil is NOT recommended for sustained high speed vehicle operation.

DRIVE BELTS

Every second oil change the drive belts should inspected for wear, fraying, cracking and tension. Belts in poor condition should be replaced immediately. Check tension by applying moderate thumb pressure midway between pulleys. If the center-to-center distance between pulleys is 13 to 16 inches, the belt should deflect approximately 1/2 inch in the center of the span.

ENGINE COOLING SYSTEM

The engine's cooling system has been filled at the factory with a high quality coolant containing a rust inhibitor. This coolant solution provides freezing protection to at least -20 degrees Farenheit. It has also been formulated to be used without replacement until the normal frequency for coolant change. At the end of this period, the coolant should be drained to prevent rust or corrosion in the radiator and engine, and refilled with a quality antifreeze /water solution.

To check coolant level, visually inspect the coolant overflow recovery tank. DO NOT remove the radiator cap. With the engine idling and warmed to the normal operating temperature, the level of the coolant in the recovery tank should be between the two marks on the side. When additional coolant is needed a minimum 50% concentration of ethylene glycol antifreeze in water should be added to the overflow recovery tank. A higher concentration (not to exceed 70%) should be used if a lower freeze point is required.

IMPORTANT

Do not use additional rust inhibitors or anti-rust products, as they may not be compatible with the radiator coolant.

WARNING

The radiator cap should be removed only when checking coolant freeze point or for complete replacement with antifreeze coolant. DO NOT remove radiator cap until the radiator has cooled completely. Use caution with hot coolant or steam. Place a cloth over the cap, turn left to first stop, pause to allow any pressure to release through overflow tube, then press down and turn left to remove cap.

AUTOMOTIVE TRANSMISSION

The fluid in the automotive transmission should be checked at least every oil change. Be sure the engine has been run long enough to thoroughly warm the transmission before checking the fluid level. Also ensure that the engine is running and the vehicle is level. Automatic transmissions are often overfilled because the fluid level is checked when the fluid is cold, and the dipstick indicates that fluid should be added.

If fluid is required, use ONLY fluid of the type labeled "DEXRON" Automatic Transmission Fluid available from your local dealer or service station.

IMPORTANT

DO NOT OVERFILL. It takes only about one pint to raise the level on the dipstick from "Add" to "Full" with a hot transmission.

Whenever the transmission fluid level is checked especially on a vehicle used in severe conditions, the condition of the fluid should be noted. If the fluid is dark and has a strong odor, fluid and filter should be changed. It is also recommended the bands be adjusted at this time.

The procedure for checking the fluid level in the transmission differs somewhat between models. Therefore, refer to the correct method:

C-Body Motor Homes

1. Make sure transmission has been warmed thoroughly.
2. Park vehicle on a level surface and engage parking brake.
4. With engine idling, move the gear selector lever to each gear position momentarily, ending with the neutral position.
4. Check fluid level with the engine idling and the parking brake on. The fluid level should be between "Full" and "Add One Pint" on the dipstick.

All A-Body Motor Homes:

1. Warm transmission thoroughly by driving several miles.
2. Park vehicle on a level surface and engage parking brake.
3. With the engine idling, move the gear selector lever to each gear momentarily, ending with the neutral position.

4. Idle the engine and observe the "transmission warning lamp" located on the warning light panel or the transmission fluid level light on the sensor panel for 30 seconds. If the lamp remains off, it is not necessary to proceed further.
5. If the lamp glows, manually check the fluid level using the filter dipstick. The fluid level should be between the "Full" mark and "Add One Pint".

Refer to the service maintenance schedule in this manual for the frequency of transmission fluid and filter change on your motor home. Fluid should be changed more frequently if the vehicle has been used for off the highway operation, towing trailers or operated frequently under a heavy load, especially in hot water.

BRAKES

Brakes should be properly maintained for correct adjustment by following the instructions under brake operation. If the brakes can no longer be adjusted by backing up and applying the brakes, the brake pads and linings should be checked for wear by your dealer.

The fluid level in the dual master cylinder should be checked at each lubrication period and maintained to within 1/4 inch of the top of the reservoir.

Only brake fluid conforming to DOT-3 specification may be used. Use only brake fluid that has been kept in a closed container to avoid contamination from foreign material or moisture.

CAUTION Hydraulic fluids not conforming to this specification must never be used. A fluid with a lower boiling point or one that is unidentified may result in sudden brake failure under hard braking condition. Never use a petroleum base fluid in the brake fluid reservoir, as seal damage to the system may occur.

POWER STEERING

Check the power steering fluid level when the engine has been warmed to operating temperature. Before removing the reservoir cap, wipe off the cap and the outside of the reservoir to prevent dirt from contaminating the fluid. Fluid level should be maintained at the proper level indicated on the cap dipstick. When adding fluid to the power steering reservoir, use only the fluid specified for your vehicle.

- All C-Body (Chevrolet) - General Motors power steering fluid.

This combined system requires the use of ONLY General Motors Power Steering Fluid.

WARNING Never add gear oil transmission fluid, or hydroboost power steering fluid. Do not overfill.

- All C-Body (Dodge) - Mopar Power Steering Fluid.

WARNING Never add gear oil, transmission fluid, or hydroboost power steering fluid. Do not overfill.

- All A-Body (Dodge) - Mopar Hydroboost Power Steering Fluid. Never add gear oil or conventional power steering fluid.

*These models are equipped with a power steering system which also supplies hydraulic power assist to the brake system (Hydroboost). DO NOT put hydroboost fluid in the brake master cylinder.

TIRES

Properly cared for, the tires on your motor home should last for several thousand miles. One important factor that contributes to tire life is correct inflation pressure. Low air pressure not only results in tire overloading and abnormal wear, but also affects handling and fuel economy. The tire flexes more from the overload and builds up heat which weakens the tire, making it more susceptible to failure. Excessive air pressure causes the tire to wear abnormally in the center of the tread, produces a rough ride, and increases the chance of a tire failure from road hazards. After determining the weight of your motor home and the load on each tire by weighing the vehicle on scales, the proper inflation pressure can be obtained from the chart in this section.

CAUTION Radial ply tires are optional on some motor home 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 can be increased over those figures found on the certification label or in the "specification" section of this manual.

Tire pressure should be checked at least monthly, preferably more often, especially during periods of frequent use. Inspect the tires often for any foreign objects caught in the tread which could work into the tire and cause tire failure. Always check tire inflation pressure when the tires are "cold", meaning the vehicle has not been driven for three hours or more, or driven less than one mile. It is normal for tire pressure to increase a few pounds when the tires become hot from driving. DO NOT reduce this pressure, as doing so reduces the "cold" pressure, resulting in under-inflation.

Any excessive or abnormal wear may indicate worn or out of alignment suspension, excessive camber, incorrect toe, out of balance tire, or other tire or suspension problems. Have your dealer inspect the vehicle for the source of the problem and repair it immediately.

CAUTION

Do not install radial ply tires on wheels having diameters ranging from 16 to 19.5 inches that are not certified for radial tire application and do not have the word "radial" stamped on the wheel rim.

CAUTION

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

TIRE/WHEEL LOAD AND INFLATION PRESSURE
All C-Body Motor Homes
(Dodge Chassis)

TIRES USED AS SINGLES

Tire Size	Load Range	Max. Cap. (Lbs.)	Tire Load Capacity at Various Cold Inflation Pressures (Lbs. per square inch)									
			30	35	40	45	50	55	60	65	70	75
8.00 - 16.5	C	1730	1360	1490	1610	1730	- - -	- - -	- - -	- - -	- - -	- - -
8.00 - 16.5	D	2045	1360	1490	1610	1730	1840	1945	2045	- - -	- - -	- - -
8.00 - 16.5	E	2330	1360	1490	1610	1730	1840	1945	2045	2145	2240	2330

TIRES USED AS DUALS

Tire Size	Load Range	Max. Cap. (Lbs.)	Tire Load Capacity at Various Cold Inflation Pressures (Lbs. per square inch)									
			30	35	40	45	50	55	60	65	70	75
8.00 - 16.5	C	1520	1195	1310	1415	1520	- - -	- - -	- - -	- - -	- - -	- - -
8.00 - 16.5	D	1800	1195	1310	1415	1520	1620	1710	1800	- - -	- - -	- - -
8.00 - 16.5	E	2050	1195	1310	1415	1520	1620	1710	1800	1885	1970	2050

NOTE 1: For special operating conditions, cold inflation pressures may be increased up to 10 psi (not to exceed 85 psi) above those indicated in the table with no increase in loads.

NOTE 2: For sustaining high speed driving over 60 mph, cold inflation pressures must be increased 10 psi above those specified by the table for the load being carried (but not to exceed 85 psi). Where the 10 psi pressure adjustment for sustaining high speed is limited by the maximum of 85 psi, speed must be limited to 60 mph. (COLD INFLATION PRESSURES MUST NEVER EXCEED 85 PSI.)

TIRE/WHEEL LOAD AND INFLATION PRESSURE
All A-Body Motor Homes
(Dodge Chassis)

TIRES USED AS SINGLES (FRONT AXLE)

Tire Size	Load Range	Max. Cap. (Lbs.)	Max. Cold Inflation Pressures at Various Loads (Lbs. Per Square Inch) PSI 35	PSI 40	PSI 45	PSI 50	PSI 55	PSI 60	PSI 65	PSI 70	PSI 75	PSI 80	PSI 85	PSI 90
8 - 17.5	C	2075	1790	1940	2075	---	---	---	---	---	---	---	---	---
8 - 17.5	D	2455	1790	1940	2075	2205	2335	2455	---	---	---	---	---	---
8 - 19.5	D	2800	---	---	---	2110	2270	2410	2540	2680	2800	---	---	---
8 - 19.5	E	3170	---	---	---	---	---	---	---	2680	2800	2930	3060	3170

TIRES USED AS DUALS (REAR AXLE)

Tire Size	Load Range	Max. Cap. (Lbs.)	Max. Cold Inflation Pressures at Various Loads (Lbs. Per Square Inch) PSI 35	PSI 40	PSI 45	PSI 50	PSI 55	PSI 60	PSI 65	PSI 70	PSI 75	PSI 80	PSI 85	PSI 90
8 - 17.5	C	1820	1575	1700	1820	---	---	---	---	---	---	---	---	---
8 - 17.5	D	2155	1575	1700	1820	1935	2050	2155	---	---	---	---	---	---
8 - 19.5	D	2460	---	1850	1990	2110	2230	2350	2460	---	---	---	---	---
8 - 19.5	E	2780	---	---	---	---	---	2350	2460	2570	2680	2780	---	---

RADIAL PLY TIRES USED AS SINGLES (BOTH AXLES)

Tire Size	Load Range	Max. Cap. (Lbs.)	Max. Cold Inflation Pressures at Various Loads (Lbs. Per Square Inch) PSI 35	PSI 40	PSI 45	PSI 50	PSI 55	PSI 60	PSI 65	PSI 70	PSI 75	PSI 80	PSI 85	PSI 90
8.75R - 16.5	C	1990	1570	1720	1850	1990	---	---	---	---	---	---	---	---
	E	2680	1570	1720	1850	1990	2110	2240	2350	2470	2570	2680	---	---

RADIAL PLY TIRES USED AS SINGLES (FRONT AXLE)

Tire Size	Load Range	Max. Cap. (Lbs.)	Max. Cold Inflation Pressures at Various Loads (Lbs. Per Square Inch) PSI 55	PSI 60	PSI 65	PSI 70	PSI 75	PSI 80	PSI 85	PSI 90	PSI 95	PSI 100	PSI 105	PSI 110
8R - 19.5	F	3500	2110	2270	2410	2540	2680	2800	2930	3060	3120	3280	2400	3500

RADIAL PLY TIRES USED AS DUALS (REAR AXLE)

Tire Size	Load Range	Max. Cap. (Lbs.)	Max. Cold Inflation Pressures at Various Loads (Lbs. Per Square Inch) PSI 45	PSI 50	PSI 55	PSI 60	PSI 65	PSI 70	PSI 75	PSI 80	PSI 85	PSI 90	PSI 95	PSI 100
8" - 19.5	F	3070	1850	1990	2110	2230	2350	2460	2570	2680	2780	2880	1980	3070

The above pressures are recommended for the bias ply tires originally supplied on the chassis. Many replacement market radial ply tires may require different pressures and the manufacturer's recommendations should be followed.

For sustained driving at speeds in excess of 60 mph, the inflation pressures listed above must be increased 10 psi.

TIRE/WHEEL LOAD AND INFLATION PRESSURE
TIRES USED AS SINGLES
Tire Load Limits at Various Inflation Pressures
(Chevrolet and GMC Chassis)

Tire Size	Load Range	Max. Cap. (Lbs.)	Tire Load Capacity at Various Cold Inflation Pressures (Lbs. per square inch) 30	35	40	45	50	55	60	65	70	75
8.75 - 16.5	C	1990	1570	1720	1850	1990	- - -	- - -	- - -	- - -	- - -	- - -
8.75 - 16.5	D	2350	1570	1720	1850	1990	2110	2240	2350	- - -	- - -	- - -
8.75 - 16.5	E	2680	1570	1720	1850	1990	2110	2240	2350	2470	2570	2680
7.50 - 16.0	C	2060	1520	1770	1930	2060	- - -	- - -	- - -	- - -	- - -	- - -
7.50 - 16.0	D	2440	1620	1770	1930	2060	2190	2310	2440	- - -	- - -	- - -
7.50 - 16.0	E	2780	1620	1770	1930	2060	2190	2310	2440	2560	2670	2780
8.00 - 19.5	D	2800	- - -	- - -	- - -	- - -	2110	2270	2410	2540	2680	2800

IMPORTANT

The indicated pressures are recommended for the bias ply tires originally supplied on the chassis. Many replacement market radial ply tires may require different pressures and the manufacturer's recommendations should be followed.

IMPORTANT

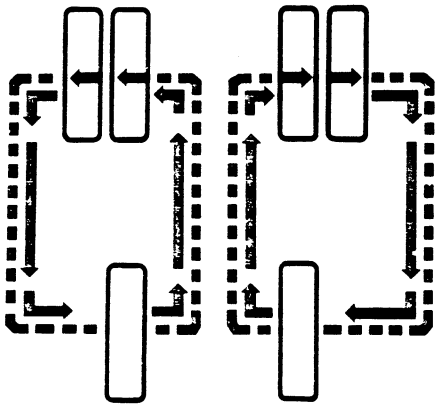
Always check tire type and ply or load range rating and follow the correct rotation diagram.

TIRES USED AS DUALS

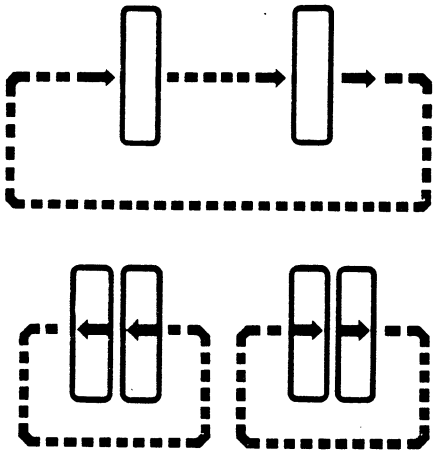
Tire Size	Load Range	Max. Cap. (Lbs.)	Tire Load Capacity at Various Cold Inflation Pressures (Lbs. per square inch) 30	35	40	45	50	55	60	65	70	75
8.75 - 16.5	C	1750	1380	1515	1630	1750	- - -	- - -	- - -	- - -	- - -	- - -
8.75 - 16.5	D	2070	1380	1515	1630	1750	1855	1970	2070	- - -	- - -	- - -
8.75 - 16.5	E	2360	1380	1515	1630	1750	1855	1970	2070	2175	2260	2360
7.50 - 16.0	C	1815	1430	1565	1690	1815	- - -	- - -	- - -	- - -	- - -	- - -
7.50 - 16.0	E	2140	1430	1565	1690	1815	1930	2040	- - -	- - -	- - -	- - -
8.00 - 19.5	D	2460	- - -	- - -	1850	1990	2110	2230	2350	2460	- - -	- - -
8.00 - 19.5	E	2680	- - -	- - -	1850	1990	2110	2230	2350	2460	2570	2680

TIRE ROTATION

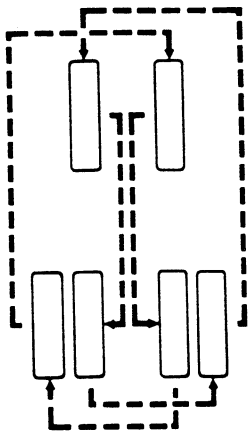
To control certain types of tire wear which are caused by road crown, type of road or individual driving habits, the tires on your motor home should be rotated periodically. Rotating the tires as indicated in the appropriate illustration will even out the amount of wear on each tire and extend the life of the entire set. Note that on some motor homes, the front and rear tires may have a different load range or ply rating. In this case, front to rear rotation is not permissible. If excessive or uneven wear on any of the tires occur, have the vehicle checked for tire balance, alignment or suspension problems. Refer to the maintenance schedule for frequency of tire rotation on your vehicle.



CONVENTIONAL TIRE ROTATION (All tires same ply)



CONVENTIONAL TIRE ROTATION (Different load ranges)



RADIAL TIRE ROTATION

IMPORTANT
Always check tire type and ply or load range rating and follow the correct rotation diagram.

WINDSHIELD WASHERS AND WIPERS

During cold weather, at least half of the windshield washer solution in the reservoir must be antifreeze formulated for windshield washer use. Inspect the windshield wiper blades periodically for wear and replace when the wipers cause streaking on the windshield.

The windshield washer nozzles should be adjusted so the stream is directed to the upper part of the wiper pattern when the vehicle is not moving. If you require assistance, contact your dealer.

LIGHTS

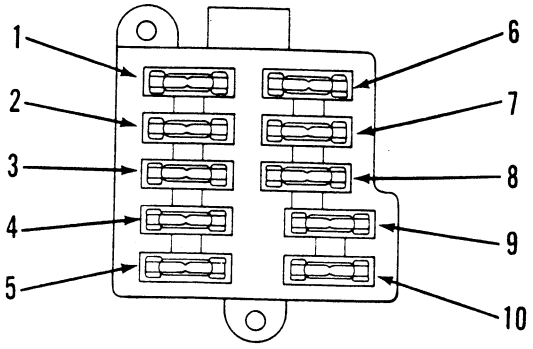
All exterior lights should be checked for proper operation each time the vehicle is prepared for a trip. Any bulbs which fail to light should be checked and replaced, when necessary, with a new bulb of the same size. A failure of more than one light, such as both taillights not operating, may indicate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

The headlight circuit is protected by a circuit breaker. An overload on the breaker will cause the lights to flicker on and off. Have your headlight wiring checked immediately anytime this condition develops.

FUSES

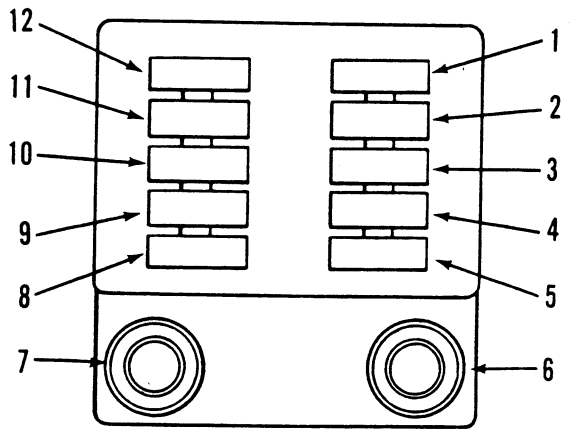
The automotive electrical circuits and accessories incorporated in your motor home are protected from short circuit conditions by a fuse panel. This panel is located under the dash to the left of the steering column on A-Body motor homes manufactured on Dodge chassis and A-Body and C-Body motor homes manufactured on Chevrolet and GMC chassis. On C-Body motor homes manufactured on Dodge chassis the fuse panel is located under the glove box door.

Should any of the automotive electrical systems fail because of a blown fuse, replace the fuse at once with one of the same type and size (Amperage rating). Repeated blowing of a fuse may indicate a serious malfunction and should be checked by your Winnebago or Itasca dealer immediately.



FUSE PANEL (C-Body Dodge Chassis)

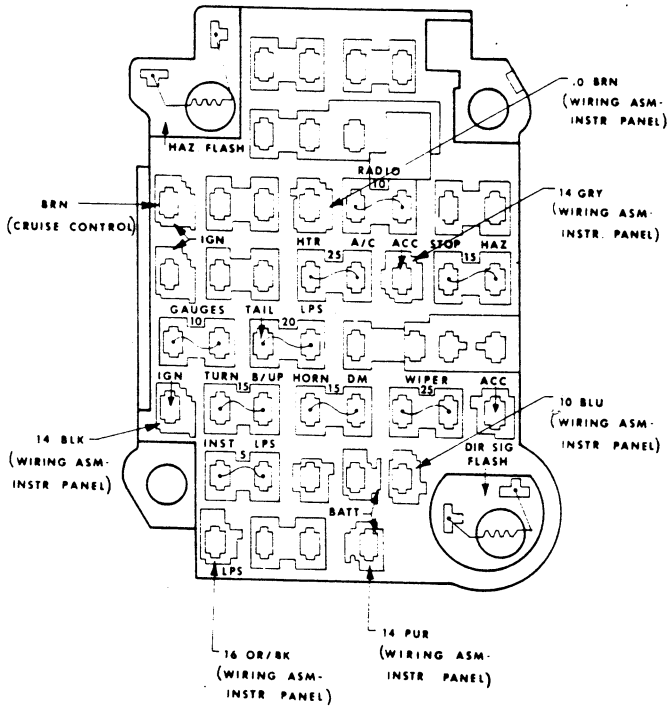
1. Instrument Lights ..... 5 Amp
2. Back-Up Lights - Turn /Signal Lights A /C Clutch - Speed Control ..... 20 Amp
3. Aux. Heater - Aux. A /C & Heater - Horns ..... 20 Amp
4. Radio ..... 5 Amp
5. Gauges - Oil Pressure Light Brake Light - Clock..... 20 Amp
6. Tail, Park, S /Markers, License Lamps..... 20 Amp
7. Dome Lamps - Stop Lamps Clock Feed - Cigar Lighter G /Box Lamp - Courtesy Lamps Ignition Lamp..... 20 Amp
8. Hazard Flashers ..... 20 Amp
9. A /C or Heater Blower Motor ..... 30 Amp
10. Blank



FUSE PANEL (All A-Body Dodge Chassis)

1. Radio ..... 7.5 Amp
2. Ignition Accessories ..... 20 Amp
3. Heater-Air Conditioner ..... 20 Amp
4. Horn and Back-Up Lights..... 20 Amp
5. Turn Signal, Gauges, Brake Warning Light and Transmission Fluid Light..... 20 Amp
6. Turn Signal Flasher
7. Hazard Warning Flasher
8. Instrument Lights ..... 4 Amp
9. Exterior Lights (incl. stop lamps)... 20 Amp
10. Interior Lights ..... 20 Amp
11. Battery Accessories..... 20 Amp
12. Running Lights (including clearance lights, tail lights, park lights and side marker lights) ..... 20 Amp

CAUTION Never replace a fuse with one of high amperage rating than those specified.



FUSE PANEL (Chevrolet & GMC Chassis)

1. Radio ..... 10 Amp
2. Heater /Air Conditioner ..... 25 Amp
3. Stop Light and Hazard ..... 15 Amp
4. Windshield Wiper..... 25 Amp
5. Directional Signal Flasher
6. Horn and Dimmer ..... 15 Amp
7. Instrument Lamps ..... 5 Amp
8. Turn Signal and Back-Up Lights .... 5 Amp
9. Gauges ..... 10 Amp
10. Tail Lights..... 20 Amp
11. Hazard Warning Flasher

CAUTION Never replace a fuse with one of higher amperage rating than those specified.

MOTOR HOME JACKING AND TIRE CHANGE PROCEDURE (All Models With Dodge Chassis)

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

WARNING The tire change procedure should be used in emergency situations only. The operator is advised to obtain qualified road service if at all possible.

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

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

NOTE: See specified models for recommended wheel nut torque.

FRONT WHEEL

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

1. Screw the jack extension out to approximately ground to spring height.
2. Slide jack under front spring and jack at a point just in front of front axle.

NOTE: Front spring 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 stud wrench.
4. Resume jacking until wheel is free of ground. Operate jack from in front of vehicle.
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.
7. Lower tire until tire just contacts the ground. Tighten nuts with stud wrench in recommended sequence.
8. Finish lowering the jack, remove jack and blocks.

WARNING 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.

REAR WHEEL

Before attempting to remove the rear wheel, observe the safety precautions in the beginning of the motorhome jacking procedures and then initiate the following procedures:

1. Screw jack extension out to approximately ground axle housing tube height.
2. Place the jack under axle housing. Center the jack on the housing so that the vehicle will not slide off the jack. Place the 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 getting under the vehicle.
3. Start jacking, but DO NOT lift wheel and tire off the ground.
4. Loosen wheel nuts with stud wrench.
5. Resume jacking until wheel and tires are free of ground.

WARNING DO NOT crawl under vehicle.

6. Remove wheel nuts and wheel. Put spare wheel in place.
7. Replace wheel nuts and torque in recommended sequence.

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

8. Lower the jack. Remove jack and blocks.

WARNING 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.

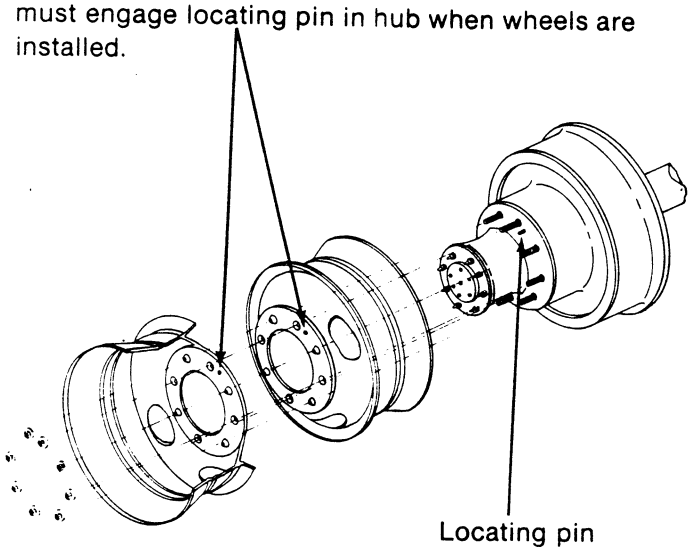
8 STUD DISC WHEELS (M300 - M400)

These wheels have four equally spaced stud holes which are coined outward and four which are

coined inward. The outer wheel must be installed so the coined stud holes match the coined stud holes of the inner wheel.

IMPORTANT

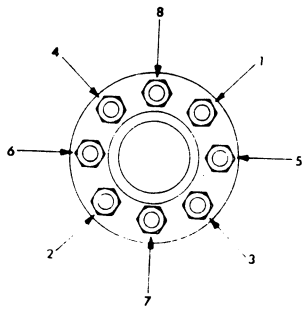
Locating pin hole in both inner and outer wheel must engage locating pin in hub when wheels are installed.



A locating pin in the hub will assist in properly orienting the inner and outer wheels. The tires of both dual wheels must be completely off the ground when tightening to insure wheel centering and maximum wheel clamping. These dual rear wheels should be tightened as follows.

1. Tighten the wheel nuts in the numbered sequence to a snug fit.

Tightening Sequence 8-Stud Disc Wheel



2. Retighten the wheel nuts in the same sequence to a torque of 300-350 foot-pounds (400-375 N.M.) Repeat this procedure a second time to assure proper torque has been achieved.

WARNING

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.

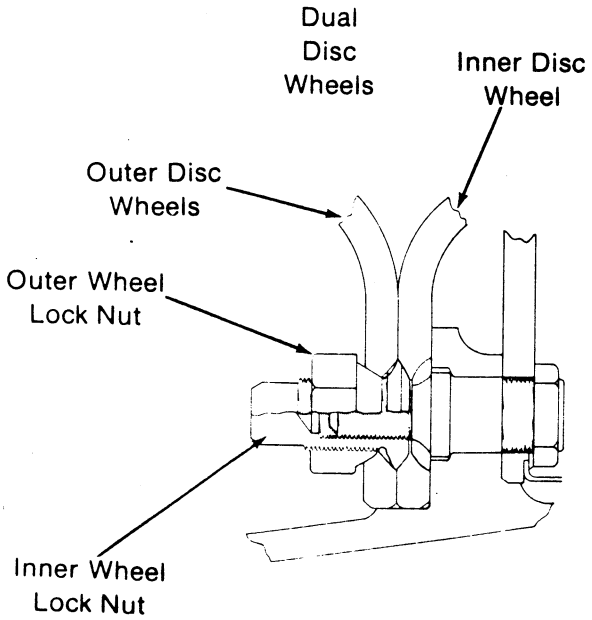
It is recommended that wheel stud nuts be kept torqued to specifications at all times. It is also recommended that they be checked after the first 100 miles (160 km) and then each time the engine oil is changed.

DISC WHEELS (M500 - M600)

The M500 chassis uses a 5 stud disc wheel and double lock nuts. The M600 chassis uses a 6 stud disc wheel and double lock nuts. The outer wheel nut bears against the outer wheel only. If the inner wheel lock nut is not tightened to specifications, the mounting stud may loosen. With the outer stud nuts tightened, only the outer wheel will be properly secured. The inner wheel may still be loose enough to move on the mounting studs, causing the stud holes in the inner wheel to wear.

To prevent the inner wheel from loosening, the dual rear wheels should be tightened as indicated in the following procedure:

1. Jack the rear axle until the tires of both dual wheels are completely off the ground.
2. Loosen the large outer nuts until the outer wheel is loose.



3. Tighten the small inner nuts to 450-500 foot-pounds (600-675 N.M.) torque. Both the inner and outer nuts must be tightened to within 450 to 500 foot pounds (600-675 N.M.) range.

NOTE: To facilitate wheel removal, it is recommended that the inner nuts be tightened more tightly than the outer nuts so the inner nuts do not loosen when the outer nuts are removed.

WARNING

The operator is advised to obtain road service whenever possible and attempt tire changing under emergency conditions only and with close adherence to the 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.

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.

WHEEL NUTS

To eliminate the possibility of the wheel studs 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.

RECOMMENDED TORQUE
DISC WHEELS

Chassis Model	Stud Size	Torque Ft. Lbs.	Torque Newton Metres
M300, M400	5/8-18	300-350	400-475
M500, M600	3/4-16	450-500	600-675

WARNING

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.

MOTOR HOME JACKING AND TIRE CHANGE PROCEDURE (All Models with Chevrolet or GMC Chassis)

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

WARNING

The tire change procedure should be used in emergency situations only. The operator is advised to obtain qualified road service if at all possible.

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

1. Jack the vehicle on a level surface only.
2. Turn off engine and set the parking brake. Activate hazard warning flasher.
3. Block both front and back of wheel opposite wheel to be removed.
4. 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 precautions and then initiate the following procedures:

1. Screw the jack extension out to approximately ground to spring height.
2. Slide 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 no jack tire off the ground.

3. Loosen wheel nuts with stud wrench.
4. Resume jacking until wheel is free of ground. Operate jack from in front of vehicle.
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.
7. Lower tire until tire just contacts the ground. Tighten nuts with stud wrench in recommended sequence.
8. Finish lowering jack, remove jack and blocks.

WARNING

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.

Dual Disc Rear Wheel

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

1. Screw jack extension out to approximate ground axle housing tube height.
2. Place the jack under axle housing near wheel to be raised. Center the jack on the housing so that the vehicle will not slide off the jack. Place the 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 getting under the vehicle.
3. Start jacking, but DO NOT lift wheel and tire off the ground.
4. Loosen wheel nuts with stud wrench.
5. 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.

WARNING

DO NOT crawl under vehicle.

6. Remove wheel nuts and wheel. Put spare wheel in place.

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.

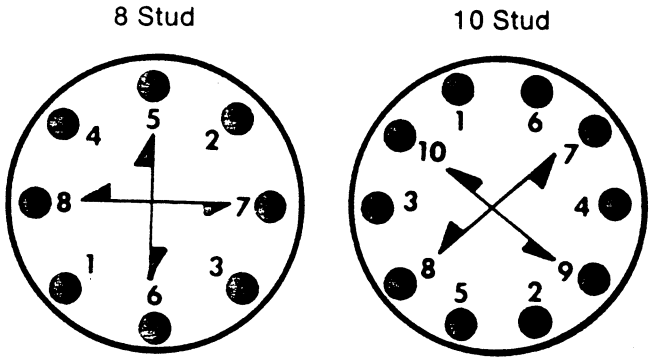
7. replace wheel nuts and torque in recommended sequence, as follows:

IMPORTANT

The tires of both dual wheels must be completely off the ground when tightening to insure wheel centering and maximum wheel clamping.

A. Tighten the wheel nuts in the numbered sequence to a snug fit.

Tightening Sequence



B. Retighten the wheel nuts in the same sequence to a torque of 140-180-350 foot-pounds. Repeat this procedure a second time to assure proper torque has been achieved.

WARNING

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.

It is recommended that wheel stud nuts be kept torqued to specifications at all time. It is also recommended that they be checked after the first 100 miles (160 km) and then each time the engine oil is changed.

The outer wheel nut bears against the outer wheel only. If the inner wheel lock nut is not tightened to specifications, the mounting stud may loosen. With the outer stud nuts tightened, only the outer wheel will be properly secured. The inner wheel may still be loose enough to move on the

mounting studs, causing the stud holes in the inner wheel to wear.

IMPORTANT
To prevent the inner wheel from loosening, the dual rear wheel should be tightened as indicated in the following procedure:

A. Jack the rear axle until the tires of both dual wheels are completely off the ground.
B. Loosen the large outer nuts until the outer wheel is loose.
C. Tighten the small inner nuts to 140 to 180 foot-pounds torque. This tightens the inner wheel only.
D. Tighten the large outer nuts to 140 to 180 foot-pounds torque. Both the inner and outer nuts must be tightened to within 140 to 180 foot pounds range.

NOTE: To facilitate wheel removal, it is recommended that the inner nuts be tightened more tightly than the outer nuts so the inner nuts do not loosen when the outer nuts are removed.

8. Lower the jack. Remove jack and blocks.

WARNING

The operator is advised to obtain road service whenever possible and attempt tire changing under emergency conditions only and with close adherence to the 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 studs 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 possibilty of loose wheels after correct mounting torque is applied.

WARNING

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.

Recommended Torque

Disc Wheels

Chevrolet and GMC Chassis

SERIES	DESCRIPTION	TORQUE
Rear Dual Wheels	9/16" Bolts (8)	Power Torque 110-140 lb. ft. Hand Torque 140-180 lb. ft.
Rear Dual Wheels	5/8" Bolts (10)	Power Torque 130-180 lb. ft. Hand Torque 150-200 lb. ft.

SERVICE SCHEDULE
DODGE CHASSIS

When To Perform Services (Months or Miles/Kilometers, Whichever Occurs First)	Item No.	Services (For Details See Numbered Paragraphs)	SERVICE LOG (Miles/Kilometers) 6,000 (9,600 km)	12,000 (19,200 km)	18,000 (28,800 km)	24,000 (38,400 km)
		Lubrication and General Maintenance				
Every 3 Months	1	Demand Water Pump Belt - Check				
	2	Demand Water Pump Filter - Check				
Every 6 Months or 6,000 Miles (9,600 km)	3	Chassis Lubrication				
	4	Fluid Levels - Check				
	5	Air Conditioning System - Check				
	6	Engine Oil - Change				
	7	Brake Booster Breather Air Cleaner - Clean				
	8	Rubber and Plastic Components - Inspect				
At 1st Oil Change - Then Every 2nd Oil Change	9	Engine Oil Filter - Replace				
Every 12,000 Miles (19,200 km)	10	Tires - Rotate				
	7	Brake Booster Breather Air Cleaner - Replace				
Every 12 Months or 12,000 Miles (19,200 km)	11	Cooling System - Check				
Every 18,000 Miles (28,800 km)	12	Automatic Transmission - Drain, Adjust and Refill				
Every 24,000 Miles (38,400 km)	13	Front Wheel Bearings - Inspect, Clean and Lubricate				
Every 24 Months or 36,000 Miles (57,600 km) and Every 12 Months or 18,000 Miles (28,800 km) Thereafter	11	Cooling System - Drain, Flush and Refill				
Every 36,000 Miles (57,600 km)	14	Rear Axle Differential - Drain and Refill				
Every 12 Months or 48,000 Miles (76,800 km)	13	Rear Wheel Bearings - Inspect, Clean and Repack				
		Safety Maintenance				
Every 6 Months or 6,000 Miles (9,600 km)	15	Owner Safety Checks				
	16	Nuts and Bolts - Check Torque				
	17	Exhaust System - Check For Leaks and Damage				
	19	Suspension and Steering - Check				
	20	Brakes and Power Steering Hoses - Inspect				
Every 12 Months or 12,000 Miles (19,200 km)	21	Disc Brake Linings - Inspect				
	22	Drum Brakes and Parking Brake - Check				
	23	Vehicle Underbody - Flush and Check				
Every 18,000 Miles (28,800 km)	18	Engine Drive Belts - Check and Replace if Necessary.				
		Emission Control Maintenance				
Every 6 Months or 12,000 Miles (19,200 km)	24	Carburetor Choke - Inspect Choke and Apply Solvent to Choke Shaft				
Every 12 Months or 12,000 Miles (19,200)	25	Crankcase Inlet Air Cleaner - Clean				
Every 12,000 Miles (19,200 km)	26	Positive Crankcase Vent Valve - Inspect and Replace if Necessary.				
	27	Exhaust Gas Recirculation System - Check Operation				

DODGE CHASSIS (Cont.)

When To Perform Services (Months or Miles/Kilometers, Whichever Occurs First)	Item No.	Services (For Details See Numbered Paragraphs)	SERVICE LOG (Miles/Kilometers) 6,000 (9,600 km)	12,000 (19,200 km)	18,000 (28,800 km)	24,000 (38,400 km)
		Emission Control Maintenance				
Every 18,000 Miles (28,800 km)	28	Fuel Filter - Replace				
	30	Spark Plug and Ignition System Wires - Inspect				
	31	Manifold Heat Control Valve - Apply Solvent				
	32	Vapor Storage Canister Filter Element - Replace				
	33	Emission Hoses - Inspect				
	34	Spark Plugs - Replace				
	29	Idle Speed and Air/Fuel Mixture - Check				
Every 24,000 Miles (38,400 km)	35	Air Cleaner Element - Replace				
	36	Fuel Cap, Tank and Lines - Check				
	26	Positive Crankcase Vent Valve - Replace				

NOTES

EXPLANATION OF SERVICE SCHEDULE (DODGE CHASSIS)

This is an explanation of each of the services listed in the preceding maintenance schedule. The maintenance schedule is based on normal vehicle use:

- where passenger and cargo loads have been maintained within the limitations on the V.I.N. plate,
- the vehicle has been operated on level hard surface roads within legal limits,
- operated on a regular basis.

Unusual operating conditions, such as operating on dusty roads, towing a trailer or driving in mountainous terrain, will require more frequent vehicle maintenance. After each of the maintenance services is performed, it is recommended that you insert the month, day and mileage in the maintenance schedule under the appropriate column.

WARNING Inspection and service should be performed anytime a malfunction is observed or suspected.

LUBRICATION AND GENERAL MAINTENANCE

1. **Demand Water Pump Belt** - Check for belt wear and adjust tension to provide a deflection of no more than ¼" in the center of the belt span. Refer to water system schematic for pump location.
2. **Demand Water Pump Filter** - Examine filter through the transparent cover. Remove cover and clean filter when necessary. Refer to water system schematic for filter location.
3. **Chassis Lubrication** - Lubricate all grease fittings in front suspension, steering linkage, universal joints and brake pedal pivot. Also lubricate transmission shift linkage, hood latch, hood and door hinges, propellor shaft slip joint and brake pedal spring. When operating under dusty or off road conditions, suspension and steering linkage should be lubricated at 2 months or 2,000 mile intervals.
4. **Fluid Levels** - Check level of fluid in brake master cylinder, power steering pump, battery, engine crankcase, rear axle, transmission and windshield washer reservior. Check test indicator on maintenance free battery on vehicles so equipped. Check coolant level regularly (daily if necessary), Significant fluid loss in any of the systems could indicate a malfunction and corrective action should be taken.
5. **Air Conditioning** - Check condition of air conditioner system hoses and refrigerant charge at sight glass window. Appearance of bubbles in the sight window may indicate an insufficient charge. Have your dealer replace hoses and/or refrigerant if necessary.
6. **Engine Oil** - Change oil as specified for your model chassis:
   Oil should be changed at one half the frequency if the vehicle is operated in dusty conditions, towing a trailer or used for frequent short trips.
7. **Brake Booster Breather Air Cleaner (Brave WDF23RG Only)** - Remove air cleaner element and clean every 6,000 miles (9,600 km) or 6 months with compressed air or by tapping on a flat surface. Replace element every 12 months or 12,000 miles. (19.200 km)
8. **Rubber and Plastic Components** - Inspect all plastic and rubber material for cracking or splitting and replace parts as required.
9. **Engine Oil Filter** - Change filter at the first oil change and every second oil change thereafter.
10. **Tires** - To equalize wear, rotate tires at the frequency specified in the chart for you motorhome model. Adjust tire pressures as indicated in the tire pressure charts on pages 96
11. **Cooling System** - At 12 month or 12,000 mile (10,200 km) intervals, wash radiator cap and filler neck with clean water. Have your dealer pressure test system and radiator cap for proper pressure holding capacity. Tighten hose clamps and inspect hoses for cracking, swelling or deterioration. Clean exterior of radiator coil and air conditioner condenser. Drain, flush and refill the cooling system with a new coolant solution as designated by the manufacturer, every 24 months or 36,000 miles (57,600 km).
12. **Automatic Transmission** - Under normal conditions, change transmission fluid and filter every 18,000 miles (28,800 km)
    Under unusual conditions, such as constant city driving or trailer towing, the fluid should be changed at one-half the designated interval.

13. **Wheel Bearings** - Clean and repack the wheel bearings at specified intervals.
14. **Rear Axle Differential** - Drain and replace lubricant at specified interval.

SAFETY MAINTENANCE

15. **Owner Safety Check** - The following checks should be made regularly during operation, at designated interval or sooner.

A. Parking Brake - Check parking brake holding capability by parking on a fairly steep incline and restraining the vehicle with the parking brake only.

B. Transmission Shift Indicator - Check to be sure automatic transmission shift indicator accurately aligns with the selected gear position.

C. Steering - Be alert to any changes in steering action such as excessive free play, increased steering effort or unusual sounds.

D. Wheel Alignment and Balance - Frequently check for uneven or abnormal tire wear as well as being alert to any pull to the left or right while driving on a straight and level surface. These signs could indicate a need for wheel alignment. The need for wheel balancing is usually indicated by a vibration of the steering wheel or the seats.

E. Brakes - Be alert to illumination of the brake warning light and changes in brake action or unusual sounds when the brakes are applied.

F. Exhaust System - Be alert to any change in the sound of the exhaust system fumes in the motorhome which may indicate a leak in the system.

G. Windshield Wiper and Washer - Check operation of the wipers and the condition of wiper blades. Check amount and direction of fluide sprayed onto the windshield.

H. Rearview Mirrors and Sunvisors - Make sure friction joints are properly adjusted and tight to hold mirror or visor in selected position.

I. Horn - Sound the horn occasionally to make sure it works properly.

J. Seat Belts - Check belts, buckles, latch plates and anchors for proper operation and security.

K. Seat Adjusters - Check to be sure seat slide adjuster lock and swivel seat lock securely engage by pushing forward and backward and twisting whenever the seat is adjusted.

L. Lights - Check all instrument panel illuminating and warning lights, interior lights, license plate lights and all exterior lights. Have headlight aim check every 12 months or 15,000 miles (24,000 km) or more often if light beams appear to be aimed improperly.

M. Glass - Check for broken, scratched, dirty or damaged glass on vehicle that could obscure vision or shatter.

N. Fluid Leaks - Check for fuel, water, oil or other fluid leaks by observing the area beneath the vehicle after it has been parked for a while. (Water dripping from the air conditioner after use is normal.) If gasoline fumes or fluid is noticed at any time, the cause must be determined and corrected immediately.

16. **Nuts and Bolts** - Check wheel lug nuts and steering linkage nuts to be sure they are tight.
18. **Exhaust System** - Check complete exhaust system and nearby areas for broken, damaged or missing parts, open seams, holes or loose connections which could permit exhaust fumes to enter the motorhome. Any necessary corrections should be made immediately. Also thoroughly inspect the 110-volt generator exhaust system at this time, if so equipped.
18. **Engine Drive Belts** - Check belts driving fan, air injection reactor (A.I.R.) pump, generator, power steering pump and air conditioner compressor for cracks, fraying, wear and tension. Adjust or replace if necessary.
19. **Suspension and Steering** - Check for damaged, loose or missing parts and parts showing signs of excessive wear or lack of lubrication in front and rear suspension and steering system. Any necessary repairs should be accomplished at once.
20. **Brakes and Power Steering Hoses** - Check lines and hoses for proper attachment, binding, leaks, cracks, deterioration, etc. Any defective parts should be replaced or repaired immediately. When abrasion or wear is evi-

dent, the cause must be corrected.

21. **Disc Brake Linings** - Check brake pads for wear and inspect surface condition of rotors while tires are removed for tire rotation.
22. **Drum Brakes and Parking Brake** - Check drum brake linings for wear or cracks. Inspect internal brake components (drums, wheel cylinders, etc.) at each wheel. Check parking brake adjustment.
23. **Vehicle Underbody** - At least once a year preferably after winter exposure, flush underbody of the vehicle with plain water to remove all corrosive material and mud.

EMMISSION CONTROL MAINTENANCE

24. **Carburetor Choke and Hoses** - Check choke mechanism for proper operation. Any binding condition which may have developed due to petroleum gum formation on the choke shaft or from damage, should be corrected. Check carburetor choke hoses for proper connection, cracking or deterioration, replace if necessary.
25. **Crankcase Inlet Air Cleaner** - Remove crankcase inlet air cleaner and wash thoroughly with kerosene or solvent. Lubricate the filter by inverting the air cleaner and filling with SAE 30 engine oil. Allow excess oil to drain and reinstall air cleaner.
26. **Positive Crankcase Ventilation System (PVC)** - Check the PVC system for proper operation every 12 months or 12,000 miles (19,200 km). Ensure that PCV valve, hoses and passages are free of deposits. If the valve is plugged or sticking, replace with a new valve. Do not attempt to clean the old PVC valve. Replace the valve at 24 months or 24,000 miles (38,400 km) or sooner.
27. **Exhaust Gas Recirculation System** - Have system inspected and if deposits are found, have the EGR valve cleaned. Also have all hoses and passages checked.
28. **Fuel Filter** - Replace fuel filter at designated intervals or immediately if it becomes clogged.
29. **Engine Idle Mixture** - At designated intervals, in case of a major carburetor overhaul or when poor idle quality exists, have the idle mixture adjusted by a qualified mechanic.
30. **Spark Plug and Ignition System Wires** - Clean exterior of wires and remove any evidence of corrosion on end terminals. Inspect wires for evidence of burning, cracking, etc. If corrosion cannot be removed or faulty conditions are noted, replace wire.
31. **Manifold Heat Control Valve** - Check valve for free operation to ensure fast engine warrn-up and smooth accelerator. Repair if necessary.
32. **Vapor Storage Canister Filter Element** - Replace filter element on vehicles equipped with California emissions package only.
33. **Emission Hoses** - Inspect emission hoses for evidence of heat or mechanical damage. Inspect hose routing to ensure hoses do not come in contact with any heat source or moving component. Hoses should be replaced immediately if there is any evidence of deterioration that could result in failure.
34. **Spark Plugs** - Replace with spark plugs of the same specifications every 18,000 miles (28,800 km).
35. **Air Cleaner Element** - Replace air cleaner element at 18,000 miles (28,800 km). Operation in dusty areas will require more frequent replacement.
36. **Fuel Cap, Fuel Lines and Fuel Tank** - Inspect the fuel tank, cap and lines for damage which could cause leakage. Inspect fuel cap for correct sealing ability. Replace any damaged or malfunctioning parts.

SERVICE SCHEDULE
CHEVROLET & GMC CHASSIS

SERVICE LOG
(Miles/Kilometers)

When to Perform Services (Months or Miles/Kilometers, Whichever Occurs First)	Item No.	Services (For Details See Numbered Paragraphs)	6,000 (9,600 km)	12,000 (19,200 km)	18,000 (28,800 km)	24,000 (38,400 km)
		Lubrication and General Maintenance				
Every 3 Months	1	Demand Water Pump Belt - Check				
	2	Demand Water Pump Filter - Check				
Every 4 Months or 6,000 Miles (9,600 km)	3	Chassis Lubrication				
	4	Fluid Levels - Check				
	5	Air Conditioning System - Check				
	6	Engine Oil - Change				
	7	Rubber and Plastic Components - Inspect				
At 1st Oil Change - Then Every 2nd Oil Change	8	Engine Oil Filter - Replace				
Every 6,000 Miles (9,600 km)	9	Tires - Rotate				
Every 12 Months or 12,000 Miles (19,200 km)	10	Cooling System - Check				
Every 12,000 Miles (19,200 km)	12	Wheel Bearings - Inspect, Clean and Lubricate				
Every 24,000 Miles (38,400 km)	11	Automatic Transmission - Drain, Adjust and Refill				
	13	Rear Axle Differential - Drain and Refill				
		Safety Maintenance				
Every 4 Months or 6,000 Miles (9,600 km)	14	Owner Safety Checks				
	15	Tires and Wheels - Inspect				
	16	Exhaust System - Check for Leaks and Damage				
	17	Engine Drive Belts - Inspect				
	18	Suspension and Steering - Check				
	19	Brakes and Power Steering Hoses - Inspect				
Every 6,000 Miles (9,600 km)	20	Disc Brake Linings - Inspect				
Every 12 Months or 12,000 Miles (19,200 km)	21	Drum Brakes and Parking Brake - Inspect				
	22	Vehicle Underbody - Flush and Check				
		Emission Control Maintenance				
At first 4 Months or 6,000 Miles (9,600 km), then at 12 Month/12,000 Mile (19,200 km) Intervals	23	Carburetor Choke and Hoses - Check				
	24	Engine Idle Speed Adjustment - Check				
	25	Carburetor Mounting - Check				
Every 12 Months or 12,000 Miles (19,200 km)	32	Manifold Heat Control Valve - Inspect				
	27	Exhaust Gas Recirculation System - Check Operation				
	28	Fuel Filter - Replace				
	29	Engine Idle Mixture - Check				
	30	Throttle Return Control - Check				
	31	Idle Stop Solenoid - Check				
	26	Positive Crankcase Vent System - Check				
Every 12,000 Miles (19,200 km)	33	Spark Plugs - Replace				
	34	Air Cleaner Element - Clean or Replace				
Every 24 Months or 24,000 Miles (38,400 km)	35	Evaporation Control System - Check				
	36	Fuel Cap, Tank and Lines - Check				
	26	Positive Crankcase Vent Valve - Replace				

EXPLANATION OF SERVICE SCHEDULE (CHEVROLET/GMC CHASSIS)

This is an explanation of each of the services listed in the preceding service schedules. The service schedules are based on normal vehicle use:

- where passenger and cargo loads have been maintained within the limitation son the V.I.N. plate,
- the vehicle has been operated on level hard surface roads within legal limits,
- operated on a regular basis.

Unusual operating conditions, such as operating on dusty roads, towing a trailer or driving in mountainous terrain, will require more frequent vehicle maintenance. After each of the maintenance services is performed, it is recommended that you insert the month, day and mileage in the maintenance schedule under the appropriate column.

WARNING Inspection and service should be performed anytime a malfunction is observed or suspected.

LUBRICATION AND GENERAL MAINTENANCE

1. **Demand Water Pump Belt** - Check for belt wear and adjust tension to provide a deflection of no more than ¼" in the center of the belt span. Refer to water system schematic for pump location.
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4. **Fluid Levels** - check level of fluid in brake master cylinder, power steering pump, battery, engine crankcase, rear axle transmission and windshield washer reservior. Check test indicator on maintenance free battery on vehicles so equipped. Check coolant level regularly (daily if necessary). Significant fluid loss in any of the systems could indicate a malfunction and corrective action should be taken.
5. **Air Conditioning** - Check condition of air conditioner system hoses and refrigerant charge at sight glass window. Appearance of bubbles in the sight window may indicate and insufficient charge. Have your dealer replace hoses and/or refrigerant if necessary.
6. **Engine Oil** - Change oil. Oil should be changed at one half the frequency if the vehicle is operated in dusty conditions, towing a trailer or used for frequent short trips.
7. **Rubber and Plastic Components** - Inspect all plastic and rubber material for cracking or splitting and replace parts as required.
8. **Engine Oil Filter** - Change filter at the first oil change and every second oil change thereafter.
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10. **Cooling System** - At 12 months or 12,000 miles (19,200 km) intervals, wash radiator cap and filler neck with clean water. Have your dealer pressure test system and radiator cap for proper pressure holding capacity. Tighten hose clamps and inspect hoses for cracking, swelling or deterioration. Clean exterior of radiator coil and air conditioner condenser. Drain, flush and refill the cooling system with a new coolant solution as designated by the manufacturer, every 24 months or 24,000 miles (38,400 km).
11. **Automatic Transmission** - Under normal conditions, change transmission fluid and filter every 24,000 miles (38,400 km).
    Under unusual conditions, such as constant city driving or trailer towing, the fluid should be changed at one-half the designated interval.
12. **Wheel Bearings** - Clean and repack the wheel bearings at specified intervals.
13. **Rear Axle Differential** - Drain and replace lubricant at specified interval.

SAFETY MAINTENANCE

14. **Owner Safety Check** - The following checks should be made regularly during operation, at designated interval or sooner.

A. Parking Brake - Check parking brake holding capability by parking on a fairly steep incline and restraining the vehicle with the parking brake only.

B. Transmission Shift Indicator - Check to be sure automatic transmission shift indicator accurately aligns with the selected gear position.

C. Steering - Be alert to any changes in steering action such as excessive free play, increased steering effort or unusual sounds.

D. Wheel Alignment and Balance - Frequently check for uneven or abnormal tire wear as well as being alert to any pull to the left or right while driving on a straight and level surface. These signs could indicate a need for wheel alignment. The need for wheel balancing is usually indicated by a vibration of the steering wheel or the seats.

E. Brakes - Be alert to illumination of the brake warning light and changes in brake action or unusual sounds when the brakes are applied.

F. Exhaust System - Be alert to any change in the sould of the exhaust system and fumes in the motorhome which may indicate a leak in the system.

G. Windshield Wiper and Washer - Check operation of the wipers and the condition of wiper blades. Check amount and direction of fluid sprayed onto the windshield.

H. Rearview Mirrors and Sunvisors - Make sure friction joints are properly adjusted and tight to hold mirror or visor in selected position.

I. Horn - Sound the horn occasionally to make sure it works properly.

J. Seat Belts - Check belts, buckles, latch plates and anchors for proper operation and security.

K. Seat Adjusters - Check to be sure seat slide adjuster lock and swivel seat lock securely engage by pushing forward and backward and twisting whenever the seat is adjusted.

L. Lights - Check all instrument panel illuminating and warning lights, interior lights, license plate lights and all exterior lights. Have headlight aim check every 12 months or 15,000 miles (24,000 km) or more often if light beams appear to be aimed improperly.

M. Glass - Check for broken, scratched, dirty or damaged glass on vehicle that could obscure vision or shatter.

N. Fluid Leaks - Check for fuel, water, oil or other fluid leaks by observing the area beneath the vehicle after it has been parked for a while. (Water dripping from the air conditioner after use in normal). If gasoline fumes or fluid is noticed at anytime, the cause must be determined and corrected immediately.

15. **Tires and Wheels** - Check tires for excessive wear or damage. Make certain wheels are not bent or cracked.
16. **Exhaust System** - Check complete exhaust system and nearby areas for broken, damaged or missing parts, open seams, holes or loose connections which could permit exhaust fumes to enter the motorhome. Any necessary corrections should be made immediately. Also thoroughly inspect the 110-volt generator exhaust system at this time, if so equipped.
17. **Engine Drive Belts** - Check belts driving fans, air injection reactor (A.I.R.) pump, generator, power steering pump and air conditioner compressor for cracks, fraying, wear and tension. Adjust or replace if necessary.
18. **Suspension and Steering** - Check for damaged, loose or missing parts and parts showing signs of excessive wear or lack of lubrication in front and rear suspension and steering system. Any necessary repairs should be accomplished at once.
19. **Brakes and Power Steering Hoses** - Check lines and hoses for proper attachment, binding, leaks, cracks, deterioration, ect. Any defective parts should be replaced or repaired immediately. When abrasion or wear is evident, the cause must be corrected.
20. **Disc Brake Linings** - Check brake pads for wear and inspect surface condition of rotors while tires are removed for tire rotation.
21. **Drum Brakes and Parking Brake** - Check drum brake linings for wear or cracks. Inspect internal brake components (drums, wheel cylinders, etc.) at each wheel. Check parking brake adjustment.
22. **Vehicle Underbody** - At least once a year, preferably after winter exposure, flush underbody of the vehicle with plain water to remove all corrosive material and mud.

EMMISSION CONTROL MAINTENANCE

23. **Carburetor Choke and Hoses** - Check choke mechanism for proper operation. Any binding condition which may have developed due to petroleum gum formation on the choke shaft or from damage, should be corrected. Check carburetor choke hoses for proper connection, cracking or deterioration, replace if necessary.
24. **Engine Idle Speed Adjustment** - Have engine idle speed adjustment checked by your dealer at specified intervals.
25. **Carburetor Mounting** - Tighten carburetor attachment bolts and/or nuts to compensate for compression of gasket.
26. **Positive Crankcase Ventilation System (PCV)** - Check the PCV system for proper operation every 12 months or 12,000 miles (19,200 km). Ensure that PCV valve, hoses and passages are free of deposits. If the valve is plugged or sticking, replace with a new valve. Do not attempt to clean the old PCV valve. Replace the valve at 24 months or 24,000 miles (38,400 km) or sooner.
27. **Exhaust Gas Recirculation System** - Have system inspected and if deposits are found, have the EGR valve cleaned. Also have all hoses and passages checked.
28. **Fuel Filter** - Replace fuel filter at designated intervals or immediately if it becomes clogged.
31. **Idle Stop Solenoid** - Have solenoid checked for proper operation.
32. **Manifold Heat Control Valve** - Check valve for free operation to ensure fast engine warm-up and smooth acceleration. Repair if necessary.
33. **Spark Plugs** - Replace with spark plugs of the same specifications at designated interval.
34. **Air Cleaner Element** - Replace air cleaner element at the following intervals. Operation in dusty areas will require replacement sooner than specified.
35. **Evaporation Control System** - Check all fuel and vapor lines and hoses for proper connection. Remove canisters and check for cracks or damage. Replace filter in lower section of canister.
36. **Fuel Cap, Fuel Lines and Fuel Tank** - Inspect the fuel tank, cap and lines for damage which could cause leakage. Inspect fuel cap for correct sealing ability. Replace any damaged or malfunctioning parts.
29. **Engine Idle Mixture** - At designated intervals, in case of a major carburetor overhaul or when poor idle quality exists, have the idle mixture adjusted by a qualified mechanic.
30. **Throttle Return Control** - Check hoses for proper connections, cracking or deterioration and replace if necessary. Check for proper operation of system.

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IMPORTANT
SERIAL NUMBERS

You will want to make a record of all serial numbers for future reference. Look for them and fill in immediately.

Motorhome Serial Number _____

Chassis Serial Number _____

Air Conditioner Serial Number _____

Range Model and Serial Number _____

Refrigerator Model and Serial Number _____

Furnace Model and Serial Number _____

Water Heater Model and Serial Number _____

Converter Model and Serial Number _____

Optional 110-Volt Generator Model and Serial Number. _____

When writing to the factory be sure to include your motorhome serial number and chassis number. When writing to a component manufacturer for information, be sure to include the model and serial number for the item.

EMERGENCY INFORMATION

Dealer

Name _____

Address _____

_____

Phone _____

Insurance Policy

Company _____

Policy Number _____

Phone _____

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the most in motor homes.

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