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# INTRODUCTION

This manual is intended as a guide to understanding and operating your new Lance Camper or 5th-Wheel Trailer. Consider this manual a permanent part of your Lance recreational vehicle. Keep it with the unit at all times. If you sell the unit, the new owner will appreciate the operating, safety, and maintenance information contained in this Owner's Manual. Also keep all manuals and tags furnished with appliances and other equipment installed in your unit.

This manual pertains to four different Lance lines: Lance, Lance Squire, Lance Squire-Lite Truck Campers and Lance 5th-Wheel Trailers. Therefore, not all features described in this manual will apply to your specific unit.

**5TH-WHEEL OWNERS NOTE:** Most sections in this manual, such as Electrical and Water Systems, LP Gas System, Appliances, etc. apply to both Truck Campers and 5th-Wheel Trailers. Also included towards the end of the manual, is a chapter pertaining strictly to 5th-Wheel Trailer operation.

## Important Notice

This Owner's Manual is of a general nature only and does not cover every aspect of all the models of campers and 5th-wheel trailers manufactured by Lance Camper Mfg. Corp.

The Lance owner should read this Owner's Manual thoroughly and heed the warnings given herein, as well as those warnings given in the instruction manuals contained in the owner's packet.

Due to ongoing design development at Lance, it is possible that recent product changes may not be included in this manual. This manual is intended as a guide only and in no way extends the responsibility of Lance Camper Mfg. Corp. beyond the limited warranty printed in the back of this manual.

We also urge you to read the various instruction manuals provided by the manufacturers of the separately warranted products. (Such as, gas appliances and refrigerator). Also, be sure to

mail in all your individual warranty cards to the respective manufacturer to protect your warranties.

## Dealer Responsibility

It is the duty of your Lance dealer to inspect and prepare your unit during the pre-delivery phase of the sale.

Your selling dealer should instruct you in using the following:

- Fresh Water System
- Waste System
- L.P. Gas System
- Electrical Systems
- Appliances
- Bed Conversions
- RV Park Hookup
- Loading and Unloading
- Optional Equipment

While the dealer is providing basic instructions on how to use this vehicle, it is ultimately your responsibility to make sure you fully understand how to use this vehicle before doing so. To fulfill this responsibility, in addition to the instructions received from the dealer, you must read all instructional material furnished with this vehicle.

If, after taking delivery of your unit, you feel it requires additional adjustment, please contact your selling dealer as soon as possible for an appointment.

Your Lance Camper or 5th-Wheel Trailer comes with the following loose items. Please make sure that you have each of these items:

- Two sets of keys
- Owner's Packet
- Fire Extinguisher (mounted)
- Waste Drain Hose with Dumping Hardware
- Two Jack Handles (Campers only)
- Tire/Rear Stabilizer Lug Wrench (5th-Wheel Trailer only)
- Front Jack Crank Handle (5th-Wheel Trailer only)

## LP GAS SAFETY REGULATIONS

The manufacturer of this recreational vehicle is required to furnish the following consumer information as provided by the National Fire Protection Association and the American National Standards Institute. The information and warnings found here may also be found in other chapters of this Owner's Manual. Please see chapters titled "LP GAS SYSTEM" and "APPLIANCES" for other safety and operating information.

**WARNING: LP GAS CONTAINERS SHALL NOT BE PLACED OR STORED INSIDE THE VEHICLE. LP GAS CONTAINERS ARE EQUIPPED WITH SAFETY DEVICES WHICH RELIEVE EXCESSIVE PRESSURE BY DISCHARGING GAS TO THE ATMOSPHERE.**

**WARNING: IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING. COOKING APPLIANCES NEED FRESH AIR FOR SAFE OPERATION. BEFORE OPERATION:**

1. OPEN OVERHEAD VENT OR TURN ON EXHAUST FAN, AND
2. OPEN WINDOW.

THIS WARNING LABEL HAS BEEN LOCATED IN THE COOKING AREA TO REMIND YOU TO PROVIDE AN ADEQUATE SUPPLY OF FRESH AIR FOR COMBUSTION. UNLIKE HOMES, THE AMOUNT OF OXYGEN SUPPLY IS LIMITED DUE TO THE SIZE OF THE RECREATIONAL VEHICLE, AND PROPER VENTILATION WHEN USING THE COOKING APPLIANCE(S) WILL AVOID DANGERS OF ASPHYXIATION. IT IS ESPECIALLY IMPORTANT THAT COOKING APPLIANCES NOT BE USED FOR COMFORT HEATING AS THE DANGER OF ASPHYXIATION IS GREATER WHEN THE APPLIANCE IS USED FOR LONG PERIODS OF TIME.

**WARNING: PORTABLE FUEL-BURNING EQUIPMENT, INCLUDING WOOD AND CHARCOAL GRILLS AND STOVES, SHALL NOT BE USED INSIDE THIS RECREATIONAL VEHICLE. THE USE OF THIS EQUIPMENT INSIDE THE RECREATIONAL VEHICLE MAY CAUSE FIRES OR ASPHYXIATION.**

**WARNING: DO NOT BRING OR STORE LP GAS CONTAINERS, GASOLINE, OR OTHER FLAMMABLE LIQUIDS INSIDE THE VEHICLE BECAUSE A FIRE OR EXPLOSION MAY RESULT.**

A warning label has been located near the LP gas container. This label reads: DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY.

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

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

**IF YOU SMELL GAS:**

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

LP gas regulators must always be installed with the diaphragm vent facing downward. Make sure that regulator vent faces downward to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

# CAMPER AND TRUCK

## Matching Camper and Truck

Matching your Lance Camper to the proper truck is extremely important. Use a truck that is large enough for your camper and has the needed power and appropriate equipment (such as heavy duty radiator, transmission, final drive, suspension, wheels and tires). The truck must be rated by its manufacturer to carry the gross weight of the fully loaded camper. The truck must also have a compatible center of gravity zone with the camper. Please refer to your truck owners manual and the Consumer Information Data Sheet supplied with this manual.

**WARNING:** Failure to properly match camper and truck can result in undesirable handling characteristics and may create a safety hazard.

The truck must have a cargo weight rating equal to or greater than the total cargo load of the camper and its contents. To estimate total cargo load, add the weight of occupants, supplies, other cargo, optional camper equipment installed and the weight of the camper. We recommend that you weigh your loaded camper and truck at an approved weight station to insure safe operation and handling. If your truck and camper do not ride level, you may want to add something, such as Ride-Rite® Comfortaires, to level the unit and improve handling characteristics.

## Tiedowns

The Camper must be secured to the truck with a set of high quality tiedowns. They connect the eyebolts provided on the camper to brackets securely bolted to the truck. These tiedowns must be spring or shock loaded at the front. The front tiedowns should angle between 45 and 30 degrees from vertical when properly installed; the rear tiedowns can be more vertical. Check eyebolts, turnbuckles, and bracket bolts before each trip and at frequent intervals. Refer to the use and maintenance instructions supplied with the tiedowns for detailed information.

## Electrical Connection to Truck

Your Lance Camper comes equipped with a 12-volt electrical connector. The female side of the connector will be installed on your truck by your Lance dealer. With the wiring and connector hooked-up, your truck will supply power to operate the 12-volt needs of the camper. See below for 12-volt connector wire color functions.

WIRE COLOR	FUNCTION
Black (8 gauge)	12-volt power
White (8 gauge)	Ground
Green	Running Lights
Red	Left turn signal
Brown	Right turn signal
Yellow	Back-up lights

To protect your truck's 12-volt system from overload, a 30 or 40 amp circuit breaker should be installed at the power source under the hood. An isolator switch should be installed to protect the truck's starting battery from discharge. To handle the camper's electrical requirements and to charge the camper battery, 8 gauge hot and ground wires should be run from the power source under the hood to the 12-volt plug mounted in the truck bed.

# LOADING AND UNLOADING CAMPER

## Camper Jacks

The camper is loaded, unloaded, leveled and stabilized with the aid of jacks positioned at each corner of the camper. This camper is equipped with one of three different systems used: Hydraulic, Ball Screw Rotary Crank or Electric. Refer to the operating instructions supplied in your owner's packet. The following information is only supplemental.

## Hydraulic Camper Jacks

The jacks are operated using a pump handle and the control valve. To extend the jack:

1. Open pump valve control 1/2 to 1 1/2 full turns. **DO NOT OPEN ANY FARTHER.**
2. Remove safety latch from base pad, and release thumb screws.
3. Push base pad to ground and be sure pad has solid footing to prevent tipping or sinking.
4. Close pump valve control, insert pump handle. Pump handle lever to extend jack.

**WARNING: OPERATION COULD BE DANGEROUS.**

Extreme caution must be taken when opening or closing the control valve. The valve must be opened very slowly to prevent the jack from lowering too quickly. The more the valve is opened, the faster the jack will lower. No more than 1/4 turn of the control valve is necessary to lower the camper. Allowing one of the front jacks to lower out of control can cause the camper to collapse and cause possible injury.

When camper is loaded on truck, open pump valves 1/2 to 1 1/2 full turns. **NO MORE.** Push base pad into external tube. Snap safety latch into notches on base pad and set thumb screws for traveling. Leave valves open 1/8 turn.

**DO NOT** extend jack beyond red safety line on the inner tube or 36 inches of extension.

Inspect and maintain your jacks regularly.

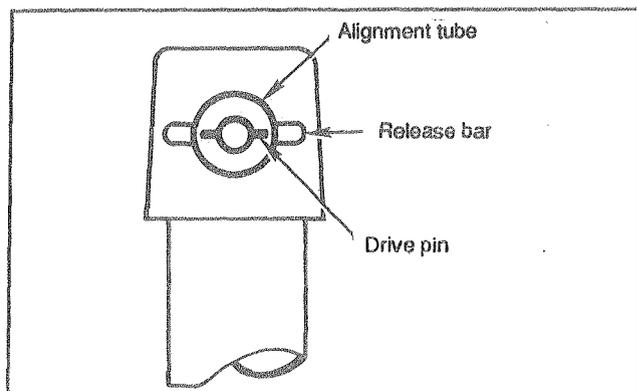
Especially the bolt under the footplate. If loose, tighten. If this bolt is not there, replace with a 5/16 x 24 x 1/2 hex head bolt.

If a jack does not pump up properly, it is most likely due to losing its prime. Open pump control valve slightly to lower the camper a bit and try it again. If the camper is on the truck, open the valve one turn then manually force the base pad leg down to the ground and up again several times. Now close the control valve and try the pump again.

Before operating jacks, read "Loading and Removing Camper From Truck" sections in this chapter.

## Ball Screw Rotary Camper Jacks

To operate jacks, place handle into alignment tube and engage drive pin, then disengage release bar by pressing inward. While depressing release bar, rotate handle clockwise to raise camper or counter-clockwise to lower camper.



Ball Screw Rotary Camper Jack

• If jack is supporting camper, it may be necessary to rotate handle clockwise slightly to relieve load on release bar before release bar can be disengaged.

• **Quick-to-ground feature:** To extend jack from transport position on truck to ground, base can be dropped quickly to the ground. While release bar is disengaged step down on base to drop it to the ground.

**CAUTION:** Do not use quick-to-ground feature with handle in place. **NOTE:** Quick-to-ground feature may not work freely until jack has been used several times due to close tolerances built into jack.

**CAUTION:** Do not over-extend or over-retract jacks. Jacks have built-in stops. If excessive force is applied against the stops, damage to the jack can result.

Before operating jacks, read "Loading and Removing Camper From Truck" section in this chapter.

### Electric Camper Jacks

To operate jacks, first turn on the main power switch located near the entry door. Press the top of the switch located on the jack to retract jack (RET), or bottom of switch to extend jack (EXT).

- Before raising camper from truck, be sure all four jack legs are extended to ground.

- Pressing both switches on the front driver's side jack will operate both front jacks at the same time. Pressing both switches on the rear jack will also operate both rear jacks at the same time.

**CAUTION:** Do not over-extend or over-retract jacks. The electric jack has an internal slip clutch to help prevent damage. When clicking sound is heard, release switch. Continuing to hold the switch could wear out the slip clutch or cause damage to motor.

- Raise or lower each end of the camper approximately four inches at a time, keeping the camper as level as possible at all times. With two people, both ends can be raised or lowered at the same time.

- **Manual operation:** To manually extend or retract jack, place manual override handle into alignment tube on front of jack and engage drive pin. Rotate handle counter-clockwise to raise or clockwise to lower camper.

- When not using the jacks, be sure to turn off the main power switch. The jacks will draw a small amount of current, causing battery drain if the switch is left on. Also, for safety and security reasons, the switch should be turned off.

**NOTE:** Electrical jacks need power to operate. The camper battery must be charged and in good condition. If the battery is too low to

operate the jacks, plug the camper's 110-volt power cord in, if power is available, or start the power generator (if equipped) to charge the battery. If the camper is on the truck, starting the truck's engine will supply power to the jacks as long as the 12-volt electrical connector is plugged in. If the camper is off the truck and battery power is low, a 12-volt electrical connector extension (available from your Lance dealer) can be used to connect camper to truck to power the jacks. If no power is available, use the manual override.

If jack fails to operate, check these items:

1. Jack's main power switch is turned **on**.
2. Adequate battery power available.
3. Jack is securely plugged into wall socket.
4. Check fuses located in exterior light fuse box.

If jack still fails to operate, see your Lance service center for more information.

Before operating jacks read the "Loading and Removing Camper From Truck" section in this chapter.

### Swing-Out Brackets (Dual Rear Wheel Trucks Only)

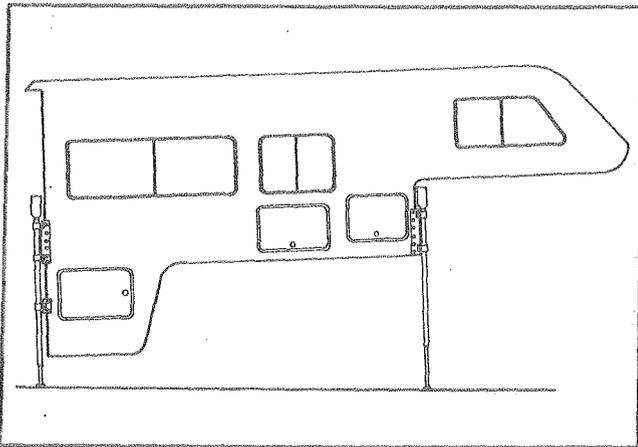
To load or unload campers on dual rear wheel trucks, swing-out brackets are used on the front jacks to clear the fenders.

1. Loosen both set screws on swing-out with a 1/8-inch allen wrench.
2. Lift jack from travel notch and pivot jack **out** board to lifting notch.
3. Extend jack leg guiding the swing-out bracket to lock into upper notch.
4. Once the bracket is locked into the upper notch, tighten both allen set screws.
5. Follow standard camper loading and removal procedures.
6. When camper is returned to truck, loosen allen set screws and pivot jack back into travel notch. Tighten screws to prevent

losing them and to prevent rattling when driving.

### Loading and Removing Camper From Truck

1. DO NOT load or unload camper on a windy day. The amount of wind that is dangerous depends on your exposure - weight of camper, etc.
2. Only unload or store your camper on LEVEL FIRM GROUND.
3. When raising or lowering the camper, always keep the front of the camper slightly higher than the rear.



Always keep front higher than rear.

**WARNING: DO NOT RAISE THE BACK OF THE CAMPER HIGHER THAN THE FRONT. THE JACKS COULD BUCKLE UNDER.**

**WARNING: DO NOT TILT THE CAMPER SIDWAYS WHILE RAISING OR LOWERING IT ON THE JACKS. THE JACKS COULD BUCKLE UNDER.**

**WARNING: KEEP CHILDREN AND ANIMALS AWAY FROM THE AREA WHEN RAISING OR LOWERING THE CAMPER. AVOID PUTTING ANY PART OF YOUR BODY UNDER THE CAMPER DURING THE PROCEDURE. AVOID LOADING OR UNLOADING IN WINDY CONDITIONS.**

### Load Camper Onto Truck

**CAUTION:** At least two persons should be available to load camper.

1. Raise both front jacks 4 to 6 inches then rear jacks 4 to 6 inches until level with front. Repeat until camper will clear truck body by approximately 4 inches.
2. Slowly back truck under camper making sure to clear wheel wells.
3. Continue backing until rubber bumpers on corners of camper lightly touch front of truck bed.
4. Connect 12-volt electrical connector.
5. Slowly lower both rear jacks, then front jacks until camper is on truck.
6. Retract jack base pads into travel position.
7. Connect solid rear camper anchors and spring front anchors. Check that all four are secure.
8. Connect camper stabilizers (optional).
9. Install boot in crawl through (optional).
10. Connect tow bar (optional).

### Remove Camper From Truck

**WARNING: DO NOT LEAVE THE CAMPER SUPPORTED BY THE JACKS. PLACE STANDS UNDER THE CORNERS OF THE CAMPER BODY AND LOWER THE CAMPER ONTO THEM. THE JACKS ARE NOT INTENDED TO SUPPORT THE ENTIRE WEIGHT OF THE CAMPER WHILE CAMPING OR DURING STORAGE. ALWAYS LOWER CAMPER BACK DOWN TO GROUND LEVEL.**

Be sure that the following items are disconnected before attempting to remove the camper.

Front and Rear Camper Anchors  
Stabilizers  
12-Volt Electrical Connector  
Tow Bar  
Crawl Through

1. Position vehicle on level ground.
2. Disconnect previously mentioned items.
3. Starting with the front jacks and then moving to the rear, raise the camper approximately 4 inches above the truck bed.
4. Slowly drive the truck out from under the camper.
5. Starting with the rear jacks and then moving to the front, slowly lower each jack no more than 4 to 6 inches at a time. Always keep the front of the camper slightly higher than the rear.

On campers without rear bumpers, lower camper until jacks are fully retracted.

On campers equipped with bumper, holding tanks or generator exhaust pipes, allow two inches of clearance between these items and the ground when lowering the camper.

**WARNING: WHEN LOWERING CAMPER, DO NOT ALLOW CAMPER BUMPER, HOLDING TANKS OR GENERATOR EXHAUST PIPES TO TOUCH THE GROUND. DAMAGE MAY OCCUR.**

### Leveling/Stabilizing Camper

When using the jacks for leveling the camper and truck DO NOT attempt to correct more than a 4 inch level difference. Move to a more level location if necessary. When raising the front jacks, check that the cabover stabilizers (if equipped) are not fully extended. Stabilizers have 2 inches of travel up and down. It may be necessary to disconnect the stabilizers when more lift is necessary.

## ON THE ROAD

### Loading

Never load your vehicle beyond its weight rating. The gross vehicle weight rating (GVWR) and gross axle weight rating (GAWR) are given on an identification label normally located on the dash or driver door area. Consult your truck's Owner's Manual.

In addition to knowing the overall weight that can be safely loaded in or attached to the truck, you must know how to distribute the weight in the camper so that correct amounts of weight are placed on the truck axles. Proper weight distribution is required for driving stability and will assure that the camper is not rear, front, or side heavy. Heavy weights placed at the rear end of the camper may cause undesirable handling characteristics.

Your RV should be weighed with a full normal load (including occupants). When weighing your truck/camper combination, always use a platform scale such as those used by trucking companies or highway weigh scales. The weigh station attendant can guide you through the correct positioning of the truck on the scales. If your unit exceeds its weight rating or axle rating, adjust the load as required. Use this information to assist in loading for future trips.

When loading the camper, store heavy gear first and place down low. Distribute weight as evenly as possible from side to side. **REMEMBER**, overloading or uneven loading can create a serious safety hazard and may shorten the service life of chassis components. Do not load upper cabinets with heavy items. Secure and brace stored items so they won't move during travel, thereby shifting the load in the camper. Do not load heavy items near either end of the camper or on the rear bumper. Carry only as much water as needed for travel use or to balance the load. Whenever possible, empty the waste water holding tanks before traveling.

### Carrying Capacity

During the design and development of your camper, the number and size of storage compartments and the liquid tank capacities are maximized for value and convenience. If the camper operator fills all liquid tanks to capacity, and fills

all storage compartments and cupboards to maximum volume, the camper will probably be overloaded. The operator is responsible for analyzing the conditions under which the camper will be used for each trip. After you have determined how much weight you can safely carry and selected those items to make up that weight, make a list and keep it for future reference.

### Safe Driving Rules

Your truck will have very different handling and stopping characteristics when it is carrying the camper. The following rules will help you develop needed driving skills for safe camper driving:

- Travel very slowly if you are new to driving with a camper or have a new camper/truck combination, until you have learned the handling and stopping characteristics of the combination. Practice turning, stopping, and backing in a secluded place away from traffic.

- Do not permit a driver who is inexperienced at driving a camper to operate your truck/camper combination without your direct supervision. Remember - it's slow speed for beginners.

- Drive at moderate speeds allowing for adverse highway and wind conditions. Even under the best of conditions, do not exceed 55 miles per hour. As speed increases, driving stability, stopping ability, and the ability to make emergency maneuvers are greatly reduced.

- Reduce speed before starting down hills - even short ones - and avoid heavy braking on downgrades. Truck stability is reduced when traveling downhill.

- Slow down before entering turns and avoid heavy braking in turns. Truck stability is reduced in turns, and the weight of the camper on the truck will affect the way the truck handles.

- Avoid quick steering movements that can reduce truck stability.

- Maintain at least twice the normal stopping distance while carrying your camper. The

increased weight of the camper on the truck requires greater stopping distances.

- Use lower gears on long grades. Downshift on upgrades to avoid overheating or undue engine loads. Downshift on downgrades to allow engine braking to assist in controlling vehicle speed. Avoid continuous or frequent brake application. The added weight of the camper can cause brakes to overheat and fade.

- Allow ample time for passing. Your acceleration will be much slower when you are carrying the camper.

Once you become accustomed to the feel of your truck/camper combination, you will find carrying your camper as easy as driving your truck without it. Become familiar with the position of the truck in traffic, and be cautious when maneuvering to allow for its length and width. Always allow extra room to corner and to change lanes. Learn to use the side mirrors to view the road behind and to the sides. Check them often.

Allow for the extra height of your camper and avoid areas having low overhead clearance. Check for low hanging tree branches or other obstructions whenever you drive, park, or when pulling in for fuel or service. Always check overhead clearances of overpasses and bridges, especially if you drive with the roof vents open or if the camper is equipped with a roof air conditioner, roof rack, or a TV/radio antenna.

### Carbon Monoxide Safety Precautions

Carbon monoxide is a colorless, tasteless, odorless gas. It is a combustion by-product of fuel-burning engines. The engines in your truck and generator system (if installed) produce it constantly while they are running. **CARBON MONOXIDE IS DEADLY.** Please read and understand the following precautions to protect yourself and others from the effects of carbon monoxide.

**WARNING: EXHAUST GASES ARE DEADLY. DO NOT BLOCK THE TAILPIPES OR SITUATE THE VEHICLE IN A PLACE WHERE THE EXHAUST GASES HAVE ANY POSSIBILITY OF ACCUMULATING EITHER OUTSIDE, UNDERNEATH, OR INSIDE YOUR VEHICLE OR ANY NEARBY VEHICLES. OUTSIDE AIR MOVEMENTS CAN CARRY EXHAUST GASES**

**INSIDE THE VEHICLE THROUGH WINDOWS OR OTHER OPENINGS REMOTE FROM THE EXHAUST OUTLET. OPERATE THE ENGINE(S) ONLY WHEN SAFE DISPERSION OF EXHAUST GASES CAN BE ASSURED, AND MONITOR OUTSIDE CONDITIONS TO BE SURE THAT EXHAUST CONTINUES TO BE DISPERSED SAFELY.**

Beware of exhaust gas (carbon monoxide) poisoning symptoms:

- Dizziness
- Headache
- Weakness and sleepiness
- Nausea
- Vomiting
- Muscular twitching
- Throbbing in temples
- Inability to think coherently

If symptoms indicate the possibility of carbon monoxide poisoning, turn off engine(s) immediately, get out into fresh air at once, and summon medical assistance.

**WARNING: DO NOT UNDER ANY CIRCUMSTANCES OPERATE ANY ENGINE WHILE SLEEPING.**

You would not be able to monitor outside conditions to assure that engine exhaust does not enter the interior, and you would not be alert to exhaust odors or the symptoms of carbon monoxide poisoning.

After traveling and/or before engine or generator operation, inspect the exhaust systems for road damage before starting any engine.

Check the exhaust systems during routine maintenance, and repair any leaks, damage, or obstructions before further operations. Do not modify any exhaust system in any way.

## Preparing For Travel

Properly preparing for a trip before you leave can make things much more enjoyable. Make a list of items you will need or wish to take. Keep in mind the following categories:

### Bathroom Supplies

Bedding

Cleaning Items

Clothing

Fire Extinguisher

First Aid Items

Food

Kitchen Ware

Personal Items

Road Flares

Holding Tank Chemical

Tools

## Pre-Trip Checks

### Exterior

1. Connect battery and check condition.
2. Check for fluid leaks.
3. Check tires and wheels for damage and proper inflation.
4. Check that access doors are securely closed.
5. Check engine and power plant oil level.
6. Check engine coolant level, windshield washer reservoir, and batteries.
7. Check all running lights, tail lights and electrical system.
8. Be sure tie-downs and cabover stabilizers are securely tightened.

### Interior

1. Secure all loose items.
2. Close all drawers and cabinets.
3. Secure doors on range and refrigerator.
4. Check that entry door is locked.

## Systems

1. Fill fresh water tank.
2. Drain holding tanks and secure drain cap.
3. Check operation of interior lights and appliances.
4. Check LP gas level.

## Post-Trip Clean-Up

1. Clean unit and check for damage.
2. Drain waste-holding tanks.
3. Clean waste drain hose and secure drain cap.
4. Drain fresh water tank and rinse.
5. Close outlet valve on LPG tank.
6. Disconnect the battery cables.

## EFFECTS OF PROLONGED OCCUPANCY

Your camper was designed primarily for recreational use and short term occupancy. If you expect to occupy the camper for an extended period, be prepared to deal with condensation and the humid conditions that may be encountered.

The relatively small volume and tight, compact construction of a modern recreational vehicle mean that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the camper and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of your camper during use in cold weather when the relative humidity of the interior air is high. This condition is increased because the insulated walls of the camper are much thinner than house walls.

Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing, and washing. Unless this water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather as frost or ice. It may also condense out of sight within the walls or the ceiling where it will manifest itself as warped or stained panels.

Appearance of these conditions may indicate a serious condensation problem. When you recognize the signs of excessive moisture and condensation in your camper, you should take action to minimize their effects.

**NOTE:** Your camper is not designed to be used as permanent housing. Use of this product for long term or permanent occupancy may lead to premature deterioration of the structure, interior finishes, fabrics, carpeting and drapes. Damage or deterioration due to long term occupancy may not be considered normal, and may under the terms of the warranty constitute misuse, abuse, or neglect, and may therefore reduce your warranty protection.

## Ventilation and Moisture Control

You can reduce interior moisture condensation by taking the following steps:

- **Ventilate with outside air.** Partially open one or more roof vents and one or more windows to provide circulation of outside air into the interior. While this ventilation may increase furnace heating load during cold weather, it will greatly reduce water condensation. Even when it is raining or snowing, ventilation air from outside will be far drier than interior air and will effectively reduce condensation inside the camper.

- **Minimize moisture released inside the camper.** Run the range vent fan when cooking and the bath vent fan (or open the bath vent) when bathing to carry water vapor out of the camper. Avoid making steam from excessive boiling or use of hot water. Remove water or snow from shoes before entering to avoid soaking the carpet. Avoid drying overcoats or other clothes inside the camper.

**WARNING: DO NOT HEAT THE CAMPER INTERIOR WITH THE RANGE OR OVEN.**

In addition to the hazards of toxic fumes and oxygen depletion, open flames add moisture to the interior air, increasing condensation. Do not use an air humidifier inside the camper. Water put into the air by the humidifier will greatly increase condensation.

- **Ventilate closets and cabinets.** During prolonged use in very cold weather, leave cabinet and closet doors partially open to warm and ventilate the interiors of storage compartments built against exterior walls. The air flow will warm the exterior wall surface, reducing or eliminating condensation and minimizing possible ice formation.

- **Install a dehumidifier.** During prolonged, continuous use, a dehumidifying appliance may be more comfortable and effective in removing excess moisture from the interior air. While use of a dehumidifier is not a "cure-all", and ventilation, storm windows, and moisture reduction continue to be

important, operation of the dehumidifier will reduce the amount of outside air needed for ventilation. Heating load on the furnace will be reduced, and the interior will be less drafty.

- Install tight fitting storm windows. This will reduce or eliminate condensation on window glass. The interior surface of the storm window will be warmer, reducing moisture condensation.

### Dripping Ceiling Vents

During cold weather and even in short term occupancy, condensation frequently forms on ceiling vents and may even accumulate to the point of dripping onto the surfaces below. This is frequently misinterpreted as a "leaking" roof vent but is most often condensation drippage.

Follow the preceding steps to control moisture condensation. Insulated hatch and vent covers are available. Consult your Lance Dealer.

### Interior Odor

New units may have a strong odor and even cause eye and lung irritation when closed up in hot weather. This is due to glues used in the production of forest products (plywoods, paneling, etc.). This condition passes with time, but, in an extreme condition, open the door, windows and vents and allow the interior to air out for several hours.

## FIRE SAFETY

The hazard and possibility of fire exists in all areas of life, and the recreational lifestyle is no exception. Your camper is a complex device made up of many materials - some of them flammable. But like most hazards, the possibility of fire can be virtually eliminated by recognizing the danger and practicing common sense safety and maintenance habits.

Recreational vehicle fires are generally caused by unattended food cooking on the stove or in the oven, faulty or damaged wiring and electrical devices, fuel leaks (both gasoline and LPG), or carelessness. The most common careless acts include smoking in bed, leaving children unattended and cleaning with flammable liquids.

### Consider These Fire Safety Suggestions:

- Before refueling your truck or any generator fuel tank in the vicinity of your camper, be sure to turn off all pilots and appliances in your camper. Explosive gasoline vapors may be present at refueling stations.

- If you experience a fire while traveling, **MAINTAIN CONTROL OF THE VEHICLE UNTIL YOU CAN SAFELY STOP IT.**

If you experience a fire while camped, **EVACUATE THE VEHICLE AS QUICKLY AND SAFELY AS POSSIBLE.**

Consider the cause and severity of the fire and the risk involved before trying to put it out. If the fire is major or is fed by gasoline, LP gas or any type of oil product, stand clear of the vehicle and wait for the fire department or other emergency assistance.

- If your camper is damaged by fire, do not use it until it has been thoroughly examined, the cause of the fire found, and fixed.

- The smoke detector is furnished with your camper as a warning device. Follow the instructions for its operation and testing which are included in the Owner's Information Package.

## Fire Extinguisher

The fire extinguisher furnished with your camper is rated for Class B (gasoline, grease, flammable liquids) and Class C (electrical) fires since these are the most common types of fires in recreational vehicles. Read the instructions on the fire extinguisher. Know how and when to use it.

The fire extinguisher in your camper is located near the main entrance door. Read the operating instructions that are printed on the extinguisher. You and your family should be familiar with fire extinguisher operation. Your fire extinguisher should be replaced immediately after use or discharge.

## Smoke Detector

Most fire casualties are caused by inhalation of toxic fumes (smoke) from a fire and not by flame. The smoke detector responds to smoke that enters the sensing chamber. It does not sense gas, heat or flame.

A ceiling-mounted, battery powered smoke detector is located in the living/cooking area of your camper. Please read the smoke detector Owner's Manual for details on testing and caring for this important safety device.

Test the smoke detector after the camper has been in storage, before each trip, and at least once a week during use.

The smoke detector should never be disabled due to nuisance or false alarm from cooking smoke, a dusty furnace, etc. Ventilate your camper with fresh air and the alarm will shut off. **DO NOT DISCONNECT THE BATTERY.**

Replace the battery once a year or immediately when the low battery "beep" signal sounds once a minute. The detector uses a standard 9-volt battery, usually available at any retail store that sells batteries.

Test smoke detector operation after replacing the battery. If the smoke detector fails to operate with a new battery, replace it with a new unit.

## EXTERIOR FEATURES

After taking delivery of your Lance, familiarize yourself with the various lights, compartments, vents, drains, etc.

### Compartments

Various exterior compartments provide access to certain appliances, controls and general storage.

- The Hot Water Heater Compartment provides access to the operating controls of the water heater.
- The LPG Tank Compartment provides access to the storage tanks and operating valves. This compartment must remain unlocked as required by safety regulations.
- The Refrigerator Compartment provides access to the rear of the refrigerator and needed air circulation.
- The Bumper provides storage and convenient access to the waste drain hose apparatus.
- The Plumbing Access Compartment provides access to shower plumbing and low-point water line drains.

Exterior storage compartments may not be watertight in all weather and road conditions. Any articles which could be damaged by water or dirt should be carried inside the camper or the truck.

**WARNING: OUTSIDE STORAGE COMPARTMENTS ARE NOT SEALED, VENTED ENCLOSURES, AND MAY BE ACCESSIBLE FROM INSIDE THE CAMPER. DO NOT STORE HAZARDOUS CHEMICALS/MATERIALS OR FLAMMABLE, VOLATILE LIQUIDS IN THESE AREAS.**

### Vents

All exterior vents and louvers provide needed air circulation. Be sure not to block these vents because damage to equipment, as well as hazards to individuals could result.

As a convenience feature, the roof vents are operated from the inside and have built-in

screens. These vents may be left slightly open while traveling, but be careful when traveling where vertical clearance is limited.

### Lighting

Your RV is equipped with exterior lights not normally found on autos to comply with legal requirements. It's important not to alter the lights or the reflecting markers. It's a good idea to check the exterior lighting frequently and replace any burned out bulbs or damaged parts as soon as possible.

### Sav-T-Vue Window (Optional Squire Lite)

**WARNING: OBJECTS VIEWED THROUGH THE SAF-T-VUE WINDOW ARE ACTUALLY CLOSER THAN THEY APPEAR.**

The Saf-T-Vue window, with its special wide angle lens, is located in the lower part of the camper door and provides backing, towing and driving safety by allowing visibility to the rear in areas not covered by the truck side view mirrors.

Objects viewed through the window are actually closer than they appear, so it is advisable, upon delivery of your new camper, to familiarize yourself with the line of vision through the window. This will help you judge more accurately, the true distance of vehicles or objects to the rear. A vinyl cover is provided, on the inside of the window, that will allow you to cover the opening when privacy is desired.

When cleaning the lens side of the window (inside), wash with soapy water and dry with a soft cloth. Care should be taken to avoid harsh cleansers as they may damage the lens.

### Roof Rack and Ladder

All models are equipped with roof rack and ladders. The rack can be used to secure light bulky items, such as lawn chairs.

Lance model campers have fully decked roofs and may be walked on from front to rear. Squire and Squire-Lite models are decked only in the rear rack area. Walking in front of the rack area can cause damage to the roof.

Use caution when loading sharp articles on the roof. If you add accessories or new equipment on the roof, use a qualified installer so as not to cause leakage or void the warranty.

**WARNING: THE ROOF IS SLIPPERY WHEN WET.**

### **Camper Bumper/Step**

Some model campers are equipped with a rear bumper and folding step. The bumper has a illuminated license plate location and storage for the sewer hose. Fold the step down when using the camper.

**WARNING: DO NOT STEP ON THE FOLDING STEP WHEN IT IS IN ITS TRAVEL POSITION (FOLDED UP), AS INJURY COULD RESULT.**

### **Towing**

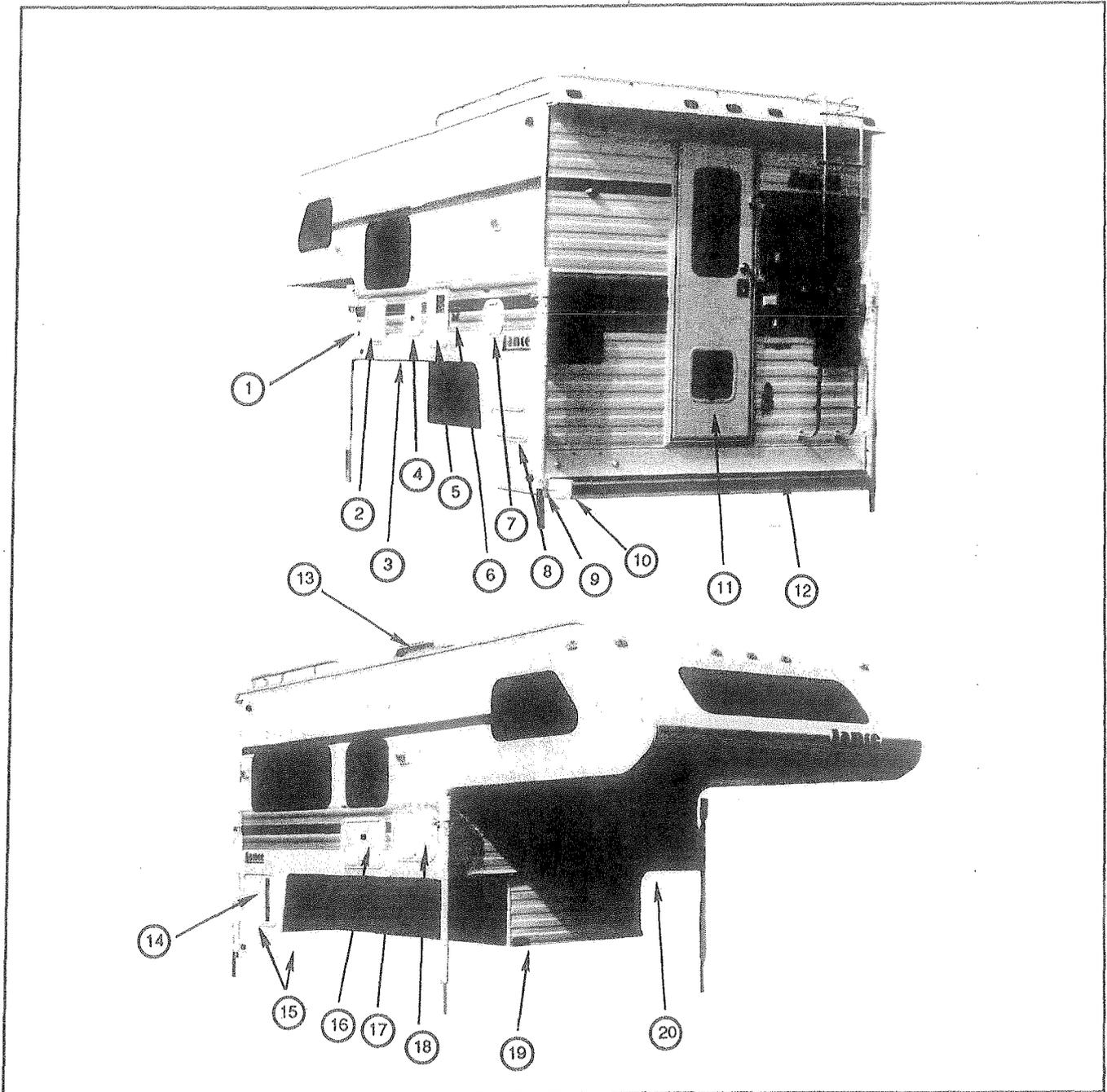
The camper bumper is rated for a maximum of 200 lbs. tongue weight when using a tow bar. A class 1 tow bar (200 lbs. tongue weight, 2000 lbs. gross weight limit) attaches between the truck's rear bumper and the camper bumper. For this type tow bar and other hitch systems that can handle heavier loads, see your dealer or hitch professional in your area.

**WARNING: DO NOT TOW WITH A HITCH BALL MOUNTED TO THE CAMPER BUMPER ONLY.**

**WARNING: HITCH SYSTEMS SHOULD BE INSTALLED BY QUALIFIED PERSONNEL ONLY.**

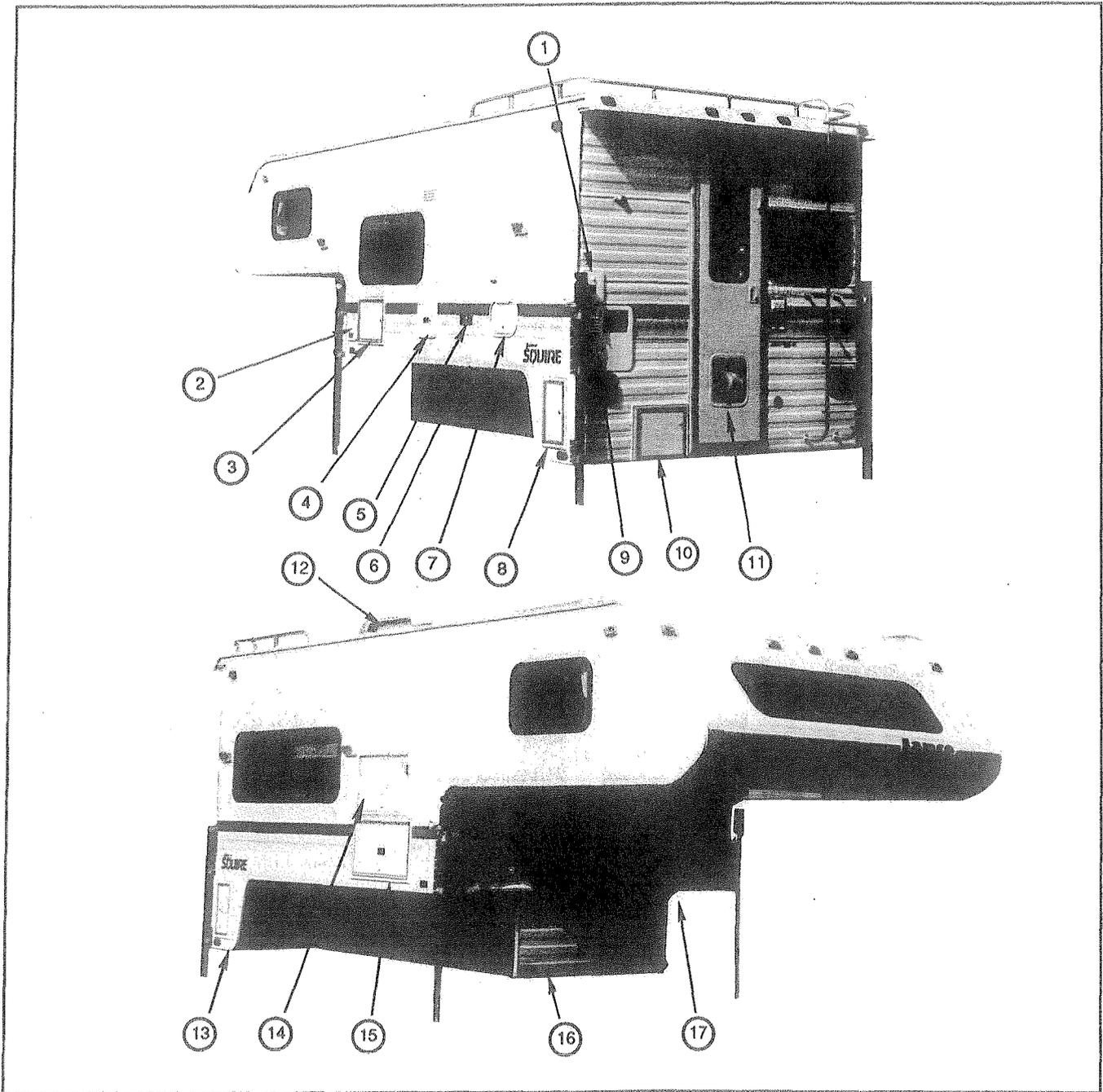
**WARNING: TOWING WILL CHANGE THE HANDLING AND BRAKING CHARACTERISTICS OF YOUR TRUCK/CAMPER PACKAGE.**

For more information on towing with your truck and camper please refer to your truck owner's manual and the consumer information data sheet supplied with this manual.



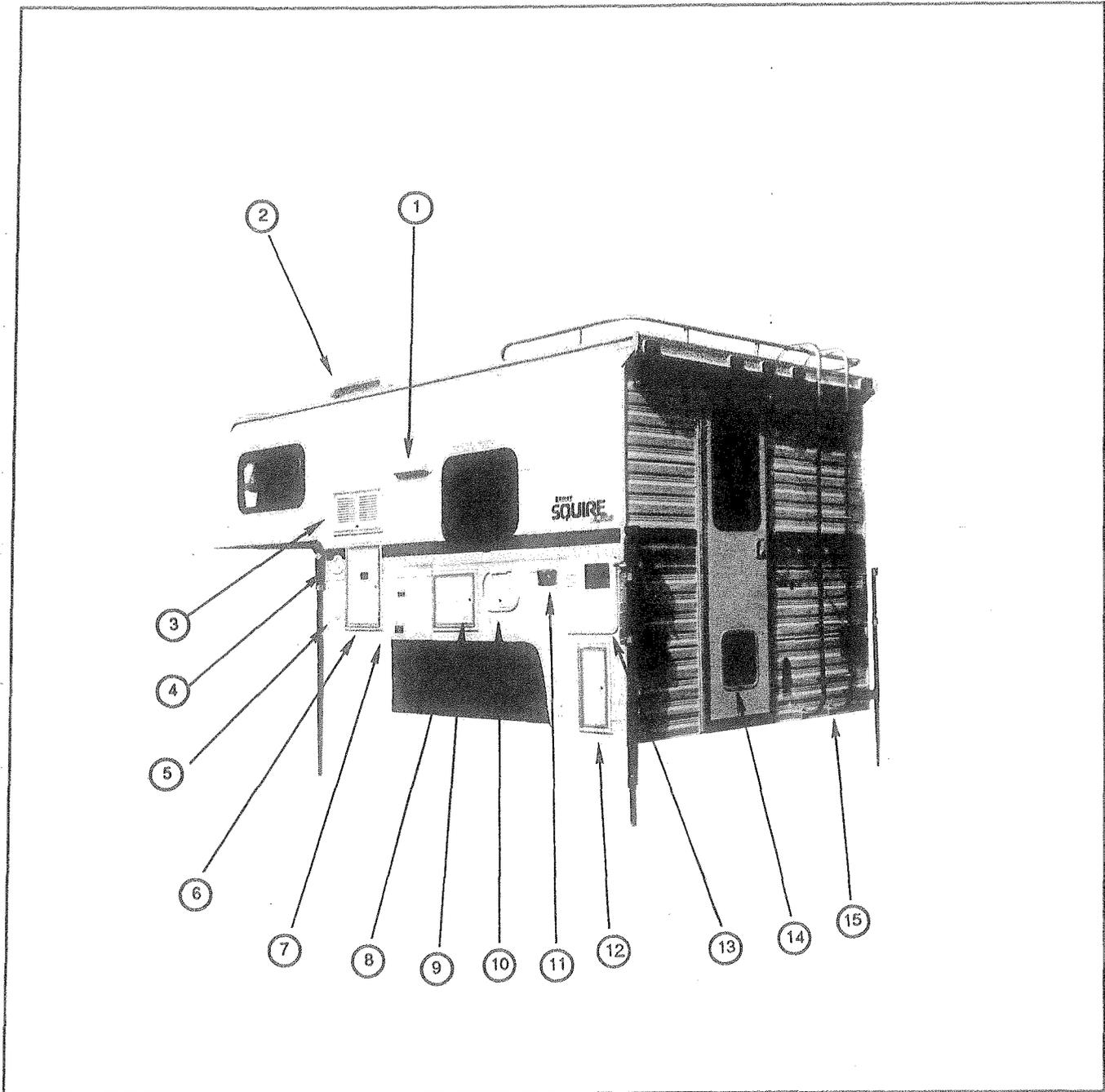
## LANCE

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Fresh Water/City Water Fill</li> <li>2. Battery Compartment</li> <li>3. Cable TV Hook-Up</li> <li>4. 110-Volt Power Cord</li> <li>5. Water Heater</li> <li>6. Furnace Exhaust (Hot!)</li> <li>7. Outside Shower (Optional)</li> <li>8. Low Point Water Drains</li> <li>9. Holding Tank Drain</li> <li>10. Sewer Hose Storage</li> </ol> | <ol style="list-style-type: none"> <li>11. Saf-T-Vue Window</li> <li>12. Bumper and Step</li> <li>13. Refrigerator Vent</li> <li>14. Generator Compartment (Optional)</li> <li>15. Fresh Water Drain</li> <li>16. Propane Tanks</li> <li>17. 110-Volt Patio Outlet</li> <li>18. Refrigerator Access</li> <li>19. Truck Bed Bumpers</li> <li>20. 12-Volt Electrical Connector</li> </ol> |
|---|---|



## SQUIRE

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Sewer Hose Storage</li> <li>2. Fresh Water Fill</li> <li>3. Battery Compartment</li> <li>4. 110-Volt Power Cord</li> <li>5. Furnace Exhaust (Hot!)</li> <li>6. City Water Connection</li> <li>7. Outside Shower (Optional)</li> <li>8. Low Point Water Drains</li> <li>9. Water Heater</li> </ul> | <ul style="list-style-type: none"> <li>10. Holding Tank Drain</li> <li>11. Saf-T-Vue Window</li> <li>12. Refrigerator Vent</li> <li>13. Fresh Water Drain</li> <li>14. Refrigerator Access</li> <li>15. Propane Tanks</li> <li>16. Truck Bed Bumpers</li> <li>17. 12-Volt Electrical Connector</li> </ul> |
|---|---|



## SQUIRE LITE

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| 1. Range Hood Exhaust               | 9. Battery Compartment          |
| 2. Refrigerator Vent                | 10. Outside Shower (Optional)   |
| 3. Refrigerator Access              | 11. Furnace Exhaust (Hot!)      |
| 4. Fresh Water Fill                 | 12. Sink Water Drain            |
| 5. 110-Volt Power Cord              | 13. Water Heater (Optional)     |
| 6. Propane Tank                     | 14. Saf-T-Vue Window (Optional) |
| 7. 12-Volt Electrical Connector     | 15. Fresh Water Drain           |
| 8. City Water Connection (Optional) |                                 |

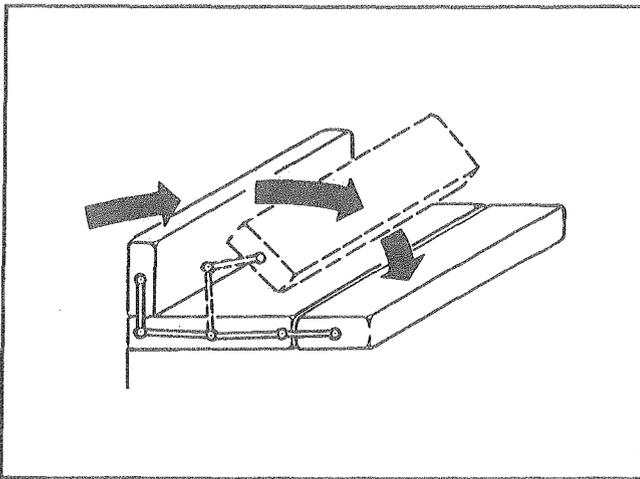
# INTERIOR FEATURES

Your interior has been designed with utility and comfort in mind to provide spaciousness and versatility. Familiarize yourself with the bedding and dining arrangements as well as the various storage areas inside.

## Dinette Conversion (Lance)

The dinette area is easily converted into a single or double bed.

1. Remove table top and pedestal.
2. On dinette models remove lid from side rail to insert table top.

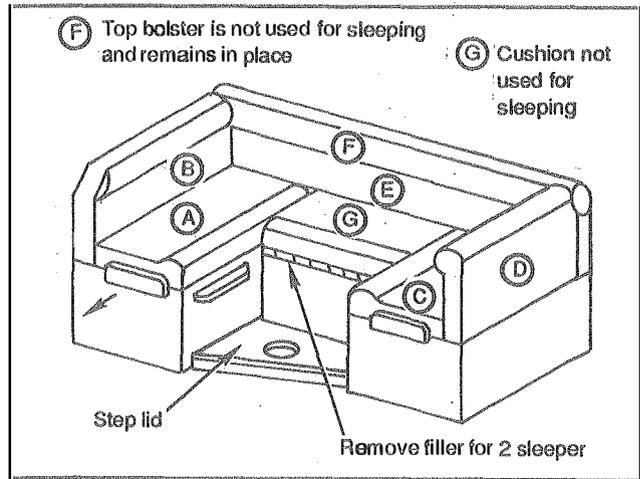


Model 300 and 980 Pull-Over Sofa

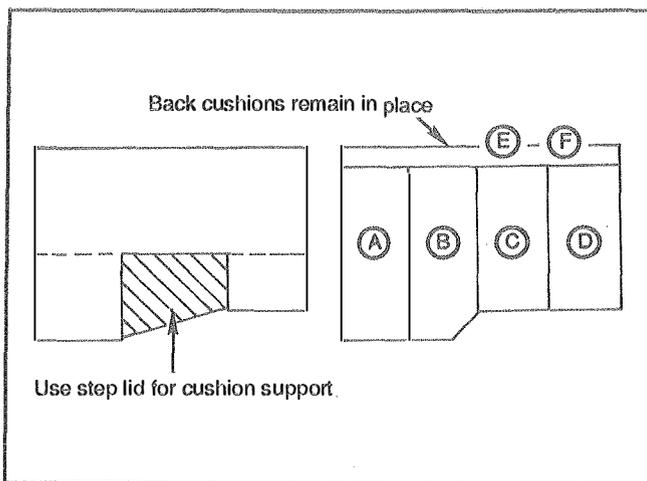
3. Place table top in the support between the seat platforms (except sofa model).
4. Slide each seat platform out.
5. Arrange seat cushions and backs to form bed as shown.

If only a single bed is required, the dinette step lid can be substituted for the table top eliminating steps 2 and 4 above. Cushions E and F remain in place. This bed arrangement will allow a clear aisle to the bathroom and entry door.

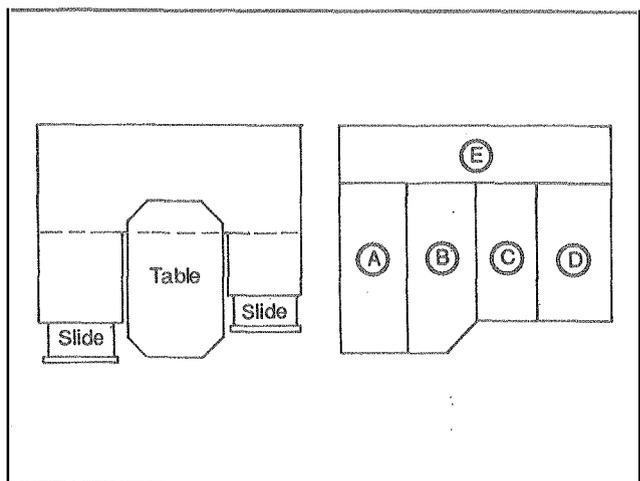
On the pull-over sofa for the Model 300 and 980, simply pull the back cushion over the bottom cushion to form a bed.



Models 480, 880 and 900 Dinette



Single Sleeper Dinette Base and Cushion Arrangement - Models 480, 880 and 900

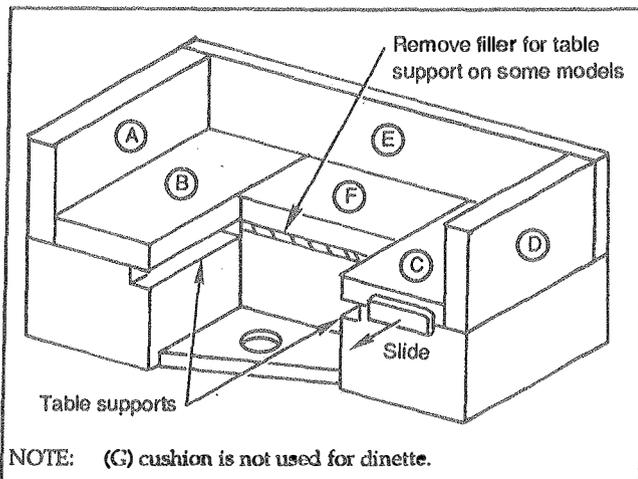


Double Sleeper Dinette Base and Cushion Arrangement - Models 480, 880 and 900

## Dinette Conversion (Squire)

The dinette area is easily converted into a bed.

1. Remove table top and pedestal.
2. Place table top in the support notches between the seat platforms.
  - Some models have a filler board that must be removed.
  - Some models have a metal angle that the table top slides beneath.
3. Pull the rear seat platform slide out to provide cushion support.
4. Arrange seat cushions to form bed as illustrated.

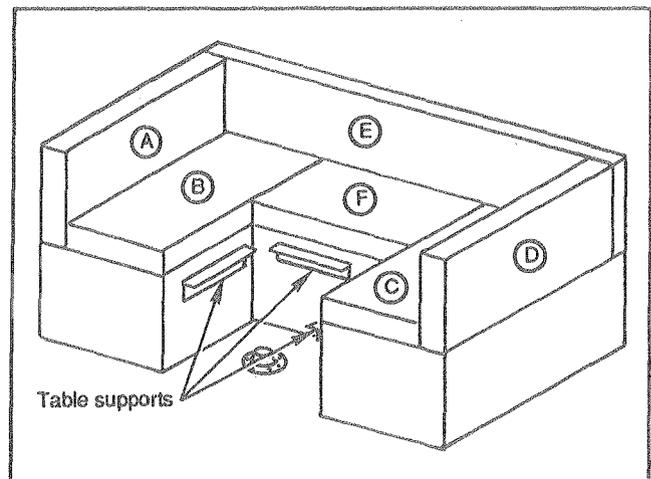


Squire Dinette

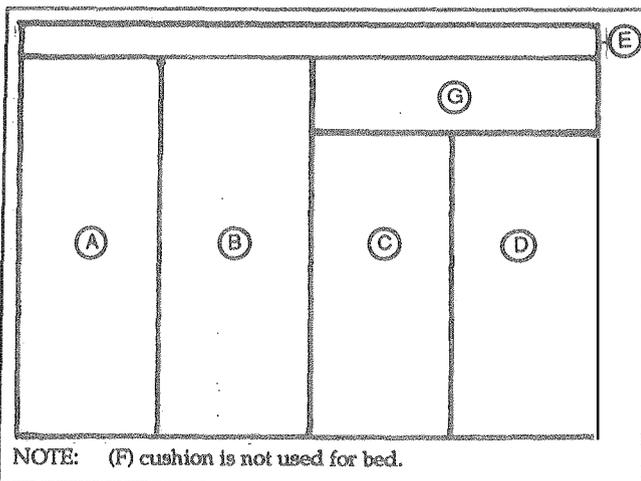
## Dinette Conversion (Squire-Lite)

The dinette is easily converted into a bed.

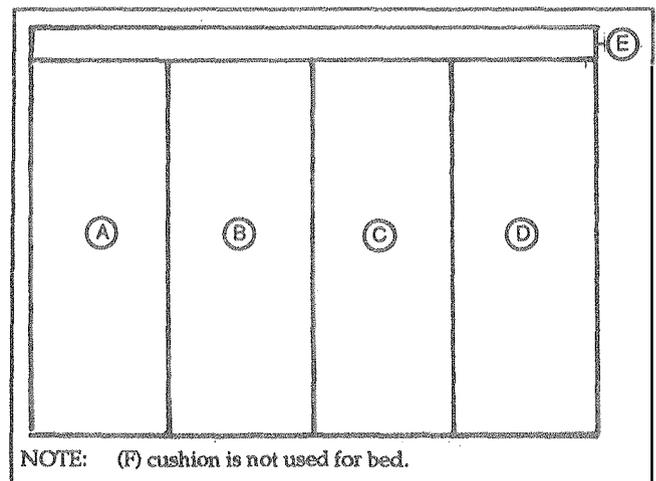
1. Remove table top and pedestal from floor base.
2. Place the table top on the supports between the seat platforms.
  - The table will extend into the aisle a few inches past the cushions.
3. Arrange seat cushions to form bed as illustrated.



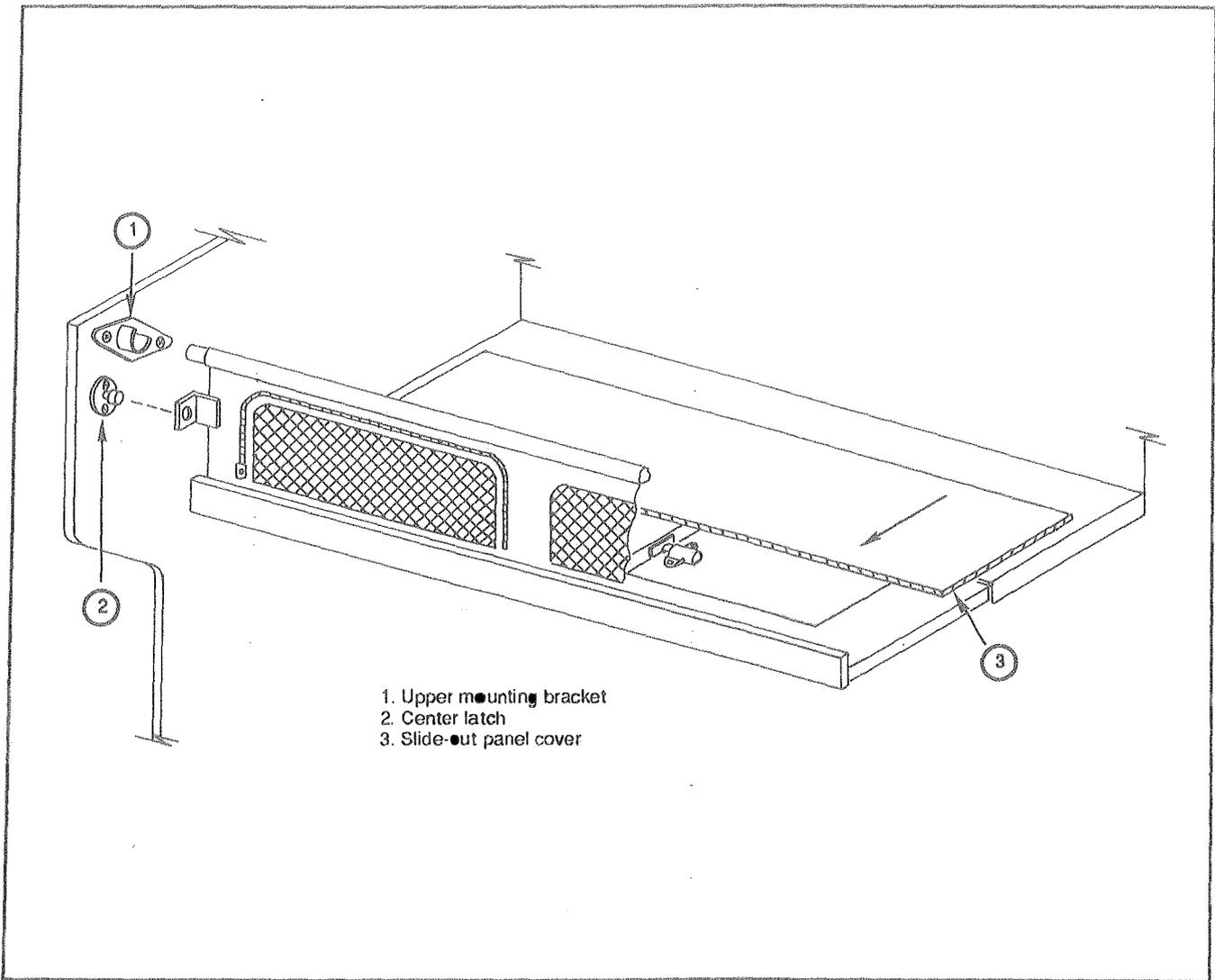
Squire-Lite Dinette



Squire Bed Conversion



Squire-Lite Bed Conversion



Luggage/Child Restraint System

### Luggage/Child Restraint System (Optional)

The luggage/child restraint system may be used when extra storage is required or for security when children are sleeping in the overhead bunk. A zippered panel allows easy access. The restraint net rolls up and snaps into place to store the system when not in use. When traveling, limit storage to 100 lbs. maximum. (This area is good for storing bulky items such as sleeping bags, lawn chairs, etc.)

**WARNING: YOU MUST FASTEN THE CENTER LATCH ON BOTH SIDES OF THE NET TO KEEP THE POLE FROM POPPING OUT OF THE BRACKETS.**

The child restraint system is intended for children's safety when sleeping and should not be used as a play pen. Please supervise your children for their safety.

**WARNING: TO PREVENT INJURY FROM A FALL, DO NOT USE THE FOLD DOWN STORAGE/BUNK FOR SLEEPING WITHOUT USING THE LANCE CHILD RESTRAINT SYSTEM.**

To use the luggage/child restraint system:

1. Unlatch the bunk and fold down.
2. Unsnap the storage strap and roll out the net.
3. Insert the pole into the upper mounting brackets.
4. Fasten the center latch on both sides of the net.
5. Slide-out the panel to cover the door openings and position the bunk pads.

## Cargo Net (Optional)

The cargo net may be used to secure items in the overhead folding bunk area, especially bulky items such as sleeping bags and lawn chairs.

**WARNING: THE CARGO NET IS NOT DESIGNED FOR, OR TO BE USED FOR, SECURING CHILDREN OR OTHER PEOPLE, IN THE BUNK AT ANY TIME!** When traveling, limit storage in bunk area to 50 lbs. maximum.

To use the cargo net:

1. Unlatch the bunk face and fold down to gain access to the cargo net which is attached to the back side of the bunk face.
2. Slide out panel to cover door openings.
3. The top edge of the cargo net is fabricated of elastic cord with loops that correspond with hooks which are attached to ceiling and adjoining walls.
4. Slip the loops over the hooks to hold the cargo net in place. Some stretching is required and necessary to provide the cargo net a taut and snug fit.

## Cargo Net (Squire Lite Models)

A cargo net, similar to and used in the same manner as the optional cargo net for overhead folding bunks, is installed on an open overhead stationary shelf in the dinette area. The cargo net, when fully hooked in place, is used to secure items in the shelf area while traveling.

**WARNING: THIS CARGO NET IS NOT DESIGNED FOR, OR TO BE USED FOR, SECURING CHILDREN OR OTHER PEOPLE IN THE SHELF AREA AT ANY TIME!** Weight of items in the shelf area should not exceed 50 lbs. during travel.

## Bathroom

The bathroom wallpaper is sealed and waterproof, so do not worry if water splashes on it. All model campers are equipped with ceiling vents.

The toilet is designed to flush with a minimal amount of water and still provide for proper disposal and odor control. The toilet paper dispenser is mounted inside the door below the sink.

Information on the bathroom plumbing can be found in the Fresh Water and Waste System sections.

## Cabover Area

**WARNING: DO NOT ALLOW ANYONE, CHILDREN ESPECIALLY, TO RIDE IN THE CABOVER AREA. ANY SUDDEN STOPS COULD RESULT IN INJURY.**

In case of fire, an emergency escape hatch is located in the ceiling.

## Galley

The galley is designed for utility, convenience and comfort. Cabinets are equipped with positive locking latches which prevent them from opening while traveling. Refer to the Appliance section for information regarding the appliances.

## Interior Storage

Interior storage areas may be found in a number of places in your camper – overhead compartments, wall closets, under the dinette, under the bed, lavy and galley cabinets.

Drawers rest in detent notches when they are closed. To open drawers, lift up slightly, then pull open. These "travel locks" reduce the opening of drawers during travel but may not hold on rough road surfaces.

Some closets are equipped with 12-volt lights that turn ON when the closet door is opened. Be sure the light goes OFF when you close the closet door or your battery could be rapidly discharged. If the light stays on when the door is closed, the door switch may require adjustment.

## ELECTRICAL SYSTEMS

The electrical system consist of a primary 12-volt D.C. system and a 110-volt A.C. system. The 12-volt system uses battery power similar to that used in automobiles. The 110-volt system requires a source of 110 power provided through the power supply cord or optional generator.

These systems are connected through a power converter. When connected to 110-volt power, the converter transforms the 110-volt A.C. input to 12-volt D.C. power. Also, the storage battery is recharged while connected to a 110-volt outside source, if equipped with a battery charger, or the optional generator.

NOTE: Lance Manufacturing Corp. does not have wiring schematics of the overall RV available.

### 12-Volt D.C. System

The 12-Volt System provides power for the following components:

- Interior Lighting
- Exterior Lighting
- Water Pump
- Power Range Hood
- Forced Air Furnace Blower
- Evaporative Cooler (optional on all models)

The interior lighting operates on 12-volt D.C. power only. When connected to a 110-volt source or using the generator, the power converter transforms 110-volts to 12-volt D.C. However, when not connected to 110-voltage, the entire load of lights, water pump, exhaust fans, etc. is on your 12-volt batteries. Use conservatively to avoid over discharging batteries.

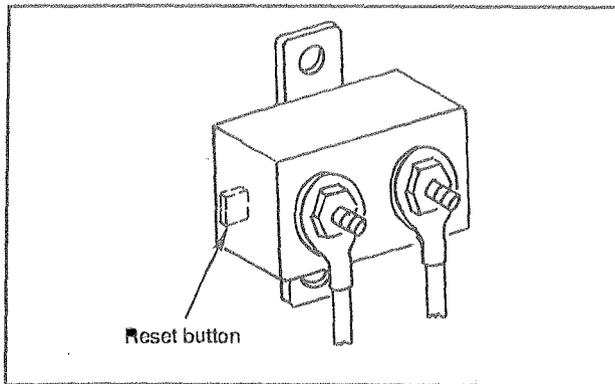
NOTE: Without an isolator switch (Dealer installed option), your truck battery will also be drained when using 12-volt components.

### Battery and Compartment

Care of your 12-volt battery is essential to care-free travel. Be sure to use a heavy-duty battery such as 95 amp/hour, group 27 deep cycle RV/ Marine battery. Check the battery frequently with the condition meter located on the Monitor Panel.

NOTE: The 12-Volt battery is not supplied with the camper by the manufacturer.

WARNING: BEFORE CONNECTING THE BATTERY CABLES, TURN OFF ALL ELECTRICAL COMPONENTS TO AVOID SPARKS. CONNECT THE BLACK CABLE TO THE POSITIVE (+) POST ON THE BATTERY. CONNECT THE WHITE CABLE TO THE NEGATIVE (-) POST.



40 amp Circuit Breaker

The battery compartment is equipped with a 40 amp main circuit breaker. When an overload or short circuit occurs, the breaker will not allow power into the camper or allow the battery to be charged. To reset the breaker (located at the rear of the battery compartment) push in the reset button on the side of the breaker. The button is small and not very visible. If the breaker continues to trip, a short circuit or overload condition is indicated. Have the system checked by qualified personnel.

•The battery must be securely strapped in the compartment at all times.

•The battery is charged by the truck's system or when connected to 110-volt power.

•Check that battery liquid level is correct (weekly in warm climate, monthly in cold climate). Add distilled water as required.

•Clean battery terminals and cables periodically with a wire brush and baking soda.

•Use caution not to touch battery terminals to metal door frame when removing or installing the battery.

WARNING: REMOVE RINGS, METAL WATCHBANDS, AND OTHER METAL JEWELRY BEFORE WORKING AROUND A BAT-

TERY. USE CAUTION WHEN USING METAL TOOLS. IF THE TOOL CONTACTS THE BATTERY TERMINALS OR METAL CONNECTED TO THEM, A SHORT CIRCUIT COULD OCCUR WHICH COULD CAUSE PERSONAL INJURY OR FIRE.

**WARNING: DO NOT ALLOW BATTERY ELECTROLYTE TO CONTACT SKIN, EYES, FABRICS, OR PAINTED SURFACES. THE ELECTROLYTE IS SULFURIC ACID SOLUTION WHICH COULD CAUSE SERIOUS PERSONAL INJURY OR PROPERTY DAMAGE. WEAR EYE PROTECTION WHEN WORKING WITH BATTERIES.**

### Storage Precautions

When you store your camper for a week or more, be sure to disconnect the battery. Electronic tuning radios, clocks, and the LPG leak detector all draw a small amount of current whenever the battery is connected. Also, even a disconnected battery will naturally "self discharge" about 1% of capacity per day. If you intend to store your camper for any length of time, remove the battery, store it in a cool, dry place, and recharge every month.

### Battery Charging

Normally the battery will be kept charged by either the truck charging system while on the road, or, if equipped, by the AC/DC power converter when plugged into AC service. On those occasions when the battery needs to be charged from a different charging source, please follow these safety guidelines:

**WARNING: NEVER EXPOSE THE BATTERY TO OPEN FLAME OR ELECTRIC SPARK. CHEMICAL ACTION IN THE BATTERY**

**GENERATES HYDROGEN GAS WHICH IS FLAMMABLE AND EXPLOSIVE.**

- Do not smoke near batteries being charged or which have been recently charged. Please note that batteries are being charged while you drive, and while you are connected to 120-volt AC power through the power center/charger circuit.

- Do not break live circuits at the terminals of the battery. Use care when connecting or disconnecting booster leads or cables on fast chargers. Poor connections are common cause of electrical arcs which can cause explosions.

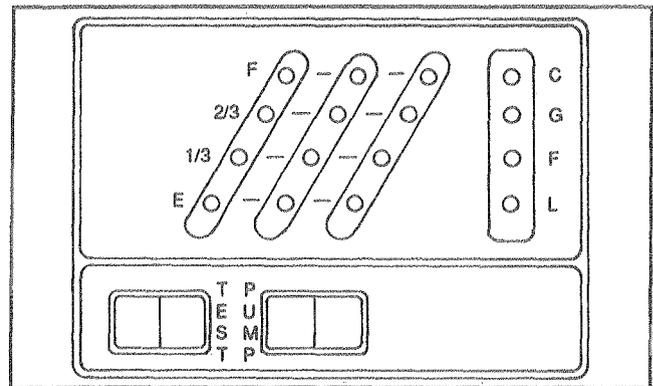
- Check and adjust the electrolyte level before charging. Fill each cell to the indicator with distilled water.

- Do not charge the battery at a rate that causes the electrolyte to spew out the top of the battery.

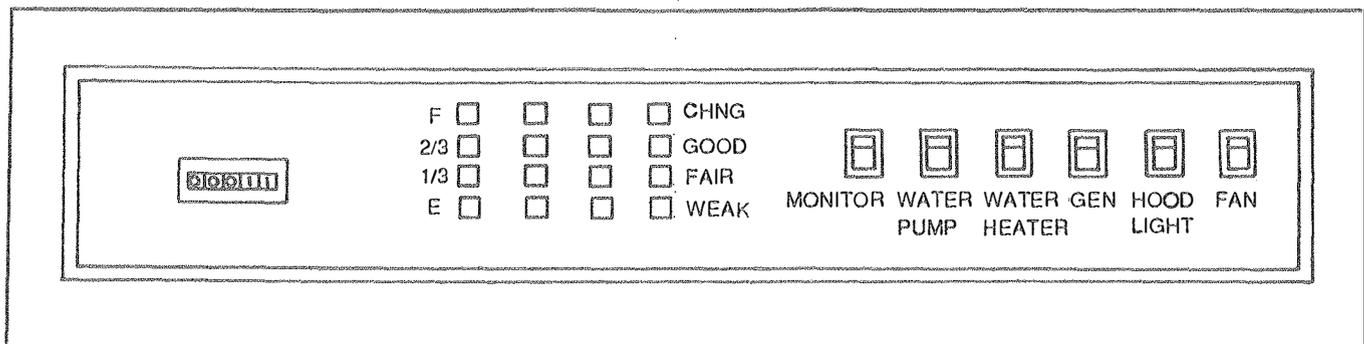
- Always remove the vent caps (if equipped) before charging the battery.

### Systems Monitor Panel (Lance, Squire)

The Systems Monitor Panel incorporates controls and instrumentation concerning the electrical and fluid systems. Some models also have



Systems Monitor Panel (Squire)



Systems Monitor Panel (Lance)

switches for optional automatic water heaters and generators.

### Water Pump Control Switch

This rocker switch controls the demand water pump. The water pump is pressure sensitive and starts (with the switch ON) when a faucet is opened, causing pressure in the line to drop. When the faucet is closed, pressure builds in the line and the pump stops.

### Level Indicators Monitor Switch

Level indicator lights monitor black (waste), grey (sink), and fresh water tank levels plus battery condition. Depressing the monitor switch will give an instantaneous readout of all four systems.

Erroneous indications can be caused by:

- Water with low mineral content. Level is measured by a very low level electrical signal traveling through the liquid. Some water which is very low in mineral content may not conduct the signal properly. This condition may be infrequent, but can exist. Check the panel reading when the fresh water tank is filled.

- Material trapped on the sides of the holding tanks may give a full reading when the tank is actually empty. Use of a spray to wash out the tank following dumping should help prevent this condition.

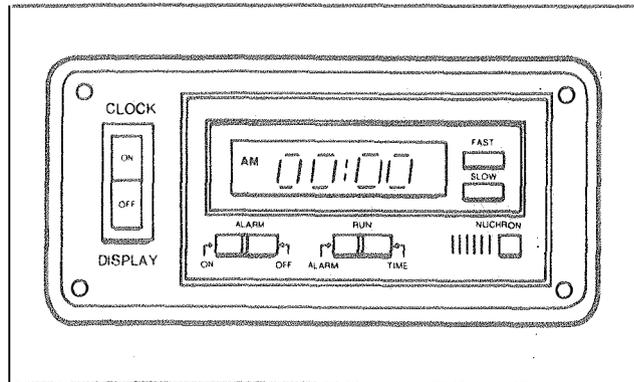
**NOTE:** If the sensor probes mounted in the tanks get coated with grease, the monitor panel may indicate falsely or not at all. Avoid pouring grease, oils, or similar substances down drains or the toilet. If this is unavoidable, the holding tank(s) should be washed out with a soapy water solution.

When testing approximate battery condition, first turn all lights, fans, and other 12-volt equipment off. If the battery is being charged the charge light will illuminate when the monitor switch is depressed. If the weak light is illuminated, discontinue use of 12-volt appliances until battery can be recharged.

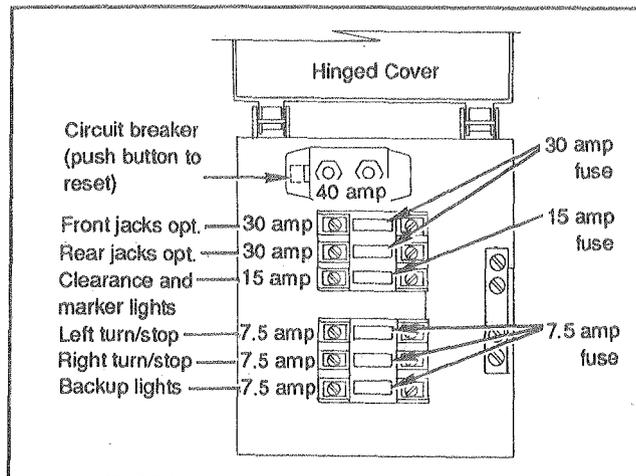
### Digital Alarm Clock

A push-on, push-off switch allows the clock display to be used as desired. The clock will

keep accurate time even with the display turned off. We suggest turning the display off when the RV is vacated to save on battery power. A momentary power loss will result in an improper reading and require resetting of the clock.



Digital Alarm Clock



Exterior Light Fuse Box

### Fuse Box (12-volt Exterior lights, main circuit breaker)

A fuse box is installed to protect the exterior light circuits, refrigerator, and 12-volt power supplied from the truck. The fuse box is located inside a cabinet near where the 12-volt connector cable enters the camper. Circuits and fuse sizes are labeled on the box cover. The 40 amp circuit breaker feeds power from the truck to the interior circuits fuse box, refrigerator and battery. When an overload or short circuit occurs, this breaker will not allow power from the truck into the camper or allow the camper battery to be charged. To reset the breaker, push in the reset button on the side of the breaker. The button is small and not very visible. If the breaker continues to trip, a short circuit or overload condition is indicated. Have the system checked by qualified personnel.

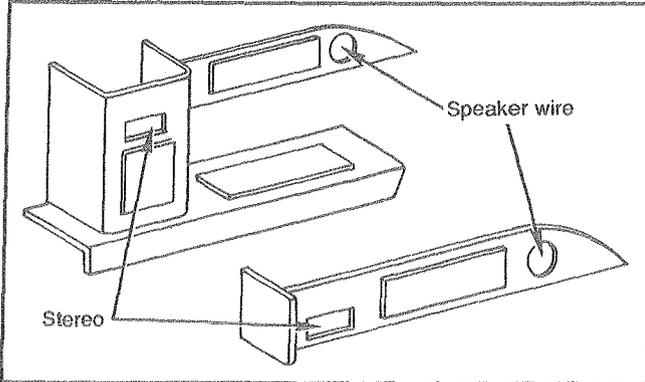
## Fuse Box (12-volt Interior circuits)

A fuse box is installed in the Power Converter to protect the interior 12-volt circuits. The radio, TV antenna outlets and some model Squire Lite water pumps have fuse protection at their locations. If a fuse blows, locate and correct the cause. Turn off all lights and motors, then install a new fuse. (Do not exceed amperage rating indicated on the power converter door.) If fuses continue to blow, a short circuit is indicated. Have the system checked by qualified personnel. (See Power Converter Section for more information.)

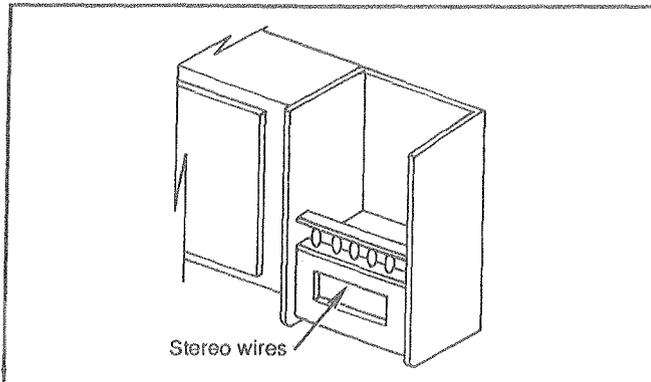
**WARNING: DO NOT INSTALL FUSES WITH AMPERAGE RATINGS GREATER THAN THAT SPECIFIED ON THE FUSE BOX OR FUSE HOLDER LABEL.**

## Stereo/TV Systems

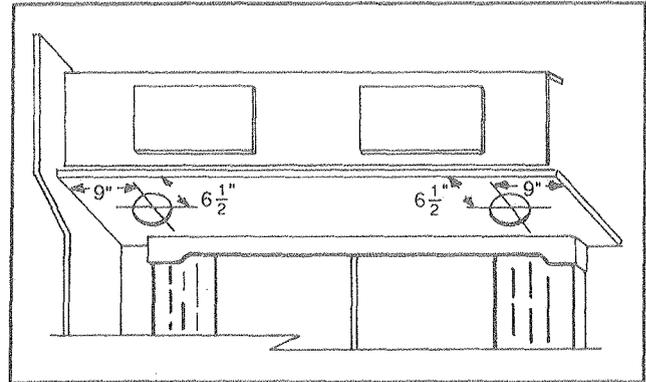
Instructional material for the various systems available are included in your Owners Information Package. Lance and Squire models are pre-wired for stereo and speakers. See diagrams.



Lance Cabover Stereo and Speaker Wire Locations (Extended, Standard Cabovers)



Squire Stereo Wire Location



Lance and Squire Models Folding Bunk Speaker and Wire Locations Underneath

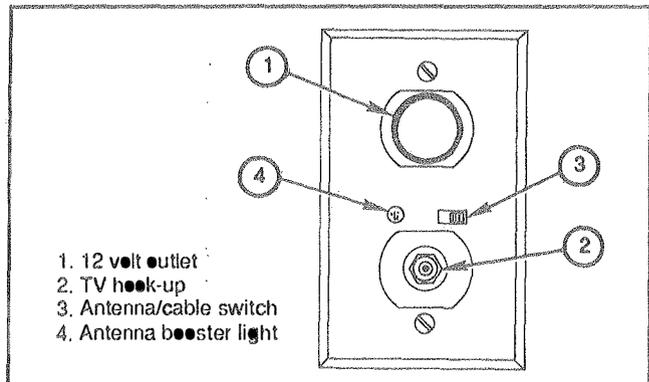
## 12-Volt Outlet, Cable TV Outlet (Lance Models)

Lance models are equipped with a park cable inlet which is located under the driver's side overhang. The park cable runs to a TV jack and 12-volt outlet which is mounted over the TV shelf or to the inside of the TV cabinet. On models with a TV cabinet, an "on"/"off" switch is installed adjacent to the TV jack which controls the 12-volt outlet. As some TVs have a small current drain, even when not being viewed, it is recommended that the switch be turned "off" when not using the TV.

**CAUTION:** The 12-volt outlet is intended for the TV and is rated at 7.5 amps. Do not use for higher rated appliances.

## 12-Volt Outlet, Cable TV Outlet and Roof Mounted Antenna (Lance Models)

The roof antenna and the park cable inlet are connected to a TV jack and 12-volt outlet which is mounted above the TV shelf or inside the TV cabinet. The TV jack has a switch, which, when



12-Volt, Cable TV, Antenna Outlet

turned on, illuminates a red light and energizes the TV antenna signal booster. There will be a small continual 12-volt current drain to the antenna booster as long as this switch is "on". Turning the switch "off" automatically changes to park cable hookup and switches the antenna booster "off".

### 12-Volt Outlet and TV Antenna Outlet (Squire Models)

Squire models that have a roof antenna are equipped with a TV jack and 12-volt outlet. This jack has a switch, which, when turned on, illuminates a red light and energizes the TV antenna booster. There will be a small continual 12-volt drain to the antenna booster as long as the switch is turned "on" so it should be turned "off" when not using the roof antenna.

**NOTE:** On models with a TV cabinet, the booster switch may be difficult for some people to reach, so a separate "on"/"off" switch has been installed closer to the door opening in a more convenient location. By leaving the TV booster switch in the "on" position, the TV booster can be turned "on" and "off" with this added switch.

### TV Antenna Pre-Wire

A plate with cable attached is located on the driver's side roof area above the cabover. The hole under this plate is the center of the wood reinforcement for mounting the TV antenna base. The other end of the cable, on Lance models, is located behind the 12-volt cable TV outlet plate. On Squire models, the cable is located above the TV shelf behind a marked cover.

### Solar Panel Wiring

Some Lance models come pre-wired for a roof mounted solar panel. A 12-volt connector is located on the roof installed in the side of the refrigerator vent. The matching connector is supplied in your loose parts box to be attached to the solar panel. Red (+) and white (-) 12-gauge wires are run from the roof mounted connector to the area behind the camper's battery compartment. When a solar panel is installed, the two wires are then run into the battery compartment, protected with the proper size fuse as called for

by the solar panel selected, and attached to the battery. The solar panel will then charge the battery at the rate specified on the panel.

**NOTE:** Weather conditions will effect charging. Some model solar panels require a separate regulator to be wired into the system before the battery connection.

### 110-Volt A.C. System

The 110-volt system supplies power to the following components:

- Power Converter
- 110-Volt Outlets (interior and exterior)
- Refrigerator
- Roof Mounted Air Conditioner (optional)
- Microwave Oven (optional)

### Power Supply Cord

**WARNING: DO NOT OPERATE THE 110-VOLT AC ELECTRICAL SYSTEM WITHOUT A PROPER GROUND.**

Your camper is equipped with a heavy duty power cord to connect to an external 120-volt, 30-amp rated AC service. The cord and plug are molded together to form a weatherproof assembly. Do not cut or alter the cord in any way. Do not remove the ground pin from the attachment plug, or defeat the ground circuit in the camper. If you have to use an adapter to plug into an electrical service, make sure the ground is maintained. Never use a two-conductor extension cord, or any cord that does not assure appropriate and adequate ground continuity. Never plug the 120-volt cord into an ungrounded receptacle.

### Power Converter/Battery Charger

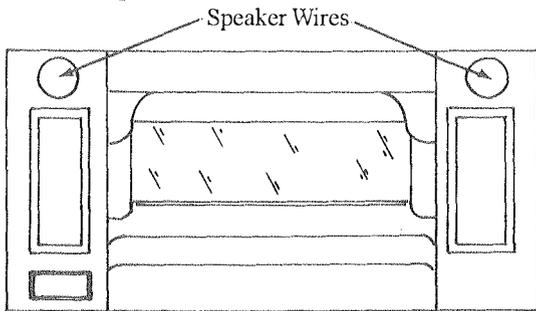
The Power Converter transforms 110-volt power into 12-volt D.C. power for use in the RV. All 12-volt appliances remain 12-volt. Complete operating instructions are located on the converter door. On Lance and Squire models, switching from battery power to converter power is automatic when the power cord is plugged in. On Squire Lite models, a switch is located on the power converter to change from battery to

### Camper Fuse Panel (12 Volt Interior Circuits)

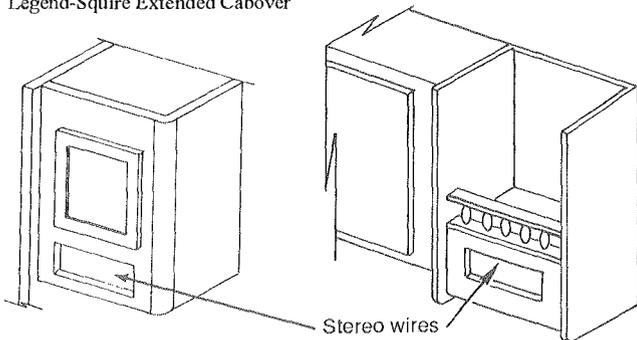
A 12 volt fuse panel is installed in the Power Converter to protect the interior circuits. Circuit titles and fuse sizes are marked inside the converter door. If a fuse blows, locate and correct the cause. Turn off all lights and motors, then install a fuse with the same rating. If fuses continue to blow, a short circuit is indicated. Have the system checked by qualified personnel. (See Power Converter Section for more information.)

**WARNING; DO NOT INSTALL FUSES WITH AMPERAGE RATINGS GREATER THAN THAT SPECIFIED ON THE POWER CONVERTER DOOR.**

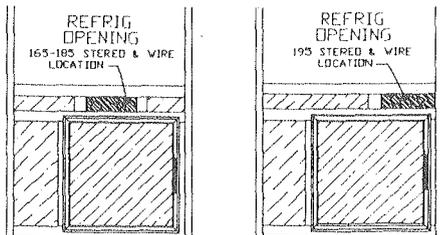
### Radio and Speaker Pre-wire



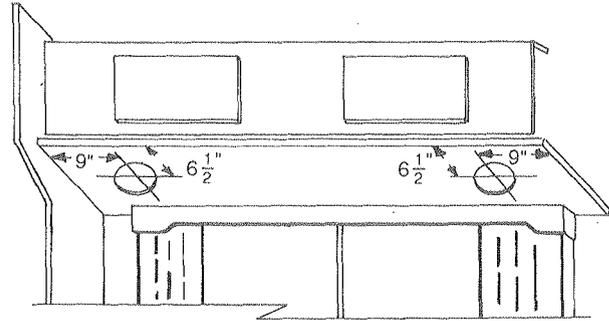
Legend-Squire Extended Cabover



**NOTE:** Squirelite models speaker wires are run from the stereo location, directly below the refrigerator to the bottom of the folding bunk above dinette. (See pictures for location) If there is a storage cabinet in place of a bunk, the speakers & wires are inside each end of the cabinet face.



Squirelite Refrigerator Cabinet

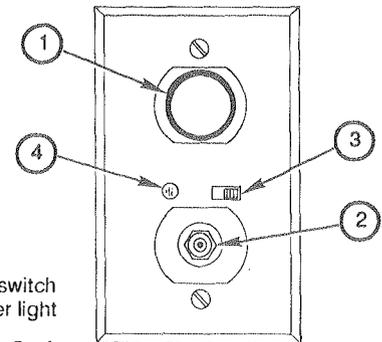


Legend, Squire, Squirelite Bunk Cab. - Speaker Wire Locations

The 12 volt positive and negative leads and speaker wires begin from the stereo cabinet on Legends, the cabover overhead shelf on Squires, and behind the cabinet face directly below the refrigerator on Squire-Lites. A framed opening in each cabinet location has been provided for future stereo installation. Consult your Lance dealer for the proper location. Speaker wires are located as shown in illustrations.

### Stereo/TV Systems

Manufacturers instructional materials for various stereo equipment is available in the Owners Information Package when installed, and if not installed, can be found by contacting your Lance Dealer.

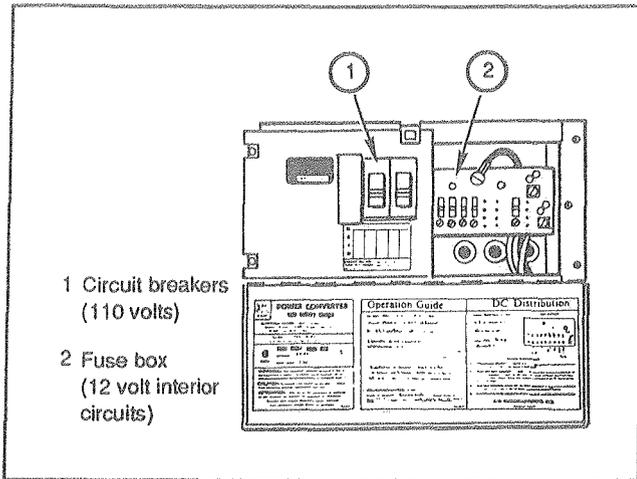


12 Volt, Cable TV, Antenna Outlet

### 12 Volt Outlet, Park Cable TV Outlet and Roof Mounted Antenna (Legend and Squire)

Legend models are equipped with a park cable inlet located under the driver's side truck bed overhang. The cable runs to a 12 volt/TV jack outlet which is mounted over the TV shelf or inside the galley/TV overhead cabinet.

On models equipped with the galley/TV overhead cabinet, an "on/off" switch is installed adjacent to the TV jack which controls power going to the 12 volt outlet. Some TV's have a small current



Typical Power Converter

converter power. Battery charging on Lance and Squire models is done automatically when 110-volt power is supplied.

**NOTE:** Clicking and humming sounds from the converter's switching solenoid and cooling fan are normal.

### Circuit Breakers (110-volt)

Circuit Breakers are located on the power converter. They provide protection for circuit overload as well as a means of disconnecting individual circuits from the supply source. Refer to the power converter for specific amperage of breakers as this varies by model and optional equipment.

Should circuit overload occur, the breaker will trip, cutting power to the circuit. Turn off items on the affected circuit, then reset the breaker to ON position. If a breaker continues to trip, a short circuit is indicated. Have the system checked by qualified personnel.

### Ground Fault Interrupter

Galley, patio and bathroom 110-volt electrical outlets are protected by a Ground Fault Interrupter (GFI). This device is intended to protect you against the hazards of line to ground electric faults and electrical leakage shocks possible when using electrical appliances in damp areas.

The GFI device does not prevent electrical shock, nor does it protect a person who comes into contact with both "hot" and neutral sides of the

circuit. It does not protect against electrical overloads.

Test the GFI at least once a month while operating on 110-volt AC power. To test the GFI:

Push the TEST button. The RESET button should pop out, indicating that the protected circuit has been disconnected.

**WARNING: IF THE RESET BUTTON DOES NOT POP OUT WHEN THE TEST BUTTON IS PUSHED, A LOSS OF GROUND FAULT PROTECTION IS INDICATED. DO NOT USE THE OUTLET OR OTHER OUTLETS ON THE SAME CIRCUIT. HAVE THE CAMPER ELECTRICAL SYSTEM CHECKED AT AN AUTHORIZED LANCE SERVICE CENTER OR BY A QUALIFIED ELECTRICIAN. DO NOT USE THE SYSTEM UNTIL THE PROBLEM HAS BEEN CORRECTED.**

To restore power, push the RESET button.

**NOTE:** If the galley, bath or patio outlets don't work, check the GFI. Reset it if necessary. If the GFI continues to trip, have the camper electrical system checked at an authorized Lance Service Center or by a qualified electrician.

### Power Generator (Optional)

**WARNING: BEFORE OPERATING ANY GENERATOR, READ AND UNDERSTAND THE "GENERATOR" SECTION OF THIS MANUAL AND THE MANUFACTURER'S OPERATING INSTRUCTIONS FOR YOUR GENERATOR.**

Your camper may be equipped with an LP gas powered generator which will provide complete electrical self-containment when public utility 110-volt AC power is unavailable. Controls are located at a remote control panel inside the camper. The remote control includes a START/STOP switch, with an indicator lamp that illuminates when the unit is operating, and an hour meter.

The voltage output of the generator is connected directly to a receptacle located inside the power cord storage compartment. With the generator power plant operating and the power cord plugged into this receptacle, power is available at all of the 110-volt power outlets in the camper,

just as if the cord were connected to an external source.

A circuit breaker located on the generator protects it from overload. The breaker must be ON for proper operation. See Generator Manual for location.

The fuel supply for the generator is the LPG tanks that supply the other gas appliances of the camper. Check LPG level frequently to avoid running out of LPG.

**THE GENERATOR HAS ONLY ENOUGH POWER TO RUN THE OPTIONAL MICROWAVE OR ROOF AIR CONDITIONER BUT NOT BOTH AT THE SAME TIME.**

**NOTE:** Refer to your Generator Power Plant Manufacturer's Instruction Manual (provided in your Owner's Information Package) for service information before starting the generator. Do not attempt to start the unit with a heavy power load connected. Always wait at least three minutes after starting generator before turning on (or plugging in) heavy electrical loads, such as the roof air conditioner or microwave oven.

**To start the generator:** press the START/STOP switch to the START position and hold until the unit starts, then release the switch.

**CAUTION:** If the unit is slow to start, DO NOT hold the switch in the START position for more than 10 seconds. Release the switch, wait two minutes, then try again. This will help avoid overheating and damaging the generator starting system. If this system fails to start the generator, a troubleshooting guide is provided in the manufacturer's instructions.

**To stop the unit:** hold switch to the STOP position until the engine stops. Be sure to hold it until the engine stops or the engine will continue to run. The engine should always be run for several minutes without a load in order to cool down before stopping.

#### **Generator Operating Safety Precautions and Warnings**

**CAUTION:** DO NOT BLOCK THE GENERATOR VENTILATING AIR INLETS OR OUTLETS. THE AIR-COOLED ENGINE REQUIRES A CONSTANT SUPPLY OF COOLING AIR. RESTRICTED VENTILATING AIR INLETS OR

**OUTLETS CAN CAUSE ENGINE FAILURE OR FIRE FROM ENGINE OVERHEATING.**

Do not use generator ventilating air for heating any interior living space. Ventilating air can contain high concentrations of lethal gases.

**WARNING: DO NOT PLACE FLAMMABLE MATERIAL OR STORE ANY OTHER MATERIALS IN THE GENERATOR COMPARTMENT.**

Check engine fuel lines often. Fuel leakage in or around the compartment is an extreme fire hazard. Do not use the generator until fuel leaks are repaired.

**WARNING: EXHAUST GAS IS DEADLY! EXHAUST GASES CONTAIN CARBON MONOXIDE, AN ODORLESS AND COLORLESS GAS. CARBON MONOXIDE IS POISONOUS AND CAN CAUSE UNCONSCIOUSNESS AND DEATH. SEE THE "Carbon Monoxide Safety Precautions" SECTION OF THE "ON THE ROAD" CHAPTER.**

**PROTECTION AGAINST CARBON MONOXIDE INHALATION ALSO INCLUDES PROPER EXHAUST SYSTEM INSTALLATION AND VISUAL AND AUDIBLE INSPECTION OF THE COMPLETE EXHAUST SYSTEM AT THE START OF EACH GENERATOR SET OPERATION.**

**DO NOT BLOCK THE TAIL PIPE OR SITUATE THE CAMPER IN A PLACE WHERE THE EXHAUST GASES HAVE ANY POSSIBILITY OF ACCUMULATING EITHER OUTSIDE, UNDERNEATH, OR INSIDE YOUR VEHICLE OR ANY NEARBY VEHICLES. OUTSIDE AIR MOVEMENTS CAN CARRY EXHAUST GASES INSIDE THE VEHICLE THROUGH WINDOWS OR OTHER OPENINGS REMOTE FROM THE GENERATOR EXHAUST. OPERATE THE GENERATOR ONLY WHEN SAFE DISPERSION OF EXHAUST GASES CAN BE ASSURED. MONITOR OUTSIDE CONDITIONS TO BE SURE THAT EXHAUST GASES CONTINUE TO BE DISPERSED SAFELY.**

**DO NOT UNDER ANY CIRCUMSTANCES OPERATE THE GENERATOR WHILE SLEEPING. YOU WOULD NOT BE ABLE TO MONITOR OUTSIDE CONDITIONS TO ASSURE THAT GENERATOR EXHAUST DOES NOT ENTER THE INTERIOR, AND YOU WOULD NOT BE ALERT TO EXHAUST ODORS OR**

## SYMPTOMS OF CARBON MONOXIDE POISONING.

DO NOT OPERATE THE GENERATOR WHEN PARKED IN OR NEAR HIGH GRASS OR BRUSH. EXHAUST HEAT MAY CAUSE A FIRE.

DO NOT USE THE GENERATOR AS AN EMERGENCY POWER SOURCE TO A RESIDENTIAL OR INDUSTRIAL UTILITY LINE. SUCH OPERATION COULD CAUSE DEATH OR SERIOUS INJURY TO WORKERS FOR UTILITY COMPANIES. SUCH USE IS UNLAWFUL IN SOME STATES.

Check the generator exhaust system after every 8 hours of operation and whenever the system or camper structure may have been damaged, and repair any leaks or obstructions before further operation.

Do not modify the generator installation or exhaust system in any way.

Disconnect the generator starting battery before performing any maintenance on the generator.

### Generator Ready (Option)

Some model campers come set up for a generator to be installed at a later date. Generator ready includes the metal compartment with all access holes pre-cut, the vented compartment door, all electrical wiring (both 110-volt and 12-volt), LP gas supply, and wiring for a remote START/STOP/HOUR Meter Panel (Panel is included in Lance models only).

**WARNING: THE GENERATOR COMPARTMENT IS DESIGNED FOR USE WITH AN ONAN 2.5 LPG MICROLITE GENERATOR ONLY. INSTALLATION SHOULD BE DONE ONLY BY QUALIFIED PERSONNEL. DO NOT USE THIS COMPARTMENT FOR THE OPERATION OF A PORTABLE GENERATOR.**

•The 12-volt supply wiring for starting a generator is located behind the battery compartment for connection to the battery at the time of installation.

•A receptacle is located inside the power cord storage compartment. This receptacle will be used to supply power from the generator to the camper.

•The compartment may be used for light storage if a generator is not installed.

### Generator Maintenance and Service

Specific maintenance requirements are outlined in the Operator's Manual supplied with the generator in the owners packet. Follow these guidelines and/or refer to your dealer for assistance.

**NOTE:** A maintenance access cover is located under the camper just below the generator. Use this access to drain the oil or change a spark plug.

**WARNING:** This cover must be in place after service to facilitate proper air flow during operation.

## L.P. GAS SYSTEM

Please observe the warnings and cautions contained herein as well as the information supplied by the manufacturers of your gas appliances.

Liquified petroleum gas (LPG) is stored in a high pressure tank in liquid form and is delivered to the appliances (i.e., range, water heater) in a gaseous form. LPG containers must not be placed or stored inside a vehicle. The containers are equipped with safety devices which relieve excess pressure by discharging gas to the atmosphere.

One gallon of LPG produces approximately 107,000 BTUs. Using the BTU rating of each gas appliance in your RV, you can determine about how long your supply will last according to your usage.

### Safety Precautions

LPG is of course highly flammable and also heavier than air. It's treated to have a garlic-like odor to aid in detecting a leak. If a leak should occur, the LPG can collect in pockets along the floor and thereby dissipate the air. If unnoticed, this could result in suffocation or an explosion.

#### 1. IF YOU SMELL GAS:

Extinguish any open flames, pilot lights and all smoking materials.

Do not touch electrical switches.

Shut off the gas supply at the tank valve(s) or gas supply connection.

Open doors and other ventilating openings.

Leave the area until odor clears.

Have the gas system checked and leakage source corrected before using again.

#### 2. Inspect the entire LP gas system for leaks or damaged parts before each trip.

#### 3. Never check for leaks with an open flame. Use an approved leak detection solution or a non-ammoniated, non-chlorinated soap solution only. If the leak cannot be located, have the system checked by qualified personnel.

4. Always be careful when drilling holes or fastening objects to the camper. The gas supply lines could be punctured by a nail or screw.

5. Do not restrict access to LP tanks. In an emergency, the tank service valve must be easily accessible. Do not store items or block ventilation openings in the LP compartment.

6. Do not use any LP gas tank other than the one furnished with your camper without being sure that all connecting components are compatible.

7. **WARNING: TURN OFF GAS MAIN VALVE AND INDIVIDUALLY TURN OFF ALL GAS APPLIANCES OR ELECTRICALLY DISCONNECT AUTOMATIC IGNITION APPLIANCES BEFORE ENTERING AN LP GAS BULK PLANT OR MOTOR FUEL SERVICE STATION. WHEN NOT INDIVIDUALLY TURNED OFF, AUTOMATIC IGNITION APPLIANCES MAY CONTINUE TO SPARK.**

8. **WARNING: DO NOT FILL LP GAS CONTAINERS TO MORE THAN 80% CAPACITY. OVERFILLING CAN RESULT IN UNCONTROLLED GAS FLOW WHICH CAN CAUSE FIRE AND EXPLOSION. A PROPERLY FILLED CONTAINER HOLDS ABOUT 80% OF ITS VOLUME AS LIQUID.**

9. LP gas regulators must always be installed with the diaphragm vent facing downward. Make sure that the regulator vent faces downward to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

10. Do not use a wrench or pliers to close the service valve. This valve is designed to be closed leak-tight by hand. If a tool is required to stop a leak, the valve probably needs repair or replacement.

11. Use a proper wrench to tighten the POL fitting. Tighten this fitting in a counter clockwise direction. Don't force, jam or crosstread the fitting. Always check this fitting for leaks after tightening.

12. Be sure the tanks are securely fastened whenever they are mounted on the camper.

13. If you do not have the special tools and

training necessary, do not attempt to repair LP gas system components.

### Fill LPG Tank

Filling should be done only at authorized LPG fueling stations. Please observe the following instructions when filling the storage tank.

Gas bottles must be purged of all air and water before filling. A small amount of alcohol (1/2 cup per bottle) can be added before filling an empty tank to help prevent freeze-ups. Check with your LP-gas dealer.

The law requires at least a 20% vapor space for safety. A special liquid level valve is installed in the tank to indicate when the tank has reached 80% of its volume as liquid LP. Stop filling when liquid appears at this valve.

### **WARNING: USE LP-GAS TANKS AND CYLINDERS IN PROPER POSITION**

Use vapor only. All LP-gas appliances for cooking, heating, lighting, water heating and refrigeration are designed to operate on LP-gas vapor only. Therefore, all LP-gas tanks and cylinders designed for vapor service must be transported, installed and used in the proper position. LP-gas containers are permanently marked with "top" stamped on tab welded to the tank or "arrows must point up" stamped in the guard or bracket to identify the proper position.

Do not transport, install or use a vertical cylinder in a horizontal or upside down position. Never use a horizontal cylinder or tank on its improper side. Liquid LP-gas could enter the system designed for vapor only, creating a hazardous condition.

Do not carry or store filled or empty LP gas containers inside your camper. LP gas containers are equipped with a safety device that relieves excessive pressure by discharging gas to the atmosphere. Leaks can occur at valves and fittings. Always store LP tanks with the valves closed.

Always use a POL plug when transporting or storing disconnected cylinders or tanks (full or empty).

All LP-gas tanks and cylinders must be securely attached in the proper position for intended use. Use all brackets provided to ensure proper support and positioning.

Two types of propane tanks are used depending on the model.

**Vertical tank** - a lockable securing strap is used to hold the tank in place during travel. The regulator is mounted directly to the tank.

**Horizontal tanks** - bolts with wing nuts are used to hold the tanks in place. Before removing the tanks from the compartment, it is necessary to loosen the regulator bracket from the compartment bottom and move it to the side.

### Using LPG System

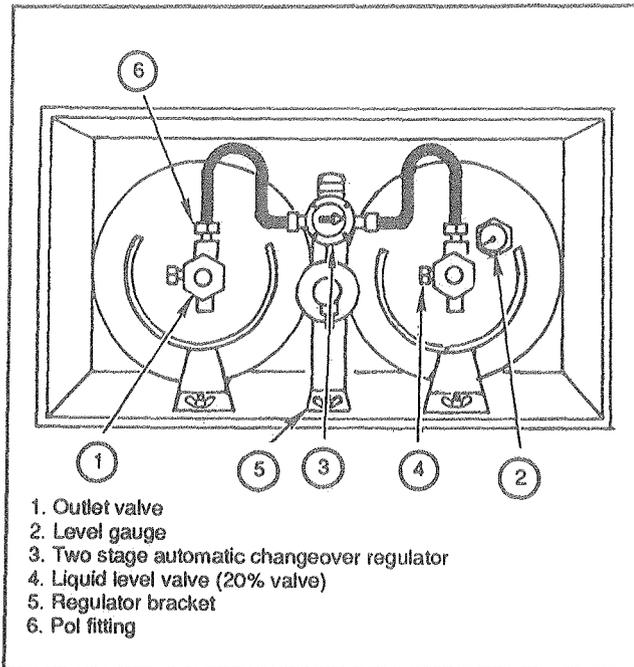
It is normal to have slight gas odor when initially opening the outlet valve. Fully open and seat valve by **HAND ONLY** to prevent leakage past the valve stem. If an odor seems to linger, perform a leak test.

Keep outlet valves closed when not using the LP-gas system.

For prolonged use of altitudes above 4,000 we recommend that you have your pressure regulator adjusted for that altitude.

**WARNING: DO NOT ATTEMPT TO ADJUST THE REGULATOR. IT HAS BEEN PRESET BY THE REGULATOR MANUFACTURER. IF ANY ADJUSTMENT IS REQUIRED, IT MUST BE MADE BY A QUALIFIED LPG SERVICE TECHNICIAN USING SPECIAL EQUIPMENT.**

Check your owner's packet for the helpful hints about LP-gas and containers pamphlet. It includes more helpful information.



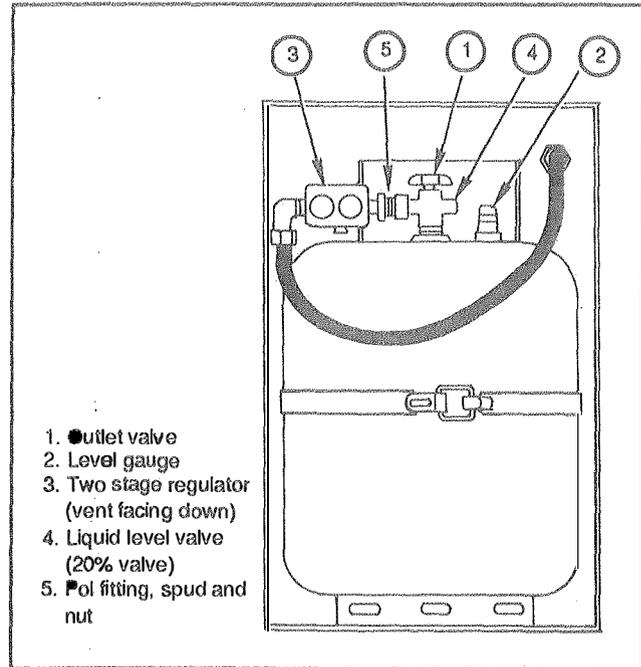
Dual LPG Tank Installation

### Dual LPG Tanks

Dual LPG tanks are equipped with a two-stage automatic changeover regulator, which transfers gas demand automatically to the second tank when the first tank becomes empty. Be sure the regulator bracket is securely bolted to the compartment before using the system. This will assure that the diaphragm vent is facing downward to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

For proper operation, both outlet valves must be opened. Turn the tank selector knob so the arrow points to the tank you wish to provide service. A small glass window is located on the top of the regulator. A silver band will appear in the window indicating that pressure is in the line from the tank. After all gas is used from that tank, the regulator will automatically switch service to the other tank, and a red band will show in the window, with the arrow pointing to the empty tank. Service will not be interrupted during the changeover.

The empty tank can be removed for filling without disturbing the gas flow to the camper by rotating the tank selector to the other tank. The red band will disappear from the window indicating pressure from the supply tank. Turn off the valve on the empty tank before disconnecting.



Single LPG Tank Installation

### Single LPG Tank

Single LPG tanks are equipped with a two stage regulator. Be sure the regulator is securely fastened to the tank with the diaphragm vent facing downward. When using the tank, open valve all the way, then close 1/4 turn. This will always enable you to determine whether the valve is open or closed.

### LP Gas at Low Temperatures

LP gas systems can and do freeze up in very cold weather. It is a common misconception that the regulator or the gas itself freezes. Actually, it is the moisture or water vapor that gets trapped in the system or absorbed by the gas that freezes and causes the problem.

Where does the water come from? From a variety of sources. The gas can be saturated with water when it comes out of the gas plant or refinery unless care is taken to see that it is thoroughly dehydrated; the gas can absorb water while it is transported if the tank cars contain water; or the gas storage tanks may have water in them because moist air has been trapped in the tank because a valve was left open.

When this water freezes, the ice can build up and partially or totally block the gas supply.

There are a number of things you can do to prevent this freeze up:

1. Be sure the gas tank is totally moisture-free before it is filled.
2. Be sure the tank is not overfilled. This is also a safety consideration.
3. Keep the valves on empty tanks closed.
4. Have the gas tanks purged by the LP gas service station if freeze up occurs.
5. Have the LP service station inject an approved antifreeze or de-icer into the tanks.
6. Be sure you have the proper gas blend for your traveling area. If you have the proper gas blend, it is very unlikely that the gas is at fault.

If, despite precaution, you do experience freeze up, try melting the ice by warming the regulator using a small light bulb. Be sure to protect the bulb from breaking which could cause sparking. **DO NOT USE AN OPEN FLAME.** If the problem persists, ask your LP gas supplier to service the tank or regulator as required.

### LPG Leak Detector (Optional Some Models)

If installed, the LP gas leak detector is located near the floor in the galley area. The unit contains an alarm that will sound alerting you to the presence of low levels of potentially dangerous LP gas that may have been released due to a gas leak.

**NOTE: THIS DEVICE DETECTS THE PRESENCE OF LP GAS - IT DOES NOT DISCONNECT THE GAS SUPPLY.**

The detector unit is powered by the 12-volt DC system and is always powered as long as the camper is connected to a charged battery or 120-volt AC shore power. A green light on the front panel indicates that the detector has power.

Test the leak detector each time the camper is relocated and set up for use.

1. Hold a butane-fueled pocket lighter near the sensor.

2. Open the lighter valve without striking the flame.
3. The leak detector should respond within a few seconds.
4. Press the reset button to reset the alarm.
5. Lightly fan the area around the detector to insure complete dispersion of the gas from the lighter, and to prevent another sounding of the alarm.

A reset button allows you to temporarily quiet the alarm for 60 seconds after it has been set off or after testing.

If the alarm does not sound during a test or if the green indicator light is not visible, see your dealer. There are no batteries or user serviceable parts inside the unit.

**NOTE:** Since the detector is continuously powered, disconnect the battery if you are not using your camper.

Low camper battery power will cause a series of short beep tones between long intervals and is distinctively different from the alert sound.

## APPLIANCES

Follow the operating and maintenance instructions supplied by your appliance manufacturer for safe and dependable use. The following information is supplied as only a supplement to that provided with each appliance. If you have a problem, see your local service center of the appliance manufacturer.

### Lighting LP Gas Appliances

Air trapped in the gas lines may delay the initial lighting of any appliance. It could take several seconds or minutes for the gas to reach the appliance. To purge some of the air from the gas system, first light a burner on the range. The other appliances will then light more quickly.

The first time the furnace or oven is operated, paints and oils used in manufacturing may generate some smoke and fumes. If this occurs, open doors and windows to air out the camper. These materials should burn off after the first 15 to 20 minutes of appliance operation.

**ALWAYS FOLLOW THE APPLIANCE MANUFACTURER'S LIGHTING AND OPERATING INSTRUCTIONS.**

### Refrigerator

The refrigerator may be operated from either LP gas, 120-volt electric power, or in some models 12-volt DC power.

The LP type refrigerator operates on the "absorption" principle and therefore must be leveled. When your camper is stationary, it should be leveled to be comfortable to live in. If you can occupy the camper comfortably, the refrigerator unit will perform well. If the refrigerator unit is not "close" to level, it will not function properly and your foods will not be adequately cooled.

When the RV is in motion, the continuous movement will not affect proper operation. Operating instructions are printed inside near the controls.

### Operating Tips

• Operate the refrigerator on 110-volts for 8-12 hours (overnight) before you leave on a trip. This will allow the refrigerator and freezer to get cold and even have some ice ready.

• Pre-cool food and drinks before putting them into the camper refrigerator.

• For off-truck use, some model refrigerators must have 12-volt battery hookup to power the electronic controls. Refer to appliance manual for details.

### Range-Oven

The gas burners and oven use LP gas for fuel. Operation is similar to the range in your home. However, cooking temperatures will vary from home ranges depending on the altitude.

Lance model campers are equipped with a push button igniter for lighting the top burners. All other models require matches or a hand held igniter for lighting the burners. Lance and Squire models are equipped with one high output burner for use when additional heat is needed.

The oven is equipped with a pilot ignition that must be lit before using the oven. Be sure to turn off the pilot when oven is not needed or before traveling or refueling. For additional information, please refer to the operating manual in your owners information package.

**WARNING: BEFORE TURNING ON THE MAIN GAS SUPPLY, BE SURE ALL BURNER AND OVEN CONTROL KNOBS ARE IN THE "OFF" POSITION.**

**WARNING: IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING. DO NOT USE OPEN FLAMES TO WARM THE LIVING AREA.**

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

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

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

Never use portable fuel-burning equipment, including wood and charcoal grills and stoves, inside the vehicle because a fire or explosion may result.

### Microwave Oven (Optional)

Please read all instructions that come with the microwave before use. The oven should never be operated empty.

When operating on your generator (optional) power is limited. If the roof air conditioner is operating there will not be enough power to operate the microwave. Turn air conditioner to "fan only" setting to use the microwave.

### Hot Water Heater

Access to the heater controls and valves is through the exterior compartment door. Some models are equipped with an electric ignitor switch for pilot lighting. Lighting instructions are printed inside the compartment door.

Before lighting, open the water heater relief valve and check that water flows without presence of air.

**CAUTION:** Do not operate the water heater until it is filled with water.

Turn on the hot water at the galley sink, and when water flows continuously the heater is full.

Occasionally you may experience "weeping" of the pressure/temperature relief valve on the water heater. This is not a defect. It is caused by the normal expansion of water while it is being heated in the closed water system of your camper. The water heater tank is designed internally with an air gap at the top of the tank

to reduce this weeping phenomenon. In time, though, the heating and expansion of the water will absorb this air. To replace the air and reduce relief valve weeping:

**WARNING: WAIT UNTIL THE WATER IN THE HEATER TANK IS COOL BEFORE PERFORMING THESE STEPS.**

1. Turn off the water heater.
2. Turn off incoming water supply.
3. Open a faucet in the camper.
4. Pull the handle of the relief valve straight out and let water flow until it stops.
5. Release the relief valve handle and let the valve snap shut.
6. Turn on the water supply.
7. Close the faucet when water flows continuously without sputtering.
8. Turn on the water heater.

This procedure will re-establish the air pocket at the top of the tank. If the relief valve weeps again, repeat the above procedure.

**CAUTION:** Do not plug the pressure-temperature relief valve under any circumstances.

If the water heater will be out of service for some time it should be drained. See "Storage" chapter for more information.

**NOTE:** When using hot water faucets in the camper for the first time after heating water, open the valve slowly to reduce water splattering due to pressure build-up.

### Automatic Ignition Water Heater (Optional)

This water heater is fully electronic and has no pilot to light. Simply turn on the water heater switch located on the monitor panel. The water heater will cycle on and off as needed. If the water heater fails to ignite, a red light on the panel will appear. Check to make sure you have adequate gas and battery supply. Move switch off and back on again.

### Forced Air Furnace (Automatic ignition)

The furnace is a forced air unit fueled by LP gas and electronically powered by 12 volts. It is controlled by a wall-mounted thermostat similar to those used in homes.

To start the furnace, set thermostat switch to ON position, and set desired temperature. The furnace will cycle on and off as needed. To shut system off, set thermostat to lowest setting and OFF position. If your furnace does not operate properly, check the battery condition.

Some models have convenient heat vent outlets in the bathroom. The outlets are adjustable for the amount of heat needed.

The furnace will not operate properly if your stored personal items block the free flow of air at the registers or the return air to the furnace. The operating manual included in your Owner's Information Package contains detailed operating and maintenance instructions.

During the initial lighting of a furnace, smoke and fumes may be created as a result of the burning off of manufacturing compounds. This is normal; however, the initial lighting should be done with windows and doors open and should be of adequate duration to completely burn off the residue.

**WARNING: PORTABLE FUEL-BURNING APPLIANCES ARE NOT SAFE FOR HEATING INSIDE THE CAMPER. ASPHYXIATION OR CARBON MONOXIDE POISONING CAN OCCUR.**

### Evaporative Water Cooler (Optional)

The evaporative water cooler cools incoming air by passing it through a moist pad. Two fan speeds provide comfort control. It can be used while driving. Also, it has an exhaust setting.

The cooler is hooked up to your RV's internal water supply. Normally the cooler will use between .5 and 1.1 gallons per hour depending on weather conditions. A valve is located under the kitchen sink to supply water to the cooler. When using the cooler, the water pump must be ON. The pump will cycle on and off periodically as the cooler needs water.

### Roof Mounted Air Conditioner (Optional)

The roof mounted air conditioner is the largest single load on the 110-volt electrical system. Therefore, it is important that the power to start and operate the air conditioner is adequate.

#### CAUTIONS:

1. Be sure A/C is OFF before connecting electricity.
2. When air conditioner has been shut down, wait at least five minutes before re-starting.
3. Do not operate without filter installed.

#### Helpful Notes for Using Air Conditioner

- Keep window curtains closed.
- Use kitchen vent fan when cooking.
- Air conditioning removes moisture from the air and it is normal to have water discharge off the roof.
- Operating the air conditioner on the optional generator will use all available power. Therefore, you will not be able to use any other 110-volt appliances while the air conditioner is in operation.

## FRESH WATER SYSTEM

Your camper is outfitted with a system designed to provide fresh water service from an on board water tank or a city water connection (except some Squire-Lite models). It is important to keep in mind that your RV has a limited water capacity when operating self-contained. So use your water supply wisely.

### Water Pump

Two types of water pumps are used depending on the model of camper.

**CAUTION:** Pump is not equipped with a dry tank shut-off switch. Be sure that pump switch is OFF if water tank becomes depleted or when system is not in use.

### Squire Lite Models Without Water Heaters

To operate this system, simply turn the switch located on the faucet ON or OFF as water is needed.

### All Models With Water Heaters

This system uses an on demand type water pump. The pump operates automatically when the pump power switch is ON and any faucet valve is opened. When the faucet valve is closed, the pump shuts off.

Turn the pump ON to pressurize the system. When a faucet is opened, the water may sputter for a few seconds. This is normal and is not cause for concern. The water flow will become steady when all air is bled from the water lines.

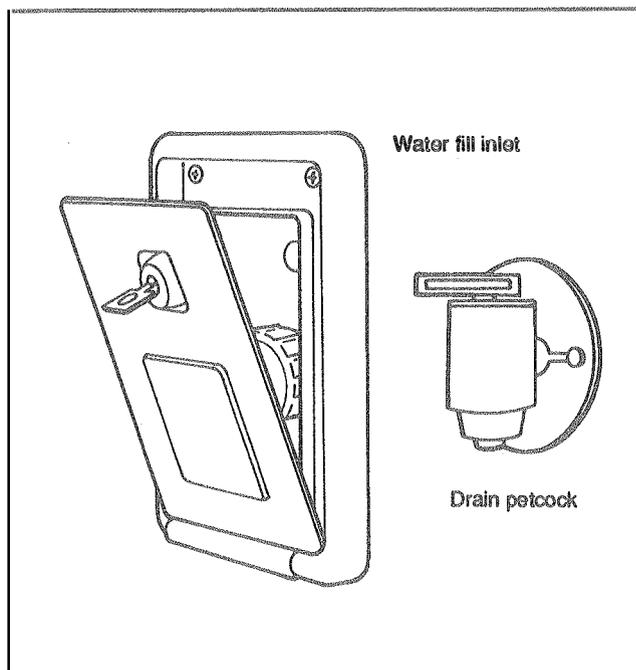
**NOTE:** When traveling, always turn off the water pump. This will reduce the possibility of water flowing during travel. If the pump cycles on and off when no water is being used, you may have a partly open faucet, a leak in the system or an empty water tank.

### Fill Water Tank

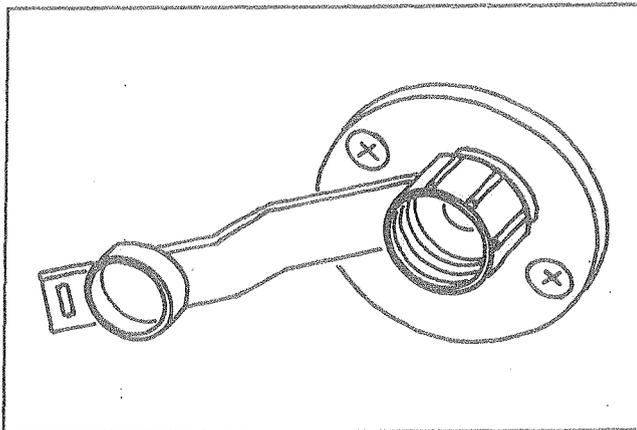
**NOTE:** The fresh water system should be sanitized at initial filling, after a period of storage or if contaminated. Refer to Sanitize Fresh Water System Section.

The water tank is filled with a hose through the water fill inlet located on the roadside of the camper.

1. Close water tank drain petcock.
2. Remove cap and vent plug on fresh water fill inlet.
3. Fill water system through exterior fill spout slowly at a low volume until water overflows. DO NOT force water into spout since air in the tank must be released during filling.
4. Set pump control switch to ON.
5. Open each faucet one by one until water flows evenly, and no more air bubbles are evident.
6. Top off water system through exterior fill spout due to water used filling the water heater and purging the water lines of air.



Typical Fresh Water Inlet and Drain



Typical City Water Connection

### City Water Connection

Depending on the model, the city water connection is either located next to the water fill inlet or under the roadside overhang.

1. Attach a hose suitable for potable water to the exterior water service connection. City water pressures may vary considerably, use a heavy duty hose able to withstand high pressure.

**CAUTION:** You may wish to purchase a pressure regulator to protect your RV from possible damage due to excessive water pressure.

2. Pump switch should remain in OFF position.
3. Open each faucet until water flows evenly.

### Drain Water System

The system should be drained if it will be out of use more than one week. This will prevent algae and bacteria contamination of your fresh water system.

1. RV should be level and pump control switch in OFF position.
2. Open all faucets and showerhead.
3. Open water tank drain valve.
4. Open water heater drain and relief valves. (See Winterization and Storage section for more information)

### Sanitize Fresh Water System

Sanitize the fresh water tank and piping at initial use, at least once a year, and whenever the camper sits for a prolonged period. This will help keep the tank and lines fresh and will discourage the growth of bacteria and other organisms that can contaminate the water supply. Rinse the tank with a chlorine/fresh water solution as follows:

1. Drain water system. Refer to Drain Water System section.
2. Prepare a chlorine solution with one gallon of water and 1/4 cup household bleach.
3. Pour one gallon of solution for each 15 gallons of tank capacity into fill spout.
4. Fill tank with fresh water.
5. Open each faucet and water heater relief valve until water flows evenly.
6. Set pump switch to OFF.
7. Allow solution to stand for 3 hours.
8. Drain and flush with fresh water.
9. To remove any chlorine taste or odor, fill tank with one quart vinegar to 5 gallons water. Allow solution to remain in tank several days if possible.
10. Drain and flush with fresh water.

### Water Filter

Dirt, mineral scale, or organic matter are filtered out of the fresh water system by an in-line water filter on the inlet side of the water pump. If you suspect a clogged filter, it is easily removed and cleaned.

Inspect the filter after the first 90 days of use, clean it if necessary, and inspect annually thereafter.

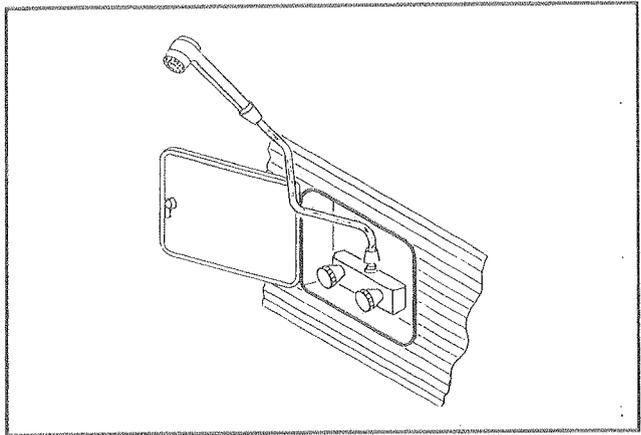
1. Loosen the clamp at the inlet end of the filter.
2. Pull the water hose off the filter.
3. Unscrew the filter from the water pump.
4. Turn each end of the filter and pull apart.
5. Flush out and clean screen.
6. Reverse procedure to install.
7. Operate the water pump and check for leaks.

### Water Purifier (Optional)

A water purifier (optional) is installed under the kitchen sink. When not in use, the filter must be removed and left to dry out. If the wet filter remains in the system, it will become contaminated.

### Shower

The shower head is removable for hand held use and equipped with a water flow control device to allow you to conserve water while showering. After showering, there may be some water discharge at the sink faucet. This water is simply draining from the shower hose through an anti-siphon valve in the faucet and is perfectly normal.



Outside Shower

### Outside Shower (Optional)

The outside shower is located in a compartment for exterior use. It uses water from the fresh water tank, when not connected to city water, and is equipped with a flow control to allow you to conserve water.

**NOTE:** For your protection, this faucet is equipped with a vacuum breaker (back flow preventer) to prevent contamination of your potable water supply. The water in the hand held shower hose will drain through this vacuum breaker when the faucet is turned "off". This is not a leak. This drainage is inherent in the design of the vacuum breaker, and is evidence that it is functioning properly.

## WASTE SYSTEM

The waste water system in your camper is made up of sinks, shower, toilet, plumbing drain and vent lines, a "gray water" holding tank and a "black water" holding tank. The holding tanks make the system completely self-contained and allow you to dispose of waste water at your convenience. A flexible sewer hose is supplied to connect the holding tank outlet to the inlet of an approved waste water dump station or sewer system.

The holding tanks are made of seamless plastic which will not corrode. On most units with dual tanks, one retains toilet wastes and the other retains liquid wastes from the sinks and shower. Always drain wastes at an approved site.

**NOTE:** On 8 and 9 foot models, the shower drains into the toilet waste tank. To prevent wastes from backing up into the shower (especially when driving) keep the locking basket strainer in the shower drain except when showering.

### Toilet

Your camper is equipped with a marine-type toilet. The flushing mechanism, whether a foot-operated pedal or a hand-operated lever, allows a valve in the bottom of the bowl to open, permitting the contents to be flushed into the holding tank. A stream of water under pressure from the camper's water system swirls around the bowl, cleaning it and flushing the contents into the holding tank. Most models have two levers, each working independently of the other so the bowl can be filled with water prior to use.

For additional information, please refer to the operating manual in your Owner's Information Package.

**NOTE:** Before toilet can be operated, fresh water tank must have water in it and pump switch must be ON or system connected to City water.

### Black Water Holding Tank

This holding tank must be primed with 2 gallons of water and one odor control chemical package at each initial use. Add more odor control chemi-

cal if needed until dumping is required. Refer to chemical package for specific instructions.

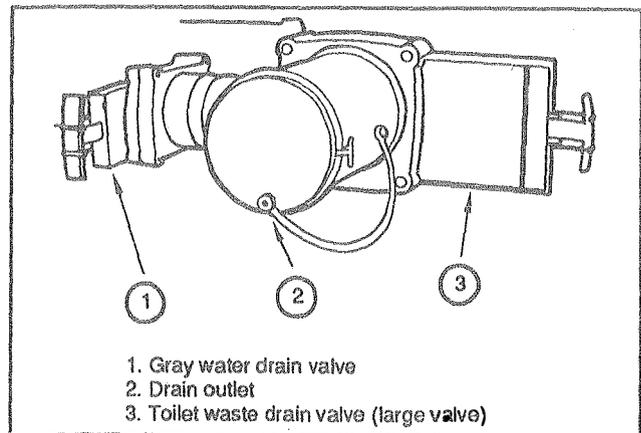
### Dumping the Holding Tanks

The holding tanks terminate in a valve arrangement that permits dumping each tank separately or together. The valves are called "knife valves". A blade closes the opening in the sewer drain pipes. The blade is connected to a T-handle that is pulled to release the contents of the tank(s). During self-containment use, the sewer line is securely capped and valves closed to prevent leakage of waste material onto the ground or pavement.

**WARNING: HOLDING TANKS ARE ENCLOSED SEWER SYSTEMS AND AS SUCH MUST BE DRAINED INTO AN APPROVED DUMP STATION. BOTH BLACK AND GRAY WATER HOLDING TANKS MUST BE DRAINED AND THOROUGHLY RINSED TO PREVENT ACCUMULATION OF HARMFUL OR TOXIC MATERIALS.**

Dump the holding tanks only when they are about 2/3 full. If necessary, fill the tanks with water to 2/3 full. This provides sufficient water to ensure complete flushing of waste material into the sewer line. Whenever possible, dump the holding tanks before traveling.

The holding tank outlet is set up to be used with a removable fitting that locks onto the outlet with a clockwise twist. The sewer drain hose is clamped to this fitting when you need to drain the holding tanks. When you are operating self-contained, or you store the camper, install the protective cap in place of the removable hose.



Typical Drain Assembly

The hose is compressed and stored in the camper's hose carrier. When you want to drain the holding tanks:

1. Attach the hose to the dump valve.
2. Extend the hose and insert the end of the hose into the sewer or dump station inlet, pushing it firmly far enough into the opening to be secure. In some cases, adapters may be necessary between the line and the inlet.
3. Arrange the sewer hose so it slopes evenly and is supported to maintain the slope.
4. Dump the black water holding tank first. Grasp the handle of the black water knife valve (the large one) firmly and slide the valve open with a quick, steady pull.
5. Allow enough time for the tank to drain completely. Rinse and flush the tank and drain hose through the toilet with a bucket of water or a hose.
6. When the tank flow stops, push the handle in to close the valve.
7. Repeat the steps above for the small knife valve to dump the gray water holding tank. This tank is dumped last to aid in flushing the outlet and drain hose.
8. Remove the sewer hose and replace the cap.
9. Rinse out the sewer hose with fresh water and remove the sewer hose from the dump station.
10. Replace sewer or dump station covers.
11. Store the sewer hose.

**NOTE:** To facilitate draining on 8 and 9 foot models, the camper should be level or slightly higher in the front than the back. On 10 and 11 foot models, raise the passenger side of the camper higher than the driver's side.

If you are parked at a site with a sewer hookup, keep the black water knife valve closed to allow the waste level to build up. The outlet will probably clog if you leave the knife valve open continually. Run enough water into the tank to cover the bottom. This will aid the break up of solid wastes. The gray water knife valve may be left open.

**PLEASE...PRACTICE GOOD HOUSEKEEPING WHEN DRAINING WASTES AT A CAMPSITE OR DISPOSAL STATION. LEAVE THE SITE IN GOOD ORDER. ABOVE ALL, DO NOT POLLUTE.**

### Holding Tank Care and Maintenance

Since holding tanks don't rely on any sophisticated mechanical devices for their operation, they are virtually trouble-free. The most common problem is also an unpleasant one - clogging. You can minimize the chances of clogging by keeping the following considerations in mind:

- Keep the black water tank knife valve closed. Fill tank to at least 2/3 full before dumping. Be sure to cover the tank bottom with water after dumping.
- Movement while driving will help liquify the solids.
- Use only toilet tissue formulated for use in septic tank or RV sanitation systems.
- Keep both knife valves closed and locked, and the drain cap tightly in place when using the system on the road.
- Use only cleaners that are approved for use in septic tank or RV sanitation systems.
- Use a special holding tank deodorant chemical approved for septic tank systems in the black and gray water holding tanks. These chemicals aid the breakdown of wastes and make the system much more pleasant to use.
- Do not put facial tissue, paper, grease, ethylene glycol-based or other automotive antifreeze, sanitary napkins, or household toilet cleaners in the holding tanks.
- Do not put anything solid in either tank that could scratch or puncture the tank.

If the drain system does get clogged:

- Use a hand-operated probe to loosen stubborn accumulations.
- Seriously clogged P-traps may require disassembly. Be careful not to overtighten when reassembling.
- Do not use harsh household drain cleaners.
- Do not use motorized drain augers.
- Sometimes the holding tank valve will get clogged. In this case, a hand-operated auger may be necessary. Be ready to close the valve quickly once the clog is cleared. If the seal gets damaged, it must be replaced.

# GENERAL MAINTENANCE

## Exterior Maintenance

Some exterior parts of your camper are made of fiberglass, metal, rubber and plastic materials. The finish on these parts is durable, but not indestructible. Any material and finish will deteriorate over time. Exposure to sunlight, moisture, and airborne pollutants can chemically alter the composition of the base and finish materials and cause dulling and fading of the finish. Generally, changes in the finish due to weathering are cosmetic - they are on the surface of the part and do not affect its strength.

The best insurance against these effects is routine maintenance. If the finish is not washed thoroughly and waxed, the surface can deteriorate very rapidly. The following maintenance guidelines can help you reduce these weathering effects:

Wash the exterior monthly. Never use strong solvents or harsh abrasives to clean exterior surfaces. NOTE: Avoid spraying water directly into louvers, windows or vents and check that roof vents are closed.

Wax the exterior at least once a year, preferably twice, with a quality non-abrasive wax. When waxing, always read and follow instructions and precautions on the container. Some cleaners and waxes are recommended for use on only certain types of surfaces. Exterior streaking is reduced with more frequent waxing.

## Damage Checks

It is important to periodically check the exterior for damage. Pay particular attention to the following areas:

- Waste tank and plumbing lines
- LP gas tank and assembly
- Sealant around vents, windows, door and roof
- Exterior lighting

## Door and Windows

Lubricate door hinges, locks and window mechanisms periodically. Clean window frames

and tracks to ensure easy operation. If the camper is exposed to salt air, more frequent lubrication will be required.

## Sealant Renewal of Roof, Door and Windows

The adhesives and sealants used in the construction of your camper were developed to remain waterproof under sustained effects of weather and vibration. However, even the finest materials will eventually dry out and lose their effectiveness under constant heat of the sun and attack by other elements. This section outlines the procedures that you must follow to maintain the weather-resistant integrity of your camper. Leak damage caused by neglecting to follow these procedures may affect your warranty.

Your dealer can perform the resealing inspection and work for you, and has current information on sealants used in your camper and can recommend the appropriate sealants if you prefer to do this work yourself. Always use the recommended sealants.

**WARNING: THE ROOF IS SLIPPERY WHEN WET.**

Inspect the sealants around the roof, windows and doors at least every six months. If any of the following defects are evident during inspection, the affected areas must be resealed:

- Weathering or drying of sealant
- Sealant cracked or peeling
- Voids in sealant
- Shrunken or separated sealant

If you find any of the above defects:

- Remove excess sealant with a plastic scraper.
- Clean all areas to be resealed with mineral spirits and clean rags.
- Make sure that all areas to be resealed are absolutely dry before new sealant is applied.

**WARNING: MINERAL SPIRITS IS A FLAMMABLE LIQUID. USE EXTREME CARE WHEN HANDLING AND USING. DO NOT EXPOSE TO OPEN FLAME, SPARKS, OR SMOKING MATERIALS. DO NOT USE IN UNVENTILATED AREAS.**

## Interior Maintenance

### Interior Odor

New units may have a strong odor and even cause eye irritation when closed up in hot weather. This is due to glues used in the cabinetry and paneling. This condition passes with time but in an extreme condition open door and all windows and allow the inside to air out for several hours.

### Upholstery and Drapes

Professionally clean only. Some dry cleaning methods will damage vinyl or plastic found on cushions and drapes. Be sure to consult your local cleaners. Frequent vacuuming or light brushing between cleanings will help prevent accumulation of dirt and grime. Use of water based or detergent based cleaners may cause shrinking. Water stains may become permanent.

**WARNING: DO NOT USE LACQUER THINNER, NAIL POLISH REMOVER, CARBON TETRACHLORIDE, GASOLINE, OR NAPHTHA FOR ANY CLEANING PURPOSE. THESE PRODUCTS MAY CAUSE DAMAGE TO THE MATERIAL BEING CLEANED, AND ARE HIGHLY FLAMMABLE OR POISONOUS.**

### Wall and Ceiling Panels

The paneling and ceiling of your camper may be any of several finishes and textures. Never use harsh detergents or abrasive cleaners on walls or ceilings. Most surfaces will clean with a soft cloth moistened with mild liquid detergent in warm water. Do not use large amounts of water which could saturate the material.

### Floors and Carpeting

Vinyl flooring requires only washing and periodic waxing. Vacuum carpeting regularly, and clean it with a quality carpet cleaner.

### Wood Product Care

Remove dust with a clean, slightly damp cloth. Apply a quality furniture polish and buff with a soft, dry cloth. Never use harsh detergents and solvents.

## Laminate Top Care

For cleaning laminate surfaces, use a mild dishwashing liquid with warm water. Use a soft cloth for both washing and drying. Abrasive cleaners, steel wool or gritty cleaners will damage the surface.

### Refrigerator

Clean interior with mild soap and water after each trip. Defrost freezer and empty ice trays. When all the frost has melted, empty the drip tray under the finned evaporator. Leave the door open after cleaning.

### Power Range Hood

Clean the filter in detergent and hot water periodically and wipe down the surface of the unit.

### Drains

If a stoppage develops in the sink or shower drain, DO NOT use lye or any strong chemicals. Strong chemicals can harm the plastic in your waste system. A standard wire drain cleaner is recommended.

### Tub/Shower Care

For routine cleaning use a non-abrasive cleaner. Household fiberglass cleaners are recommended. Never use harsh detergents or abrasive cleaners. Never use a razor blade or steel wool to clean these surfaces.

### Bulb Specifications

Porch light	-1141
Dome light	-1141
Stove hood light	-912
Fluorescent light	-F15T8-CW (15-watt)
Backup light	-1156
Running light	-194
Turn signal light	-1057
License plate	-67
Bullet reading lights	-912
Lamps	-15 watt, 12V household
Wardrobe light	-563
Swing arm lamp	-1076

# WINTERIZATION

## Operating In Freezing Conditions

**CAUTION:** If water freezes inside the system, it can damage piping and equipment.

Keeping the interior warm will aid in preventing water in the storage tank, pump and piping from freezing. Open cabinets inside and allow warm air to circulate over the water system components.

Add non-toxic anti-freeze to the holding tank(s). Refer to instructions with the anti-freeze. Install the winter cover for the air conditioner.

**NOTE:** Propane, for operation of the appliances will work down to 44 degrees below zero.

The sliding windows have weep holes which drain water from the window tracks. In heavy rain and wind, water could be blown into the coach through these holes. Put a piece of sponge in the track over the hole to prevent this from occurring.

See "Ventilation and Moisture Control" section for more information.

## STORAGE

The following checklists will help you perform the steps necessary to prepare your camper for storage. Use the checklist that applies to the storage conditions you anticipate. These checklists do not include every detail required, and you may want to expand them to suit your needs.

### Short-Term Storage (less than 45 days) - Above Freezing

1. Wash the exterior.
2. Park the camper as level as possible front to rear and side to side.

**NOTE:** Prepare the camper as follows before removing it from the truck.

3. Before disconnecting the battery cables, check the charge in the battery. Recharge as necessary. Clean terminals, top and sides of battery and battery box. Leave the battery disconnected.

4. Drain holding tanks, toilet, and fresh water tank. Turn off water pump and water heater.

5. Remove the water purifier filter cartridge and let dry out. (If equipped)

6. Turn off LP gas at tank valve.

7. Turn off refrigerator, furnace, all range and oven burner valves and pilot.

8. Remove all perishables from refrigerator and galley cabinets. Leave refrigerator door open to reduce odor buildup. An open box or tray of baking soda in the refrigerator will help absorb odors.

9. Slightly open (1/4") a roof vent.

10. Close and lock all windows. Be sure vent fan and range hood fan switches are off.

11. Cap or close holding tank drain, city water inlet and fresh water fill spout.

12. Turn off all radios, TVs, interior and exterior lights.

13. Close curtains and/or mini blinds and pull shades.

14. Disconnect the 110-volt power cord and store in compartment.

15. If removing the camper from the truck, see procedure and warnings in the "Loading/Unloading" section.

16. Check the camper weekly.

### Long-Term Storage - Above Freezing

1. Perform all the preceding as in short-term storage.

2. Operate air conditioner periodically to lubricate compressor seals.

3. Place battery in a cool, dry area. Check battery charge every 30 days. Recharge as necessary.
4. Check sealants around all roof and body seams and windows. Reseal if necessary. See "Sealant Renewal" section.
5. Prepare generator (if equipped). (See Generator Operating Manual included in your Owner's Information Package.)
6. Remove the battery in the smoke detector. Leave the smoke detector cover open as a reminder to replace the battery.
7. Cover exterior vents (water heater, furnace, air conditioner shroud, range hood, refer) to prevent insects and small animals from getting in. Be sure to remove all covering material before using appliances or vents.

### Storage Below Freezing

To avoid damage to the plumbing fixtures and other components, we recommend that your camper plumbing systems be properly drained and have anti-freeze protection. The following is a procedure checklist you can follow if you prefer to winterize your camper yourself. Many people prefer to have a Lance Dealer Service Center perform this service.

1. Perform all the preceding as in short-term and long-term storage.
2. Drain the fresh water tank by opening the water tank drain. Leave valve open.
3. Turn the water pump on and open all cold and hot water faucets. When the flow of water stops, turn the pump off. Open the low point drain caps on HOT and COLD water pipes located under the shower.
4. Drain the water heater by opening the drain valve at the bottom of the heater and open the pressure relief valve.
5. Depress the flush pedal or hand operated lever on the toilet. Shut off all faucets, close the water line drain caps, fresh water tank drain valve, water heater drain and pressure relief valve.
6. Drain the shower head and hose by discon-

necting the hose at faucet. Don't forget the outside shower. (If equipped)

7. Drain the waste water system by following the normal procedure for draining the holding tanks. (See "Waste System" section.)
8. Apply silicone lubricant to the knife valve actuator rod.
9. Be sure ALL water from ALL plumbing fixtures has been drained.

**CAUTION:** Draining the water system alone will not provide adequate cold weather protection. If the camper is to be unheated during freezing temperatures, consult your dealer for the best winterizing procedure for your climate. Your dealer can supply you with one of the special antifreezes which are safe and approved for use in RV water systems. Follow the instructions furnished with the antifreeze.

**WARNING:** DO NOT USE AUTOMOTIVE OR WINDSHIELD WASHER ANTIFREEZE IN THE CAMPER WATER SYSTEM. THESE COULD BE HARMFUL IF SWALLOWED.

10. If your camper is equipped with water heater bypass valves, turn water heater bypass valves to BYPASS position. (See water heater bypass instructions and diagrams)
  11. Pour approximately three to five gallons of non-toxic RV approved water system antifreeze into the fresh water tank if equipped with a water heater bypass; if not equipped, use seven to ten gallons.
- CAUTION:** Antifreeze will stain plastic parts if left in contact. Use care when pouring.
12. Turn water pump on.
  13. Open hot water faucet farthest away from water tank. When antifreeze appears, let at least one cup run down drain to winterize P-trap. Repeat this at all other hot and cold water faucets, including the shower.
  14. Depress the flush pedal or hand operated lever on the toilet until the antifreeze solution flows continuously.

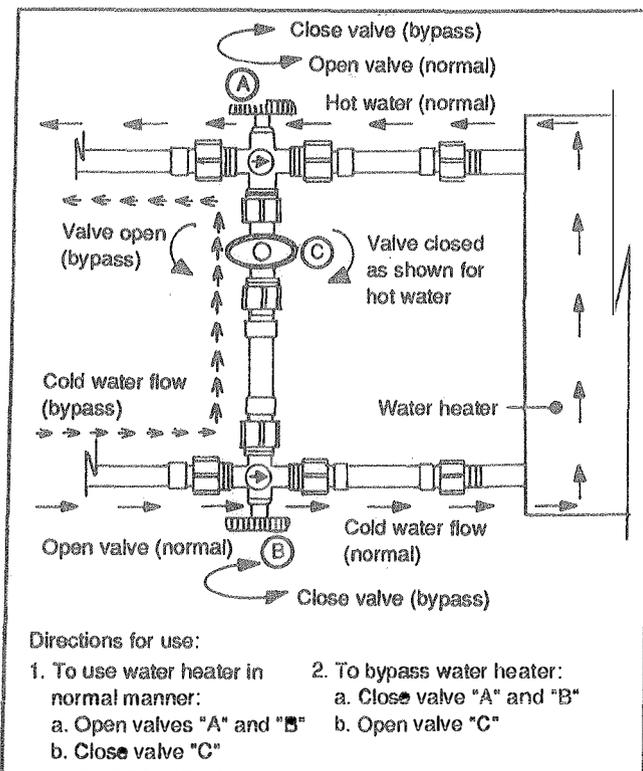
15. Install all protective caps:

- Water tank fill
- City water inlet cap
- Waste tank drain outlet cap

16. Remove snow accumulation as often as possible.

### Water Heater Bypass

The water heater bypass valves are used when winterizing the water system for storage. With the valves in the bypass position, antifreeze will not enter the water heater requiring less antifreeze to protect the rest of the water system.



Water Heater Bypass

**NOTE:** Be sure to drain the water heater by opening the drain valve at the bottom of the heater and open the pressure relief valve.

### Reactivating Camper After Storage

The following procedure checklist assumes that you stored the camper with care. If you didn't, and extensive freeze damage or other serious

deterioration may have occurred, please consult your authorized Lance Dealer Service Center for advice.

1. Thoroughly inspect the outside of the camper and open all doors and compartments. Check for animal or insect intrusion, water damage, or other deterioration.

2. Remove all appliance vent, ceiling vent and air conditioner coverings. Be sure all furnace, water heater, and refrigerator openings are clear and free of debris or insect nests, webs, etc.

3. Check charge level in battery. Refill and recharge as necessary. Be sure cable ends and terminals are clean and free of corrosion.

4. Open vents and windows for ventilation.

5. Be sure all 12-volt DC and 110-volt AC circuit breakers are off.

6. Check the operation of taillights, turn signals, backup lights, clearance lights, license plate light, emergency flashers.

7. If fresh water system has been winterized, drain antifreeze from fresh water tank.

8. Turn water pump on and open all faucets until flow of antifreeze stops.

9. Open water heater bypass valves if equipped.

10. Flush, and sanitize the fresh water system as outlined in the "Fresh Water System" section.

11. Install the water purifier cartridge (if equipped).

12. Operate all faucets and fixtures in the fresh water system. Check for leaks at all joints and fittings. Repair if necessary.

13. Inspect all pipes and fittings in the LP system. Check for leaks as outlined in the "LP Gas System" section.

14. Operate each LP gas appliance. Observe all burners and pilot flames for proper color and size. If there are any problems, refer to an authorized Lance Dealer Service Center.

15. Inspect and operate all 12-volt lights and accessories.

16. Install new 9-volt battery in smoke detector.
17. Check monitor panel operation (if equipped).
18. Open and operate vents and vent fans.
19. Inspect the 110-volt electrical system - power cord, converter, and outlets. If defects are found, refer service to an authorized Lance Dealer Service Center.
20. Prepare the AC generator (if equipped) for operation following instructions in the generator operating manual in your Owner's Information Package.
21. Operate 110-volt AC appliances and air conditioners.
22. Check the sealant around all roof and body seams and windows. Reseal if necessary. See "Sealant Renewal" section in the "MAINTENANCE" chapter.
23. Lubricate all exterior locks, hinges, and latches.
24. Wash and wax the exterior. Inspect the body for scratches or other damage. Touch up or repair as necessary.

Your camper should now be ready for a new traveling season. If you choose, your dealer can double check your preparation and correct any defects or make any necessary adjustments.

## FIFTH WHEEL TRAILER

This chapter contains specific information pertaining to the operation of Lance fifth wheel trailers. See other chapters in this manual for information on LP Gas Systems, Electrical and Water Systems, Appliances, etc.

### Your Fifth Wheel Trailer and Truck

#### Matching Trailer and Truck

Your Lance 5th-Wheel Trailer must be properly matched to your truck for maximum safety and compatibility. It is important that your truck's towing capabilities are adequate. Check your vehicle owner's manual or with the vehicle manufacturer for towing capabilities or restrictions.

#### Fifth Wheel Hitch

The 5th-wheel hitch mounts in the truck bed over the rear axle. No weight distribution, equalizing or sway control devices are necessary. Your trailer comes equipped with a king pin and pin box mounted to the chassis. The hitch unit is available from your Lance dealer. Be sure the hitch is installed by a competent installer and that the manufacturer's installation instructions are followed. All hitches should be fastened to the truck frame and not just to the truck bed. A coating of grease should be applied to all mating surfaces.

#### Fifth Wheel Pin Box Height Adjustment

The pin box on your 5th-wheel has four height settings. If it is necessary to make an adjustment in the height of the pin box, you must observe the following: (1) all eight bolts must be used as supplied. (2) all eight bolts must be on the same height level; **DO NOT DRILL ANY ADDITIONAL HOLES.** (3) all bolts must be tightened to a minimum of 120 ft. lbs. of torque.

#### Electrical Connection to Tow Vehicle

Your Lance 5th-Wheel Trailer comes equipped with a seven-way electrical connector. The female side of the connector will be installed on

your truck by your Lance dealer. With the wiring and connector hooked-up, your truck will supply 12-volt power to operate the trailer brakes, turn signals, brake lights, interior and exterior lights and other 12-volt components. See following chart for connector terminal function.

Terminal	Function
No.1	Ground
No.2	Brakes
No.3	Running lights
No.4	12-volt power
No.5	Left turn signal
No.6	Right turn signal
No.7	Back-up lights

With the seven-way connector hooked-up, the truck's alternator will charge the trailer battery as you drive. When you are parked with a seven-way connector hooked-up, the truck battery also provides power to operate 12-volt components on the trailer unless an isolator is installed. If the seven-way connector is disconnected, the trailer components are operated **ONLY** by trailer battery power.

#### 12-Volt DC Charging Line

Be certain that your dealer has run a "Charge Line" from the alternator on the tow vehicle to terminal number 4 on the trailer's 12-volt DC connector. This wire should be 8 gauge stranded insulated copper conductor, and should have a 40 amp circuit protector installed near the alternator connection. This charge line will keep the trailer battery charged as you travel.

#### Special Electrical Notes

Some import trucks have separate turn signal and stop light systems. Domestic trucks have single light systems. All Lance 5th-Wheels are wired for the single light system. Therefore, a brake and signal light adapter must be installed on the dual system import trucks to make the lights function properly. Bargman makes an inexpensive, easy to install adapter (No. 50-57-002), available from your dealer.

#### Brake System

The brakes on your 5th-Wheel Trailer are electric and powered by your truck battery and the

trailer battery. The brakes are activated by the brake control installed in your truck. The brakes will operate automatically when the tow vehicle brakes are applied. For normal driving conditions we recommend automatic brake operation.

A manual override is possible by using the control lever on the brake controller. In icy or wet conditions the manual brake control may be applied first, then the truck brakes. Also, wind gusts or dips may cause your unit to sway. Touching the manual brake control in these cases can stabilize the unit.

**CAUTION:** The seven-way connector must be properly hooked-up and the trailer properly grounded to your truck before the brake system will operate. Check your trailer brakes each time you hook-up the unit-BEFORE you get out on the road.

We recommend that you have the brake system periodically adjusted and safety checked. Take the unit to your Lance dealer or an authorized brake service center.

### Break-Away Switch

The break-away switch is a safety device that will activate the trailer brakes if the trailer accidentally becomes separated from the tow vehicle. For proper operation the break-away cord must be securely attached to the tow vehicle, and the trailer battery **MUST** be operational in order to power the brakes. The break-away switch is located on the hitch of your 5th-Wheel Trailer.

**CAUTION:** NEVER pull the pin on the break-away switch manually to engage the brakes. The brakes are electric and will stay on, which can cause damage to the brake system.

### Axles/Springs

The axles used on your Lance 5th-Wheel are suspended on heavy duty, leaf-type springs. The springs absorb sharp jolts and maintain tire contact with the road.

### Wheels and Tires

**WARNING: CHECK WHEEL LUGS EVERY 100**

### MILES FOR THE FIRST 500 MILES - OWNER'S RESPONSIBILITY.

It is important to check that wheel lugs are tight before each trip and intermittently during long trips.

If a wheel gets bent or damaged, replace it with a similar wheel to prevent tire damage or wear.

Inspect your trailer tires before each trip. Tires excessively worn in the center of the tread indicate over-inflation; tires worn on both edges of the tread indicate under-inflation. Always check air pressure when the tires are cold and adjust to recommended level listed on the tire's sidewall. Be sure to replace worn tires with ones of equal ratings to original ones.

### Tire Changes

It is a good idea to carry a spare trailer tire and wheel either in your truck bed or mounted to the trailer. And be sure to carry a jack (not supplied with trailer) with you in case a tire change is necessary.

Raise the trailer only on level ground. Block the front and back of the tire on the opposite side before using the jack. Use an automotive type axle jack placed on the axle or frame near the wheel. **NEVER** jack against the floorboard of the trailer. Be sure lug nuts are firmly tightened (95 lb. torque) after tire change.

### Hitching Up

1. Activate the hitch locking device to open jaws.
2. Lower truck tailgate.
3. Raise front of trailer to match hitch height.
4. Back truck under trailer to engage king pin in hitch latchplate. On some trucks it may be necessary to raise tailgate before completing coupling.
5. On some hitches, the latchplate will engage the king pin automatically, but the locking handle must be in the locked position. Safety pin the locking handle.
6. Raise the front trailer jacks.
7. Attach the 12-volt electrical cord to the truck.

8. Attach the safety cable for the break-away device securely to the truck hitch. Leave enough slack in the cable to allow for turns.
9. Check to make sure trailer brakes are working.
10. Test operation of all exterior lights.

### Jacks/Leveling

Before unhitching, be sure to block trailer wheels to prevent trailer from rolling. Use the front jacks to level unit. Use the rear jacks for stabilizing the trailer. It is important for trailer to be level for proper refrigerator operation and for comfort inside the unit.

### Loading Trailer

Never overload your trailer beyond its weight rating. The gross vehicle weight rating (GVWR) and the gross axle weight rating (GAWR) are given on the certification label on the right side of the trailer. The GVWR is the total weight of the trailer, fluids and cargo. The GAWR is the maximum weight a specific axle is designed to carry. Weigh your fully loaded trailer. If your unit exceeds its weight rating or axle rating, adjust the load as required.

When loading, distribute the load evenly front to back and side to side. Load the heavy items low to the floor and near the axle of the trailer. Secure and brace items so they won't move during travel. Avoid loading heavy items at the rear of the trailer. **DO NOT** store gasoline or other flammable liquids in the trailer. If your unit is equipped with the optional roof rack and ladder, use it for storing only light bulky items such as lawn chairs.

The rear bumper of the trailer is designed for maximum capacity of 65 lbs. for holding a spare tire. It is not suitable for heavier loads or for towing. Exceeding this weight limit could adversely affect handling characteristics of the trailer.

### Traveling

#### Towing

Speed, cargo weight distribution, road and wind conditions are the principal factors affecting

trailer towing stability. Lowering of vehicle speed increases stability and reduces stopping distances. Slow down for downgrades and turns. Allow more distance for stopping, avoid high speeds and quick lane changes, signal turns and lane changes well in advance, and take turns and corners wider than normal. Reduce speed in heavy wind conditions.

If the trailer begins to sway strongly from side to side, make as little steering corrections as possible. Use the hand lever on the brake controller to apply the trailer brakes to straighten the trailer out. Do not try to stop swaying by making quick steering changes or by forcefully applying the tow vehicle brakes.

Small, but sudden, course changes can occur when you are passed by a large truck or bus. As the truck passes, the tow vehicle will tend to turn away from the truck, and turn back as the truck passes. Avoid making quick steering corrections that can inadvertently magnify these course changes and start the trailer swaying.

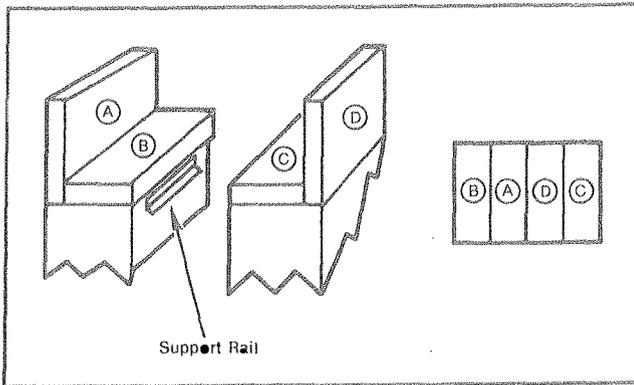
Always apply brakes intermittently, particularly on long downgrades to prevent brake fading. Use engine compression to brake as much as possible. Avoid holding brake pedal down for extended periods of time as this can cause overheating of the electric trailer brakes.

When passing, allow plenty of time and distance due to slow acceleration speeds. Once past the other vehicle, allow for clearance of the trailer before returning to the original lane.

When backing-up, be aware that you have poor visibility to the rear. Someone standing outside at the rear will assure safe backing. Also, with some hitch installations, you will have reduced turning radius when backing. Have someone watch as you back-up and turn your vehicle so you can learn how far you can go before doing damage to truck and trailer.

**CAUTION:** Be sure of adequate clearance with overpasses, bridges, tunnels and gas stations. Do not risk severe damage to your RV!

## Interior

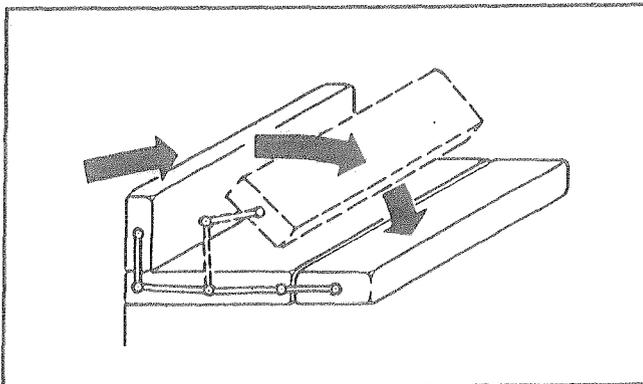


Dinette Conversion

### Dinette Conversion

The dinette area is easily converted into a bed.

1. Fold table leg under table.
2. Lift-up on front of table to unlatch it from wall.
3. Swing table down to rest on seat box support rails.
4. Arrange seat and back cushions to form bed.



Pull-Over Sofa Conversion

### Pull-Over Sofa Conversion

Simply pull the back cushion over the bottom cushion to form a bed.

## Swivel Rocking Chair

The swivel rocking chair is to be used only when the trailer is stationary. DO NOT sit in this chair when trailer is moving.

## General Maintenance

### Wheel Bearings

The wheel bearings should be cleaned, inspected, repacked, and adjusted at intervals of 10,000 miles or one year, whichever comes first.

### Brakes

Inspect the brakes at the same time the wheel bearings are serviced or at any time a noticeable decrease in braking capability is noticed. Since the brakes are electric, check all the electrical wiring and connections.

### Generator

When changing oil, the old oil is drained from inside the generator compartment into a shallow pan.

## LIMITED WARRANTY

Lance Camper Manufacturing Corporation (Lance Campers) warrants, to the original purchaser, this recreational vehicle to be free of defects in material and workmanship under normal use and with reasonable care and maintenance for one (1) year from the date of purchase.

The scope of this warranty is expressly limited to only items actually constructed by Lance Campers. Lance Campers therefore makes no warranty with respect to component parts constructed or assembled by other manufacturers, including, but not limited to, L.P.G. and electrical appliances, heaters, refrigerators, plumbing fixtures, light fixtures, lights, entrance doors, and windows. Such component parts may be warranted by their respective manufacturers and copies of such warranties are included with the vehicle.

This warranty shall not apply to damage caused by abuse, misuse, neglect, alteration, accident, or normal wear and tear. Nor does this warranty apply to parts made out of cloth, leather, wood, paint or chrome which have been affected by airborne fallout, such as chemicals and tree sap, or by road salt, hail, windstorm or other environmental factors.

No payment or other compensation will be made for incidental expenses, including, but not limited to, towing, telephone, transportation, lodging, travel, gasoline, loss of pay or indirect or consequential damages, including, but not limited to, loss of use of the vehicle, inconvenience, damage or injury to person or property, or loss of revenue, which might be paid, incurred or sustained by reason of a manufacturer's defect covered by this warranty.

Lance Campers does not know or have reason to know of any particular purpose for which purchaser requires this recreational vehicle and does not represent that it shall be fit for any particular purpose. Lance Campers is not responsible to any purchaser of its recreational vehicles for any undertaking, representation or warranty made by dealers during the course of selling this recreational vehicle, beyond those herein expressed.

Within the period of this warranty, Lance Campers is obligated to repair or replace any part covered by this warranty proving defective in material or workmanship. In the event of such an occurrence, the purchaser should contact the selling dealer for a service appointment. The cost of transporting the vehicle to the service center shall be incurred by and paid for by the purchaser.

The purchaser must notify Lance Campers (or servicing dealer) of any defect promptly upon discovery. Within sixty (60) business days after receiving notice from the purchaser, Lance Manufacturing (or servicing dealer) will repair or replace, at its option, the defective part.

This is the only warranty given with the purchase of this recreational vehicle. Any warranties implied by law are limited to the duration of the warranty outlined above. Any other warranty, express or implied, not provided for in this limited warranty is waived by the purchaser. Lance Campers neither assumes nor authorizes any other person to assume for it any other liability in connection with this recreational vehicle.

This warranty is intended to comply with the requirements of both State and Federal laws. Any part of the warranty in conflict with any such law shall be ineffective to the extent of any such conflict. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

## Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Lance Camper Manufacturing Corporation.

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

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

## Altering or Modifying Your Camper or Fifth Wheel Trailer

**WARNING:** If you plan on making any alterations or modifications to your camper or fifth wheel trailer, check with your dealer or call the factory before getting started. Even when doing something as simple as hanging a picture, a drill, screw or nail could penetrate an unseen gas line, or electrical circuit which would be hazardous. Also alterations or modifications to your camper or fifth wheel trailer may void the warranty.

# IDENTIFICATION INFORMATION

For identification purposes it is recommended that you write the camper serial number inside. Pick your own spot - behind a drawer or inside a cabinet. Protect yourself from possible theft and be able to identify your property. You should keep a copy of this information at home. If unit is ever stolen, the police can use the appliance serial number to identify the unit. It is also handy to have when service is needed.

Take a few minutes to fill in this information. It will be a helpful reference for you.

Your Name \_\_\_\_\_

Camper Model \_\_\_\_\_

Serial No. \_\_\_\_\_

Date Purchased \_\_\_\_\_

Dealer Name \_\_\_\_\_

Adress \_\_\_\_\_  
\_\_\_\_\_

## Insurance Policy

Agent Name \_\_\_\_\_

Policy No. \_\_\_\_\_

Agent's Telephone No. \_\_\_\_\_

## Range/Oven

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Refrigerator

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Furnace

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Water Heater

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Air Conditioner

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Microwave Oven

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Stereo

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Generator

Manufacturer \_\_\_\_\_

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

## Miscellaneous

Key No. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# MAINTENANCE CHART

Service To Be Performed For details, see respective chapter and section	Start of Each Trip	Before Use At Setup, Or Weekly	Monthly
Inspect wiring, connector, plug and receptacle	●		
Check exterior lighting	●		
Inspect LPG system components		●	
Inspect LPG leak detector		●	
Inspect generator exhaust (if equipped)		●	
Check smoke detector operation		●	
Check fire extinguisher			●
Inspect/clean battery, cables, terminals			●
Check battery charge (in storage)			●
Check battery electrolyte (in use)			●
Test GFI			●
Wash exterior			●
Inspect water pump filter	First Time		Thereafter
Inspect roof sealants		●	
Inspect door and window sealants		●	
Inspect camper jacks	●		
Check that camper anchors are secure	●		

# MAINTENANCE CHART

<p style="text-align: center;">Service To Be Performed For details, see respective chapter and section</p>	<p style="text-align: center;">Annually ● or After Long Storage</p>
Inspect all hot, cold, drain plumbing	●
Sanitize fresh water tank	●
Complete LPG pressure check and system check	!
Check water purifier cartridge (if equipped)	●
Clean interior (as necessary)	●
Wax exterior	●
Clean and lube overhead vents	●
Lube locks, hinges, hardware	●
Replace smoke detector battery	●

Items marked with ! require special equipment and/or qualified personnel.