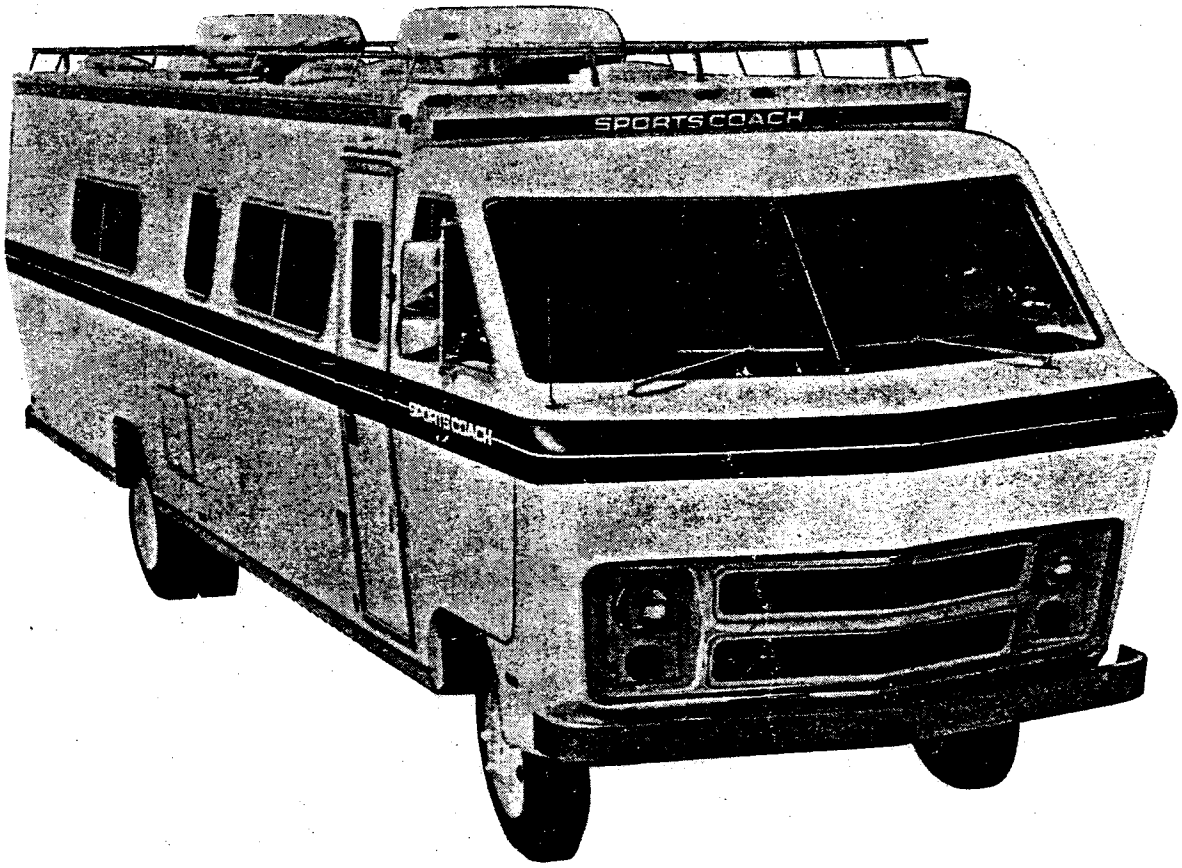
1976

SPORTSCOACH CORPORATION OF AMERICA SCA

This manual compiled specifically for motor home

serial no._____

OWNER'S MANUAL



Description, Operation, Servicing, and Maintenance Of The Sportscoach Motor Home

Report No. SCA-71-001

Fifth Edition

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SPORTSCOACH CORPORATION OF AMERICA SCA
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After taking delivery of your Sportscoach you will be relatively unfamiliar with its contents. Try out the various components before you embark on your first journey. Not only will you become familiar with the coach but you will be able to verify the proper operation of the various components. If any malfunctions are discovered they can be brought to the attention of your dealer.

Here are some important areas for pre-operational checks.

1. Fresh Water System
    a. Pump operation.
    b. Check for leaks.
2. LP-Gas System
    a. Operate gas appliances.
3. Check interior and exterior lighting.
4. Operate air conditioners.
5. Operate refrigerator on electricity and gas.
6. Check cabinetry for defects.
7. Operate driver and passenger seats.
8. Operate windows.
9. Operate door locks.
10. Check engine operation.
11. Check brake operation.

SECTION II

EXTERIOR FEATURES

A. DESCRIPTIONS

This section identifies exterior coach features with which the operator should become familiar. Figure 2-1 is a typical front view and Figure 2-2 a typical rear view.

The various compartments and access doors of the coach lock in place securely with keys provided with the coach. Check that all doors are closed and locked before driving.

Access into the trunk is obtained by first releasing retaining pins on ladder. (See Figure 2-3). Next remove safety clip on spare tire mount (if fitted) and pull release ring. (See Figure 2-4). Lower spare tire and pull out on ladder. The trunk may now be opened. Most Sportscoach Models have a convenient storage compartment for general storage and tire jack and tools. (See Figure 2-5). Refer to Model Specifications, Section XIV for location of these items.

Access into hood is gained by releasing retaining latch and lifting hood. A metal rod inside will hold hood open. (See Figure 2-6). The following items are located under the hood.

1. Coolant reservoir and radiator fill.
2. Oil dip stick.
3. Oil fill.
4. Windshield washer reservoir and motors.
5. Chassis identification plate.

B. MAINTENANCE

a. <u>Exterior Surfaces</u>

1. Wash with cold or lukewarm water using mild detergent. Flush cleaning agent from surface quickly.
2. Apply a liquid spray wax with garden hose for protection.

NOTES

1. Avoid spraying water directly into louvers or vents.

2. Due to textured surface of exterior body panels, use of paste wax is not recommended.

3. Chrome polish may be used on chrome parts.

4. Aluminum trim should not be cleaned with abrasive or caustic cleaners. White sidewall cleaner is recommended.

b. Periodic Inspections for Possible Damage

1. Check exterior.

2. Check roof vents.

3. Check sealant around vents and air conditioner(s).
" " " Roof, windows and all frame seals

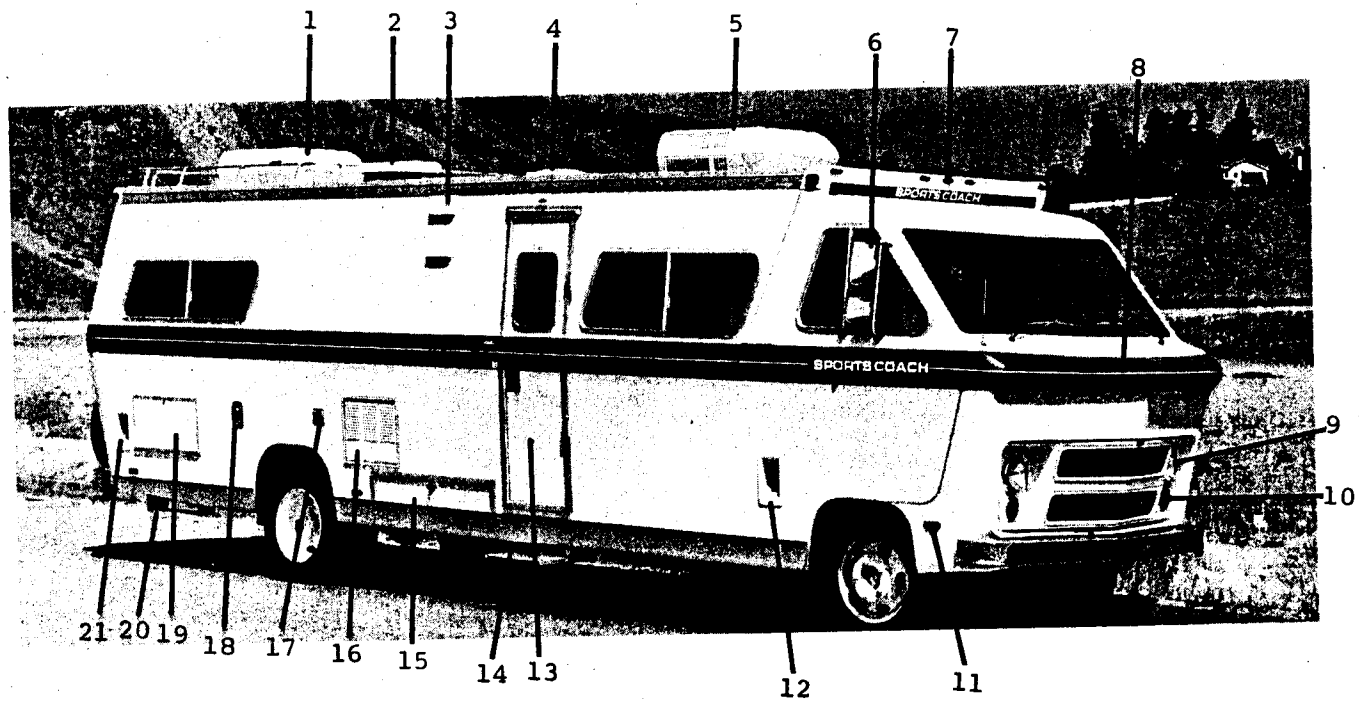
4. Check waste holding tanks and plumbing lines.

5. Check LP-Gas tank and assembly.

6. Check exhaust system.

7. Check window and door operation, lubricate and clean as required.

C.



1. Air Conditioner
2. Refrigerator Vent
3. Oven Vents
4. Roof Vent
5. Air Conditioner
6. Mirrors
7. Marker Light
8. Hood
9. Headlight
10. Turn Signal
11. Marker Light
12. Main Fuel Tank Fill
13. Entry Door
14. Entry Step
15. Storage Compartment
16. Refrigerator Access
17. 120 Volt Receptacles
18. Forced Air Furnace Vent
19. Storage Compartment
20. LP-Gas Tank
21. Auxiliary Fuel Tank Fill

Figure 2-1 Typical Front Exterior View

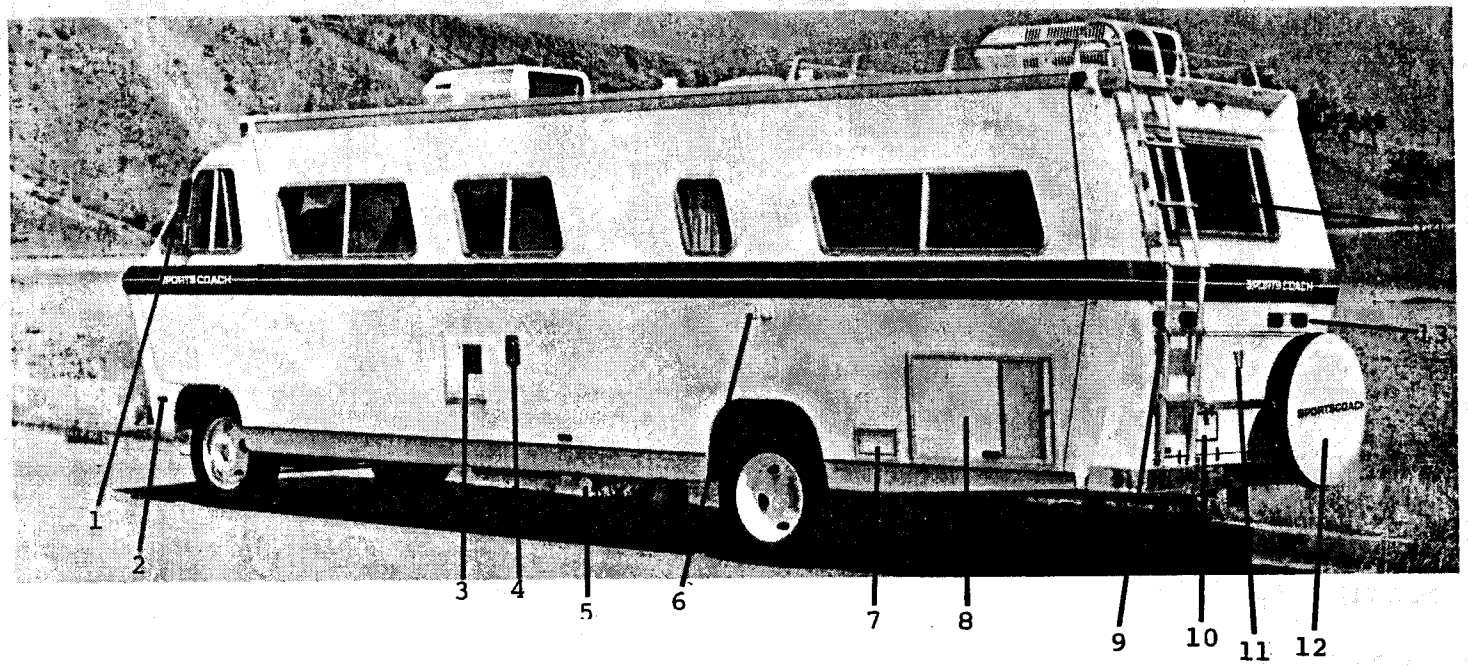


Figure 2-2. Typical Rear Exterior View

1. Mirrors
2. Marker Light
3. Hot Water Heater Access
4. Forced Air Furnace Vent
5. Holding Tank Drain
6. Fresh Water Connections
7. Power Cord Compartment
8. Power Plant Compartment
9. Ladder
10. License Plate Holder
11. Trunk
12. Spare Tire
13. Stop, Turn and Running Lights
14. Emergency Escape Window

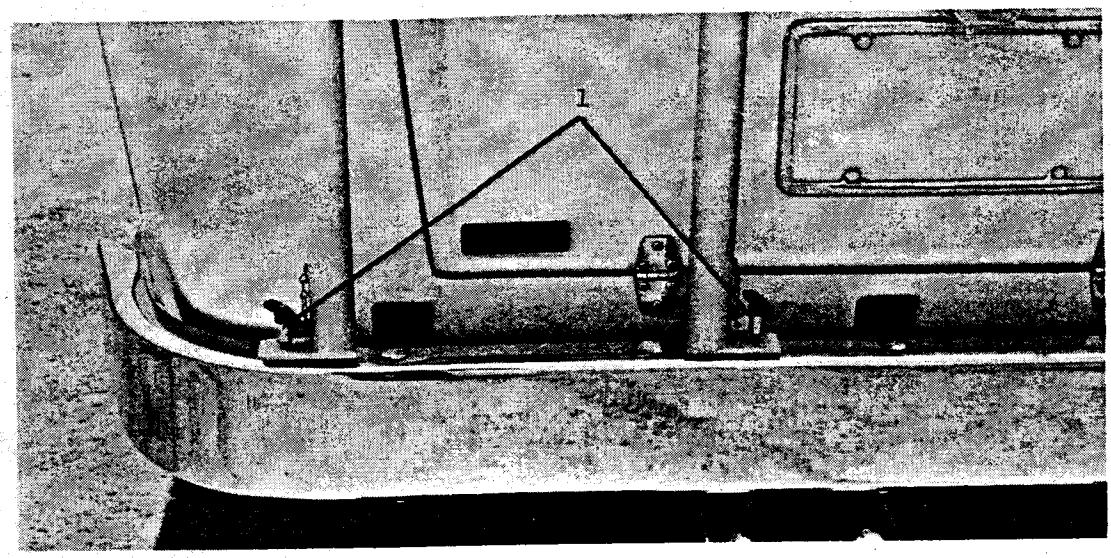


Figure 2-3. Ladder Detail

1. Retaining Pins

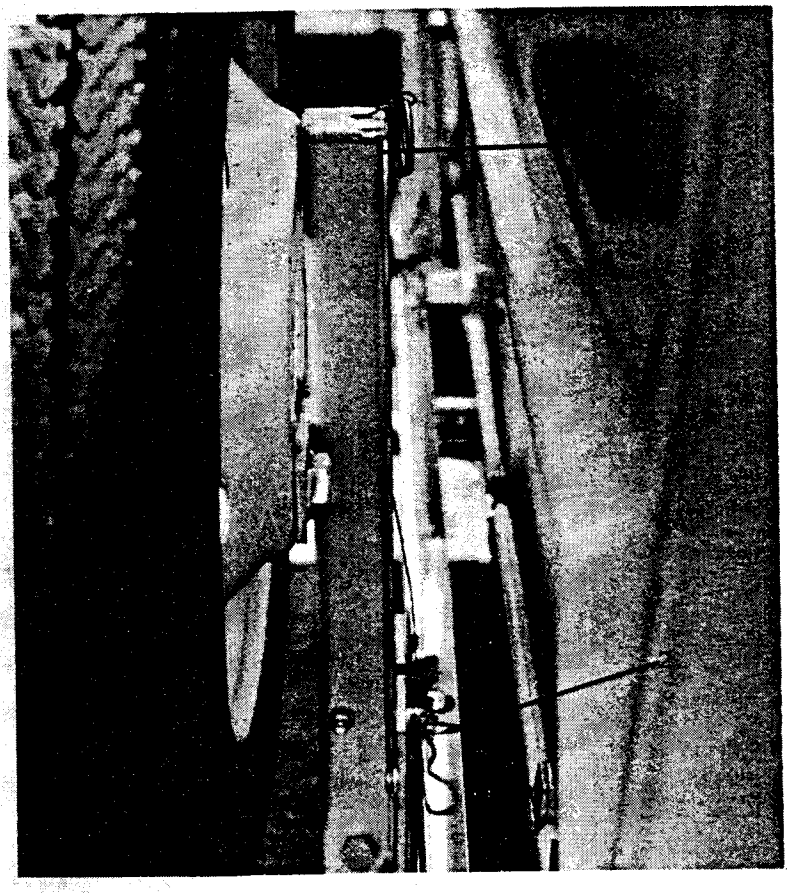


Figure 2-4. Spare Tire Mount

1. Release Ring

2. Safety Clip

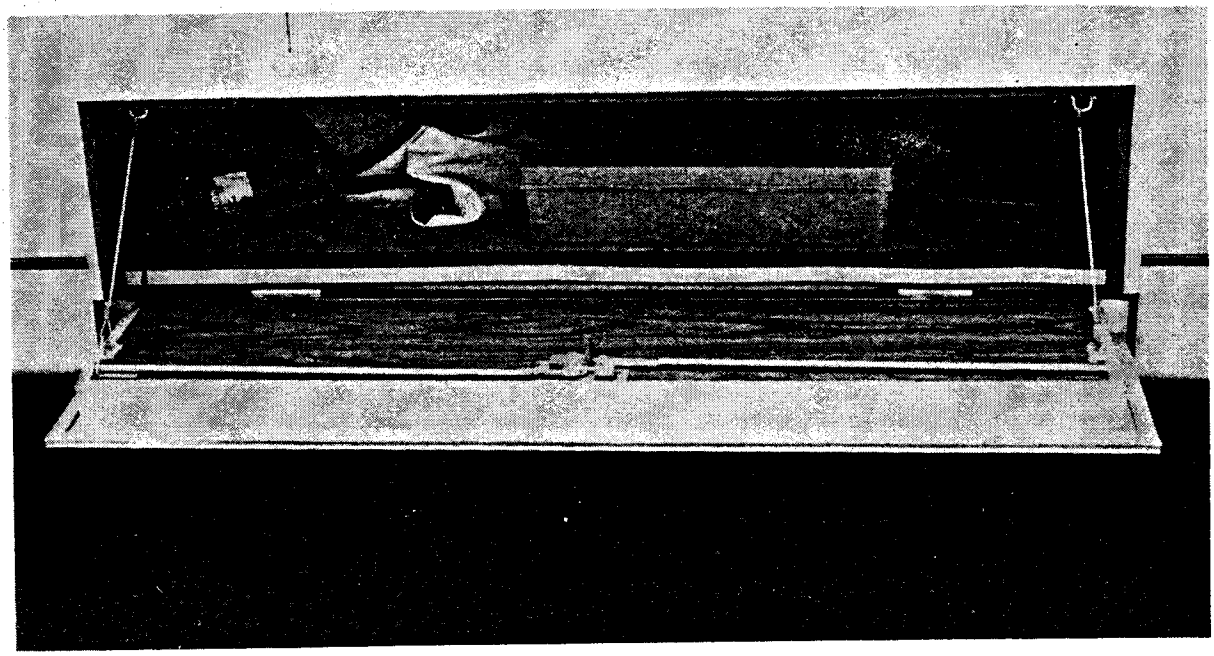


Figure 2-5. Storage Compartment for Jack and Tools

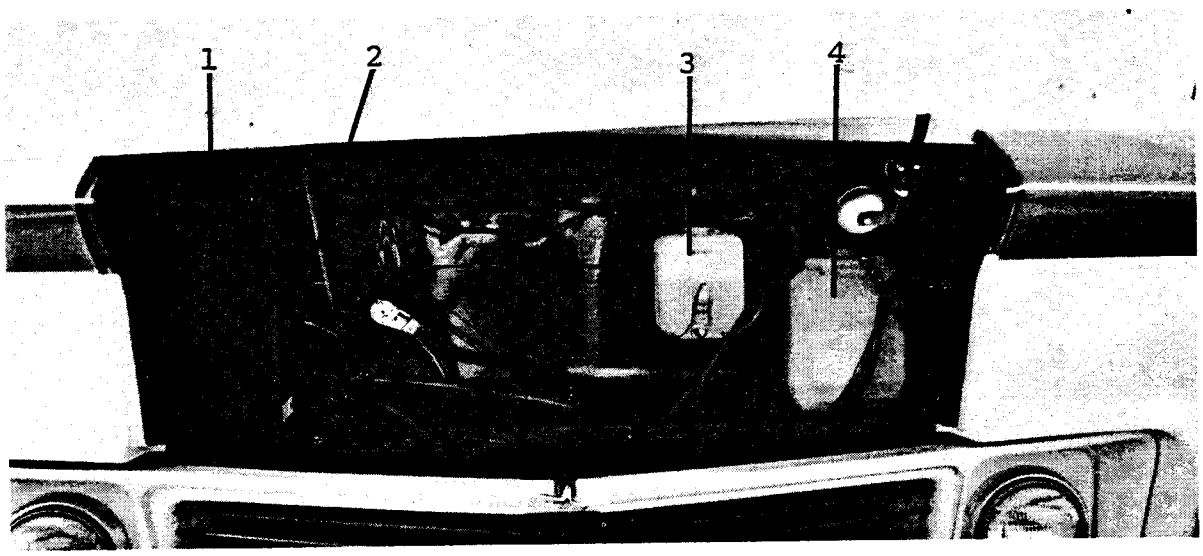


Figure 2-6. Under Hood Detail

1. Front Heater - Air Conditioner
2. Hood Hold-up Rod
3. Windshield Washer Reservoir
4. Coolant Recovery Bottle

SECTION III

INTERIOR FEATURES

BATHROOM

A single handle controls the water for shower or tub (if installed). Pull out on control to increase water flow and turn left for hot or right for cold water.

The shower head is height adjustable and removable for hand held use. A special button on the head permits shut-off of water to conserve water while soaping down. (See figure 3-1.)

The shower is also equipped with an overhead light.

The bathroom ceiling vent incorporates a light and exhaust fan. Open vent by turning crank handle. Fan and light are operated by switches on the vent assembly.

Cabinet space is located behind mirror.

Toilet operation is described in the Waste Disposal System, Section IX.

Rear Bath Units

Circuit Breaker Panels are located on the rear wall of the Wardrobe or behind a door on the rear wall of the bedroom.

A sliding partition offers privacy in the bathroom area.

BEDROOM

The bedroom is lit by an overhead light and four directional lights at the head and foot of each bunk.

On most models the cabinets above each bunk fold down to make beds. Release slide retaining bars at each side of upper bunk and lower to horizontal position. (See figure 3-2.) Attach bunk straps.

The thermostat for the forced air furnace and the blower control switch for the auxiliary heater are located on the forward bedroom wall. (See figure 3-3.)

REAR AUXILIARY HEATER

This heater provides heating for the rear of the coach only. The unit utilized the engine coolant system as a source of heat. Therefore, the engine must be operating for the heater

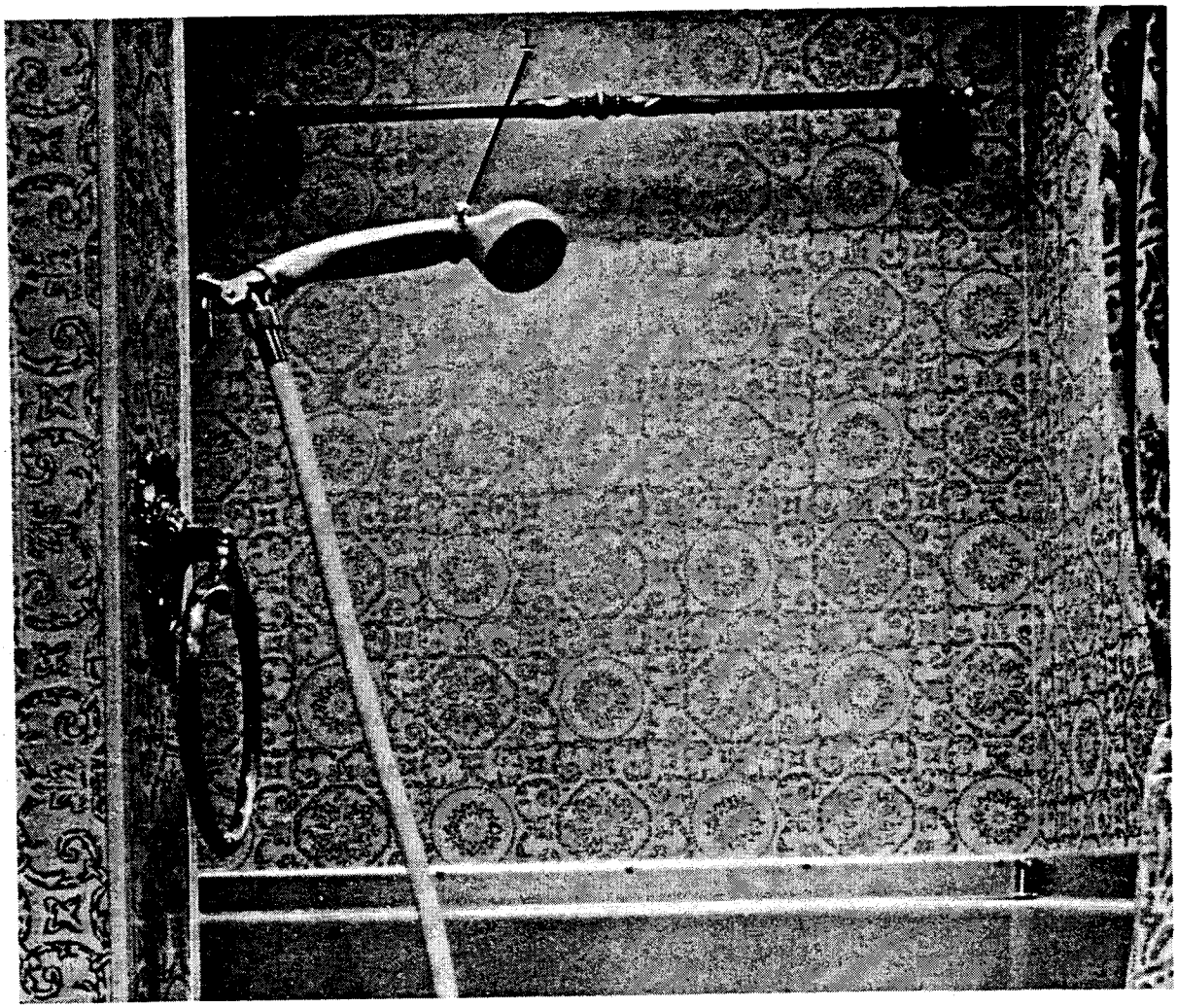


Figure 3-1. Shower Head

1. Water Control Button

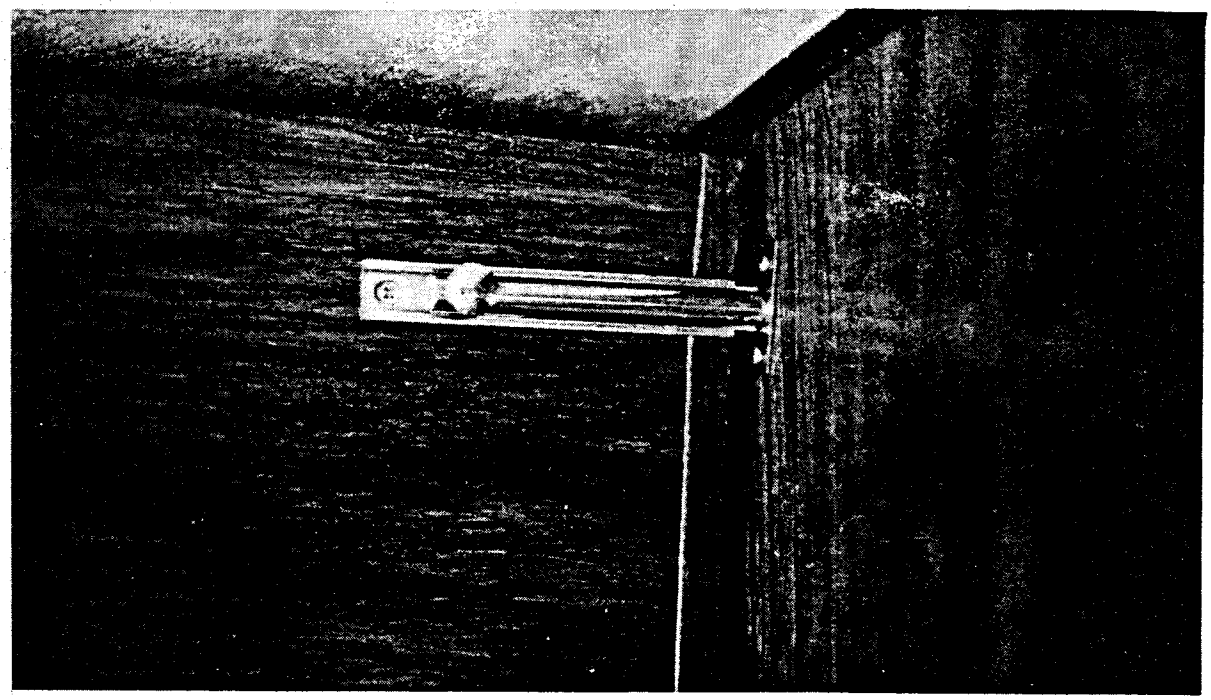


Figure 3-2. Slide Retaining Bar

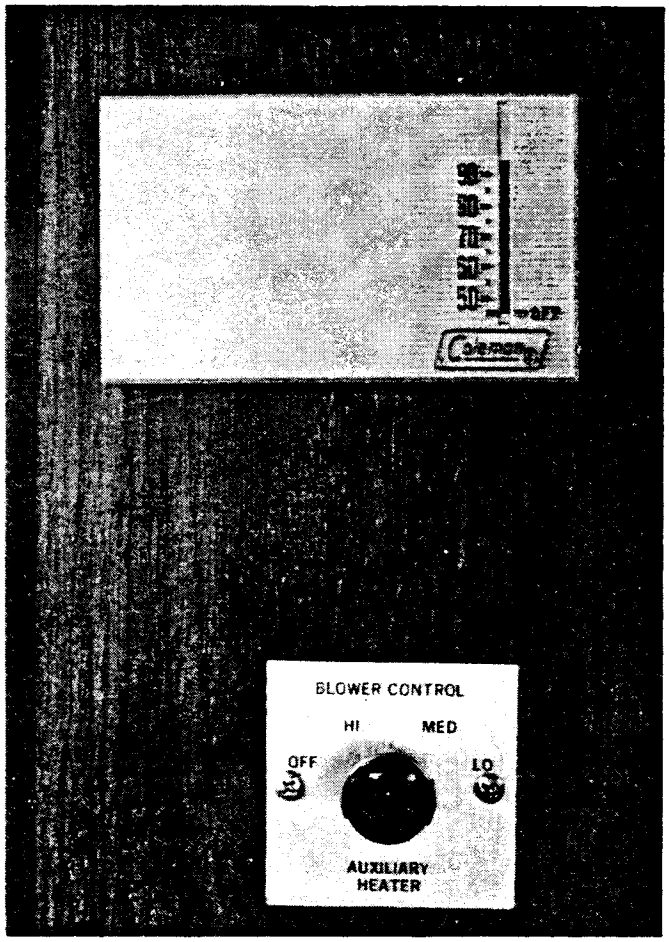


Figure 3-3. Furnace Thermostat and Auxiliary Heater Blower Control

to operate. However, the unit will continue to produce heat for awhile after the engine is shut down.

A three-speed blower switch mounted on the bedroom wall controls volume of heat. The coach ignition switch must be in ON or ACCESSORY position to operate blower.

KITCHEN

The kitchen is designed for usefulness and beauty. A roof vent with built-in light is installed in the ceiling. The oven-range and refrigerator are covered in the LP-Gas System, Section VII.

OPTIONAL INTERIOR EQUIPMENT

Microwave Oven

The following description and instructions are provided as a supplement to the information furnished by the manufacturer. Due to possible changes in design or equipment installed, material supplied by the manufacturer takes precedence should any discrepancy occur. More detailed and specific information will be found in that material.

WARNINGS

1. Do not operate oven unless door securely closed. Harmful microwave energy may escape.
2. Do not operate oven if metal mesh door gasket is damaged.
3. Do not operate oven if any visible damage is evident.
4. Do not tamper with safety features which prevent oven operation with door open.
5. Have oven serviced only at an authorized dealer.

Operation

1. Place food in oven. Close door.
2. Turn ON-OFF swith ON and select microwave or infrared browner.
3. Set time to desired setting.
4. When bell rings, turn oven OFF. Open door and remove food.

Microwave Oven (cont.)

Maintenance

1. Clean interior walls using mild detergent and water.

2. Rinse and dry surfaces with soft cloth.

3. Remove glass shelf and wash in warm soapy water.

4. Refer to instructions supplied with unit for additional information.

NOTE

Use microwave oven cleaners with care. Place a piece of cardboard between infrared element and microwave stirrer.

Food Center

The Food Center, located just behind the sink, is a helpful addition to your kitchen. Consult instructions with unit for operation and maintenance.

Vacuum Cleaner

The vacuum cleaner operates only off the power plant. The vacuum is located in the lower cabinet next to the entrance door on 29' and 31' models.

Operation

Insert vacuum hose into receptacle and the unit automatically starts. The vacuum shuts off when the hose is removed.

Maintenance

Periodically remove top cover of vacuum and check contents of filter bag. Replace with a new bag when needed. Refer to instructions supplied with unit for additional information.

Interior Maintenance

WARNINGS

1. Do not use flammable cleaning solvents, any petroleum base solvent or alcohol to clean interior surfaces.

2. Avoid use of abrasive cleaners.

Cabinets

Clean cabinets with mild detergent and warm water with a small amount of bleach. Rinse with water and wipe dry. Protect surface with household spray wax.

Carpet

Vacuum frequently.

Clean carpet as any 100% nylon carpeting.

Ceiling and Walls

Clean with mild detergent and warm water with a small amount of bleach. Rinse with water and wipe dry.

Drapes

Drapes must be dry cleaned.

Protect drapes during coach storage by pulling down Mylar Shades.

Shower

Clean with soap or detergent and water.

Do not use scouring powder or any abrasive cleaner.

Sink

Clean with soap or detergent and warm water. Remove stubborn spots with scouring power making sure to scrub in the direction of polish lines.

Toilet

Clean with soap or mild detergent and water. Do not use scouring powder or any abrasive cleaner.

Upholstery

Clean frequently with whisk broom or vacuum. For soiled fabric, use good quality upholstery cleaner or shampoo. The zippered fabric covers may be removed and dry cleaned.

Work Surfaces

Clean counter top and table top with soap or mild detergent and water. Protect finish with household spray wax. Do not use these surfaces for slicing or cutting.

SECTION IV

CONTROLS AND INSTRUMENTATION

DRIVER COMPARTMENT

The driver compartment has been designed for beauty and practicality. Within easy access of the driver are automotive controls and instruments. Figure 4-1 shows the driver compartment and locates important items.

1. Transmission Selector Lever (2): Refer to Getting Underway, Section X for instructions on using transmission.

2. Fuel Tank Selector Switch (3): This switch allows operating on Main or Auxiliary Fuel Tank (if installed).

3. Ignition Switch (5): The four positions of this switch are ACCESSORY, OFF, ON and START. ACCESSORY position allows operation of electrical accessories with engine off. START position engages the starter motor. ON position allows full operation of automotive electrical system and activates instrumentation.

4. Engine Compartment Cover (6): This cover may be removed to gain access to engine. Transmission fluid dip stick is under cover.

5. Seats: Both driver and passenger seats adjust forward and back to obtain a comfortable sitting position. Each seat also swivels and the arm rests lift up and out of the way for easy exit. The passenger seat will recline.

6. Cruise Control (See Figure 4-2): This control mounted on the turn signal lever will maintain coach speed without constant pressure on the accelerator. Operation of this component is as follows:

    1. Bring coach to desired road speed.

    2. Place control switch (2) at ON.

    3. Press button (1) to engage system.

    4. Disengage system.

        a. Place switch (2) at OFF or

        b. Depress brake pedal or

        c. Depress gas pedal

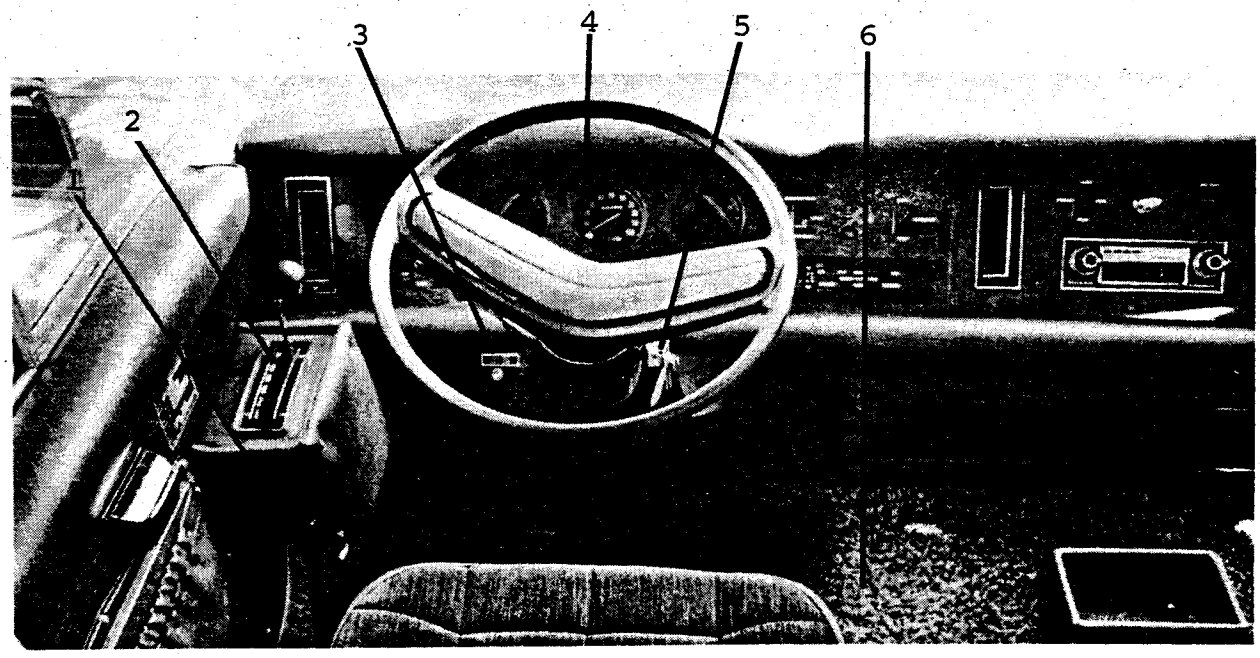


Figure 4-1. Driver Compartment

1. Emergency Brake
2. Transmission Selector Lever
3. Fuel Tank Selector Switch
4. Instrument Panel
5. Ignition Switch
6. Engine Compartment Cover

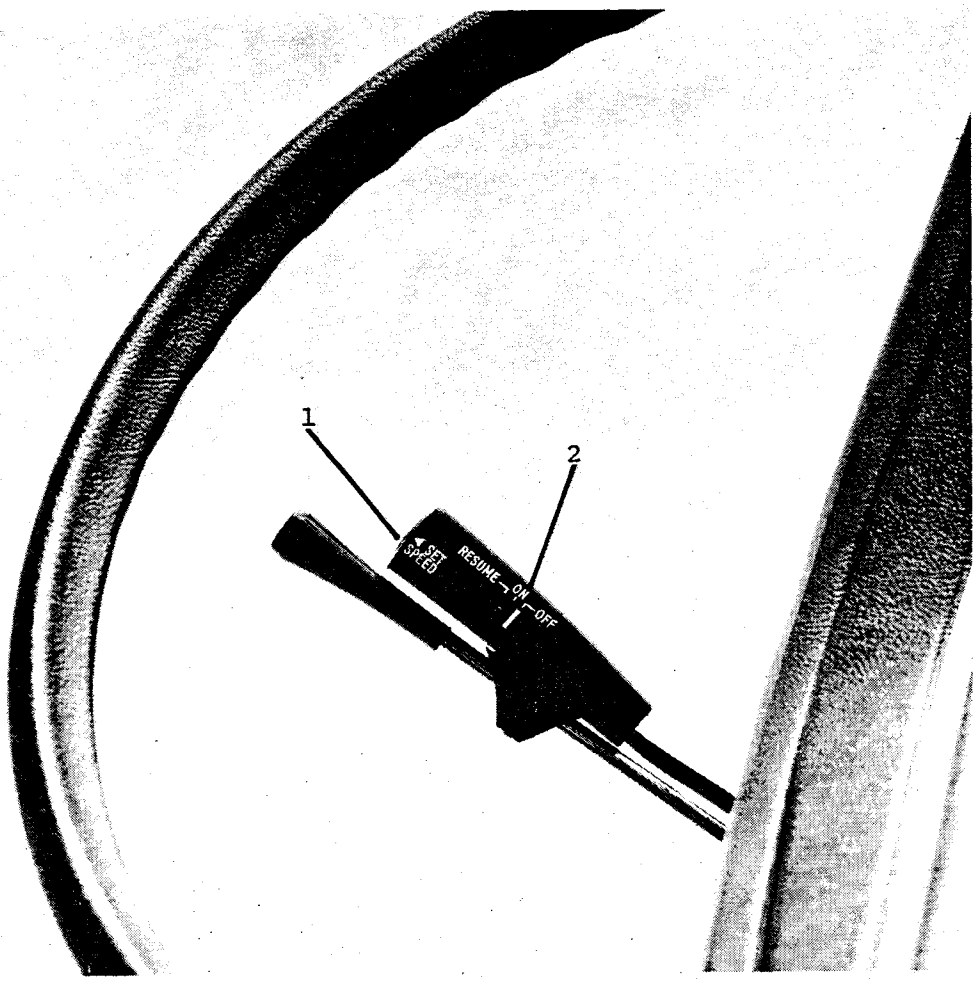


Figure 4-2.
Cruise Control

1. Set Button
2. Control Switch

DRIVER COMPARTMENT (cont.)

NOTE

Release gas pedal and system will engage at previous setting.

5. Place switch (2) at RES. (Resume) to engage system at previous setting.

INSTRUMENT PANEL

The instrument panel, shown in Figure 4-3 incorporates instrumentation on automotive operation and controls for lights and windshield wipers. Operation of these controls and interpretation of instruments is self explanatory.

CAUTION

Do not operate coach with temperature extremely high or with oil pressure extremely low.

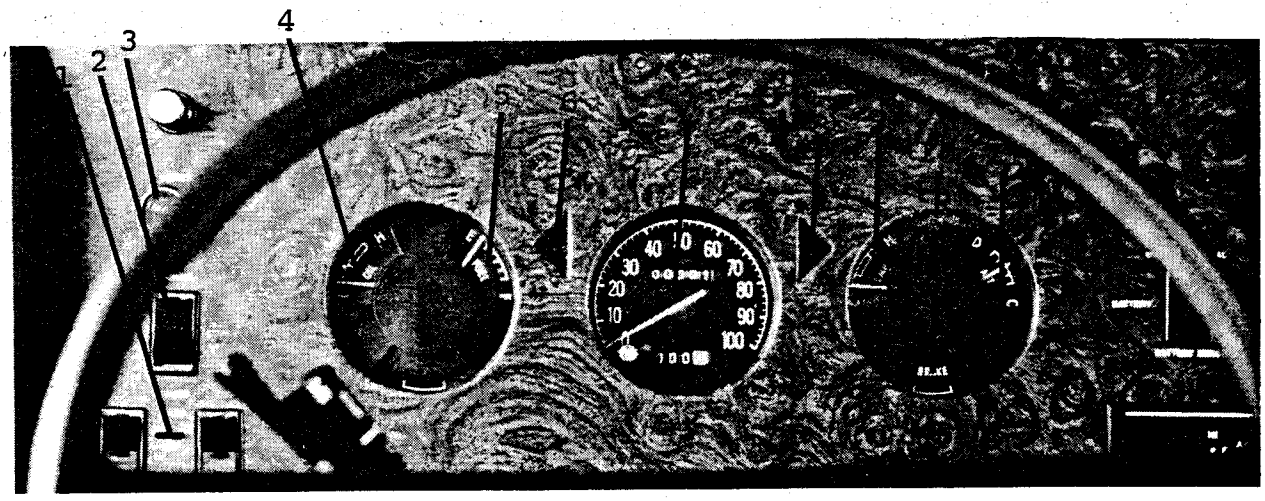


Figure 4-3. Instrument Panel

1. Left and Right Windshield Wiper Controls
2. Windshield Washer Control
3. Headlights Switch
4. Oil Pressure Gauge
5. Fuel Level Gauge
6. Left Turn Indicator
7. Speedometer and Odometer
8. Right Turn Indicator
9. Engine Water Temperature
10. Brake Warning Light
11. Amp Gauge

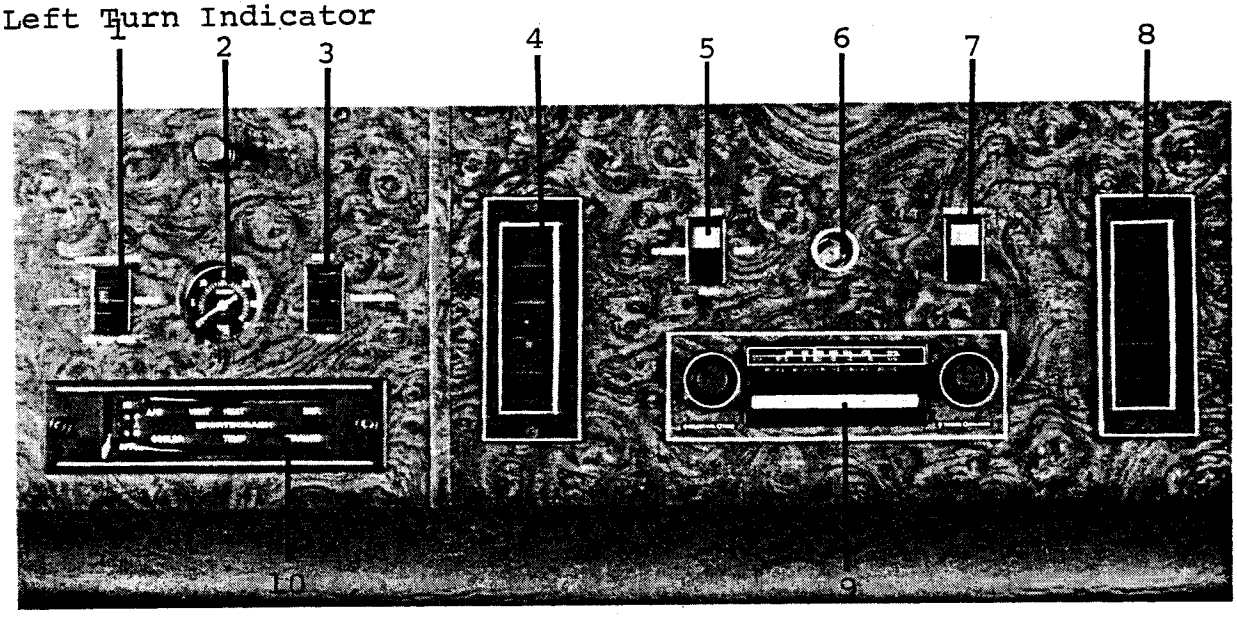


Figure 4-4. Dash Panel

1. Dual Battery Switch
2. Vacuum Gauge
3. Power Plant Start/Stop Switch
4. A/C Vent
5. Speaker Control
6. Cigarette Lighter
7. Map Light
8. A/C Vent
9. Stereo Radio
10. A/C, Heating and Defrosting Controls

DASH PANEL

The dash area, shown in Figure 4-4 incorporates numerous important controls.

1. Dual Battery Switch (1): This switch controls a relay that connects the two 12 volt battery systems. (See Section V). When the switch is in the center position the two battery systems are completely separated. In the battery dual position the battery systems are connected when the ignition switch is ON so that the engine alternator will charge both the chassis and the coach batteries while driving. The Momentary Dual position connects the two battery systems to help in starting either the vehicle engine or the electric power plant if their respective batteries have a low state of charge.

2. Vacuum Gauge (2): This gauge indicates inches of vacuum in the engine intake manifold. Lower vacuum indicates excessive fuel consumption. Higher vacuum indicates improved fuel consumption. Observe gauge particularly during accelerating. A consistent upper middle vacuum reading indicates optimum fuel mileage.

3. Power Plant Start/Stop Switch (3): This switch is one of three Start/Stop switches for the generator. It is a momentary type switch. To start plant, depress switch to START. Hold until plant starts; then release switch. To stop plant, depress switch to STOP. Hold until plant stops; then release switch.

4. A/C, Heating and Defrosting Controls (10): Air flow is controlled by the FAN switch. The upper slide handle selects A/C, VENT, HEAT or DEF. and the lower slide adjusts the temperature.

CAUTION

Operate auto air conditioner five minutes a week during off season or storage to keep compressor seal lubricated.

5. Air Conditioning Vents (4,8): These vents adjust left to right and open or close to control air flow.

6. Stereo Radio (9): Consult manual supplied with radio for information regarding operation and use.

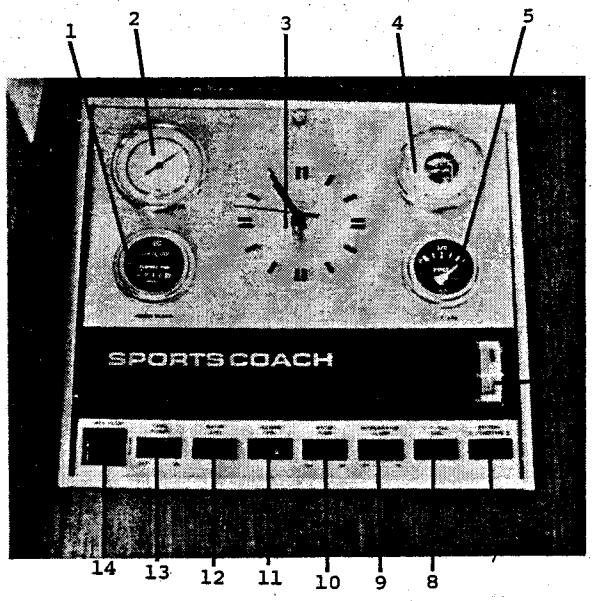


Figure 4-5. Central Control Panel

1. Power Plant Hour Meter
2. Thermometer
3. Clock
4. Barometer
5. LP-Gas Gauge
6. Battery Condition Meter
7. Battery Condition Switch
8. LP-Gas Level Switch
9. Refrigerator Alarm Switch
10. Water Pump Switch
11. Holding Tank Level Switch
12. Fresh Water Level Switch
13. Panel Power Switch
14. Power Plant Start/Stop Switch

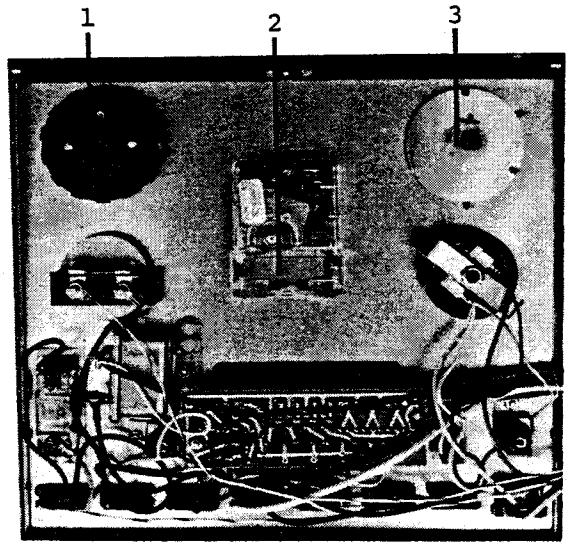


Figure 4-6. Central Control Panel Rear

1. Barometer Adjustment Screw
2. Clock Battery
3. Thermometer Adjustment Screw

CENTRAL CONTROL PANEL

This panel is an extremely important feature of Sportscoach. It incorporates controls and instrumentation regarding the electrical and fluid systems of the coach. Also featured are a clock, barometer and thermometer. (See figure 4-5).

1. Panel Power Switch (13)

   This switch controls the 12 volt power supply to the panel. This switch must be ON for following checks to be performed.

   1. Water Level
   2. Holding Tank Level
   3. Refrigerator Alarm
   4. LP Gas Level
   5. Battery Condition

2. Thermometer (2)

   This indoor bimetal type thermometer is accurate within one degree. Should calibration become necessary, use a screwdriver to rotate adjusting screw through center hole at rear of instrument. (See Figure 4-6).

3. Clock (3)

   This clock operates on a "C" type battery. The clock will operate 9 - 12 months on each battery. Replace battery at rear of instrument. (See Figure 4-6).

4. Barometer (4)

   This instrument indicates atmospheric pressure, which usually changes preceding weather change. Adjust the barometer to your local altitude by rotating adjusting screw marked ADJUST at rear of instrument. (See Figure 4-6). Set reading on barometer to agree with local airport or weather station.

5. Power Plant Start/Stop Switch (14)

   This is a remote Start/Stop switch for the electric power plant. It is a momentary switch which automatically returns to a center no-contact position. An indicator light above the switch illuminates when the power plant is operating.

6. Power Plant Hour Meter (1)

   This gauge records total hours of power plant operation.

7. Water Level Switch (12)

   This momentary on switch is used to determine the amount of water in the fresh water storage tank. Depress switch and observe indication above switch.

8. Holding Tank Level Switch (11)

   This momentary on switch is used to determine the content level of both holding tanks. Depress switch for desired holding tank and observe indication above switch.

9. Water Pump Switch (10)

   This switch controls the supply power to the water pump. Pump operation is dependent upon pressure in the piping. The pump operates only when a faucet is opened and pressure decreases. An indicator light above the switch illuminates when switch is ON.

10. Refrigerator Alarm Control Switch (9)

    This switch activates the refrigerator alarm buzzer; if outage of the gas pilot should occur, a buzzer will sound. Refer to LP-Gas section for lighting instructions of refrigerator. A warning light over the switch will be lit anytime the pilot light is out if the panel power switch is on.

11. LP Gas Level Switch (8)

    This momentary on switch, when depressed, activates the LP-Gas gauge (5). This gauge indicates the amount of liquid in the gas storage tank. Do not use this gauge as a guide to filling tank.

12. Battery Condition Switch (7)

    This dual position momentary on switch, when depressed, activates the voltage meter (6) located above the switch. This meter indicates condition of chassis battery (position 2) and auxiliary battery (position 1). If indication is LOW, decrease load on auxiliary battery.

13. Battery Liquid Level Warning

    A warning light (BATT) is illuminated if the liquid level in the rear mounted auxiliary battery is too low. This is an indication only, since the light only checks the level of one battery cell.

NOTES

1. Auxiliary battery is used to operate all low voltage items (i.e., lights, water pump).

2. If operating on 120 volt power, this battery test will not be accurate.

SECTION V

ELECTRICAL SYSTEMS

The electrical system of this coach incorporates a 12 volt D.C. lighting and motor driven appliance system and a 120 volt A.C. appliance system. These systems are connected through power converter which performs power conversion and battery charging automatically.

12 VOLT D.C. SYSTEM

The coach is equipped with a dual 12 volt D.C. system. The chassis battery, located under the hinged entry step, provides power for engine ignition, exterior lighting, windshield wipers, turn signals and instrumentation. (See Figure 5-1).

Two auxiliary batteries, located in the trunk compartment on either side, provide power for interior 12 volt lighting, water pump, central control panel, range exhaust fan, and other 12 volt appliance needs. The forced air furnace(s) is the single largest load on the auxiliary batteries. The batteries are 6 volt wired in series to produce 12 volts D.C. (See Figure 5-2).

CAUTION

Keep batteries properly charged. The battery tester on the central control panel should be used frequently. Keep 12 volt load to a minimum when operating on auxiliary batteries only.

Battery Charging

1. Auxiliary Battery Charging Occurs:
   a. When connected to 120 volt shore power supply.
   b. When operating power plant.
   c. When driving coach, if dual battery switch in in DUAL position.
2. Chassis Battery Charging Occurs:
   a. When driving coach.

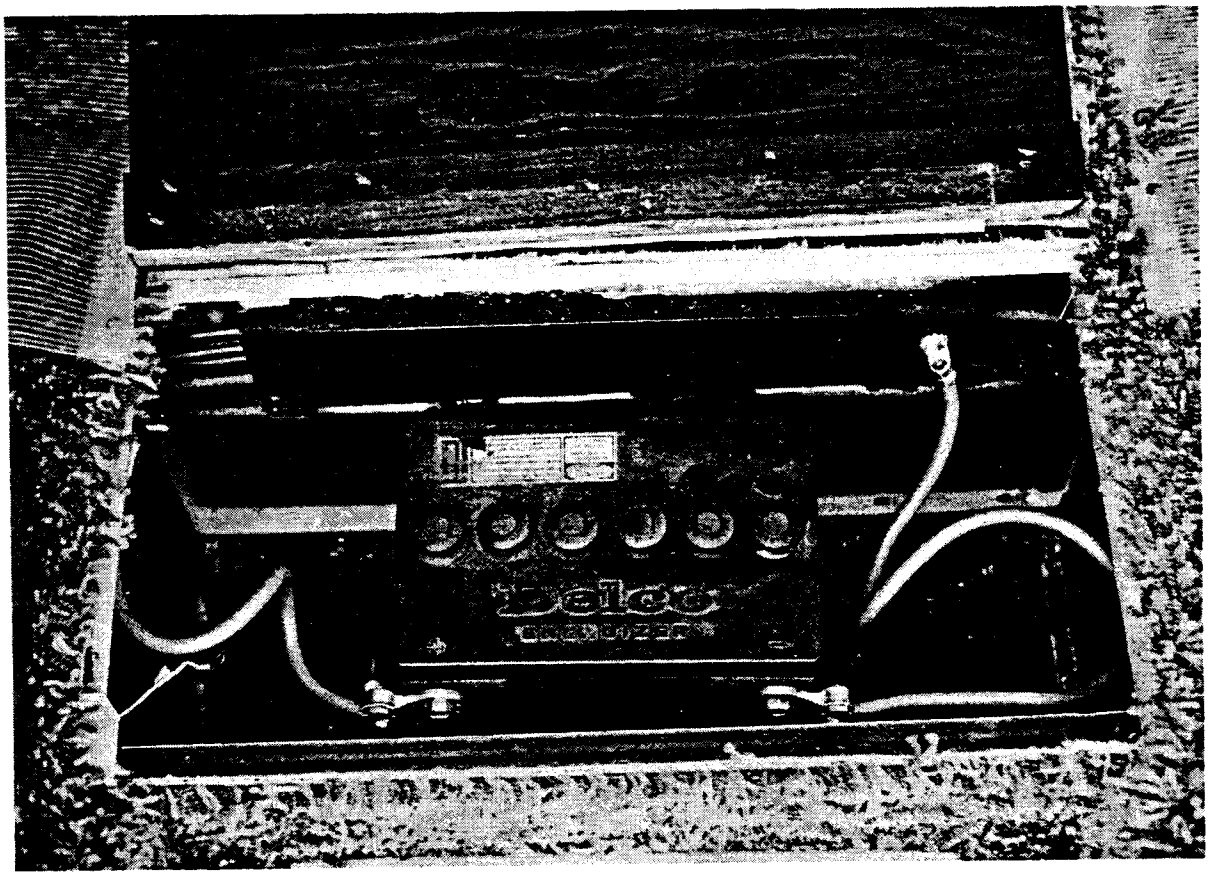
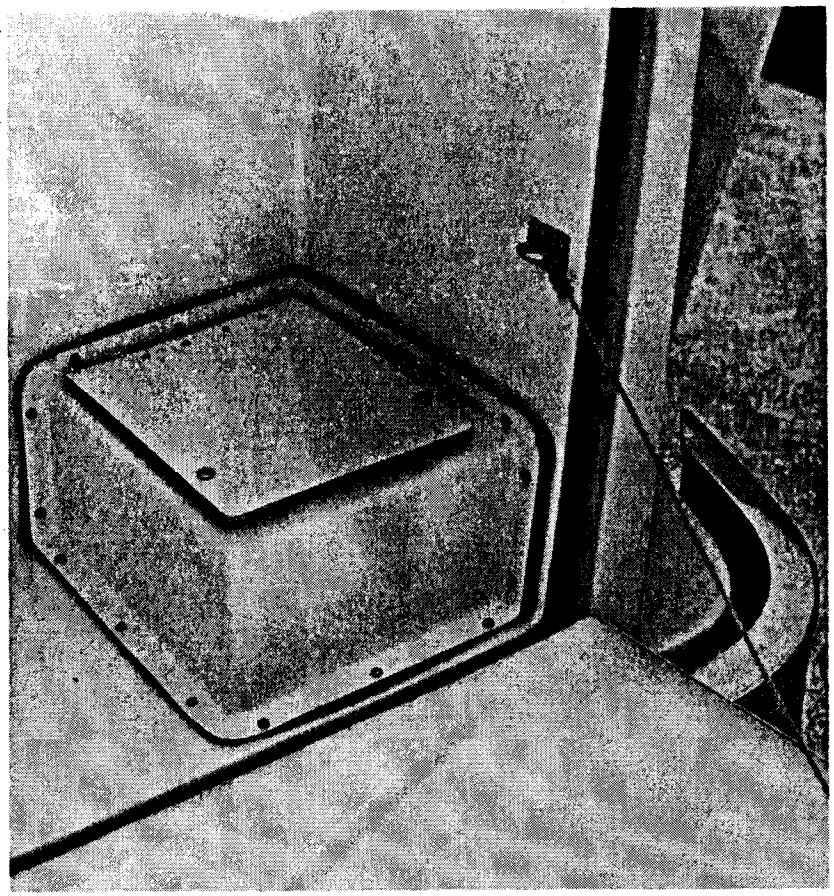


Figure 5-1. Chassis Battery Installation



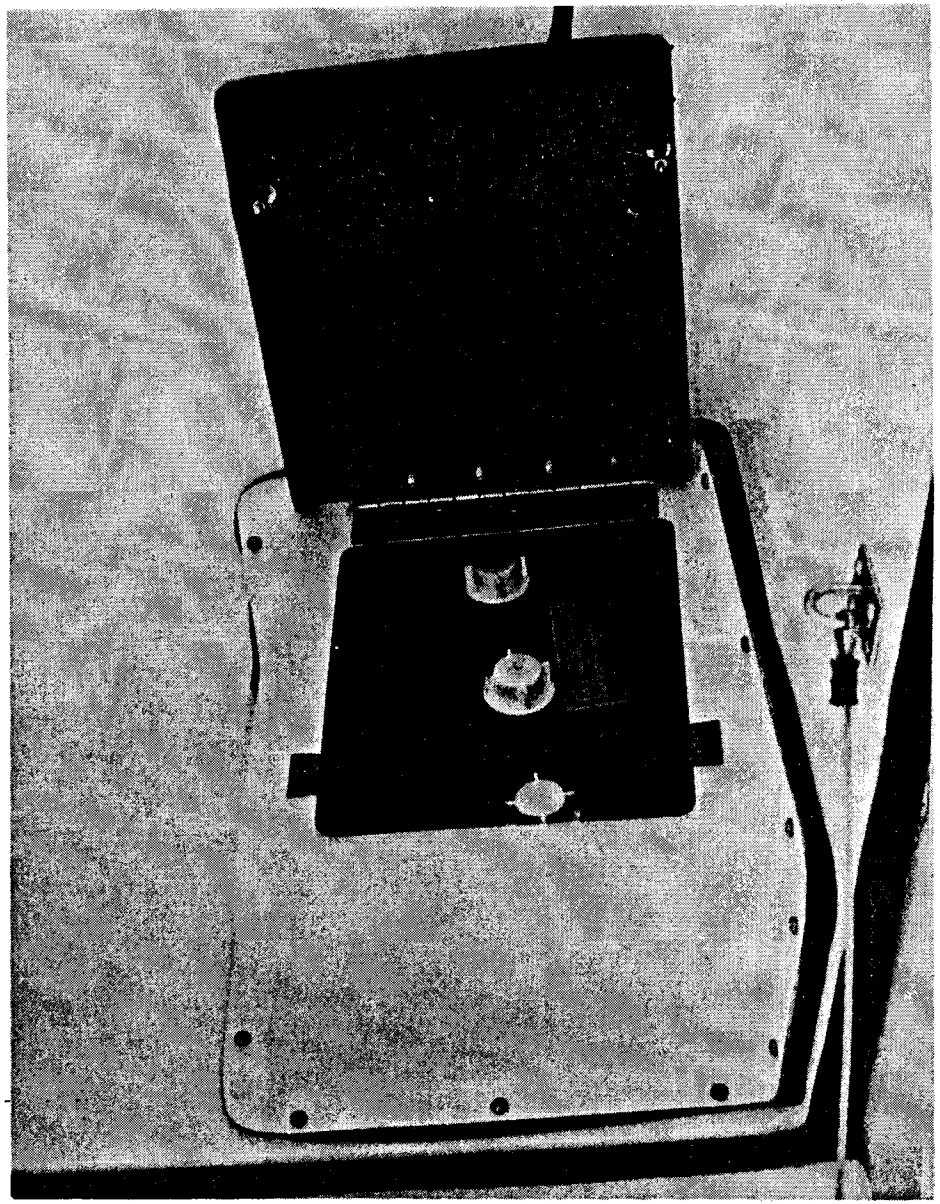


Figure 5-2. Auxiliary Battery Installation

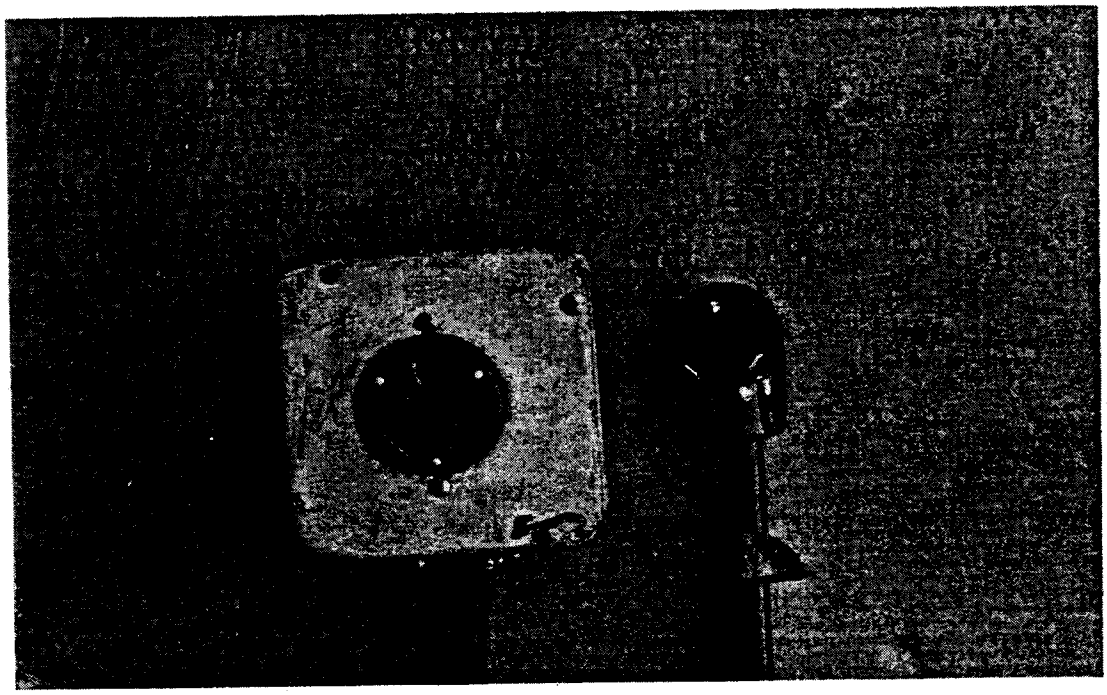


Figure 5-3. Typical 30 Amp Plug and Receptacle

Battery Maintenance

CAUTION

Avoid fully discharging batteries as this shortens their life.

1. Check that liquid level is correct. (Weekly in warm climate, monthly in cool climate). Add water to proper level if required.

NOTE

The "BATT" warning light on the Control Panel illuminates if liquid level is low in the rear batteries. This sensor only monitors one of six cells in the rear batteries, and should be used only as a general indication.

2. Clean battery terminals and cables periodically with wire brush.

3. Using a hydrometer, periodically check that specific gravity is above 1.225. If below 1.225, recharge battery.

4. When not using coach, batteries should be maintained at full charge. Charge batteries monthly to maximize their life.

120 VOLT A.C. ELECTRICAL SYSTEM

The coach is equipped with a dual 120 volt system. The power plant provides self-contained mobile power and the power cord provides accessibility to outside power sources. Refer to Model Specifications, Section XIV for wiring diagrams and component locations.

Power Cord

The power cord, located inside the small service door behind the rear wheel on the driver's side, is a special three pin design. It is made to be connected to a 30 amp source only. Figure 5-3 shows the special plug configuration.

WARNING

This three pin plug is designed for your safety. DO NOT TAMPER WITH PLUG or sever damage and physical harm may result.

CAUTION

The 30 amp power cord can only carry 30 amp of current (3600 watts). On coaches that have a higher electrical load than this, it is necessary

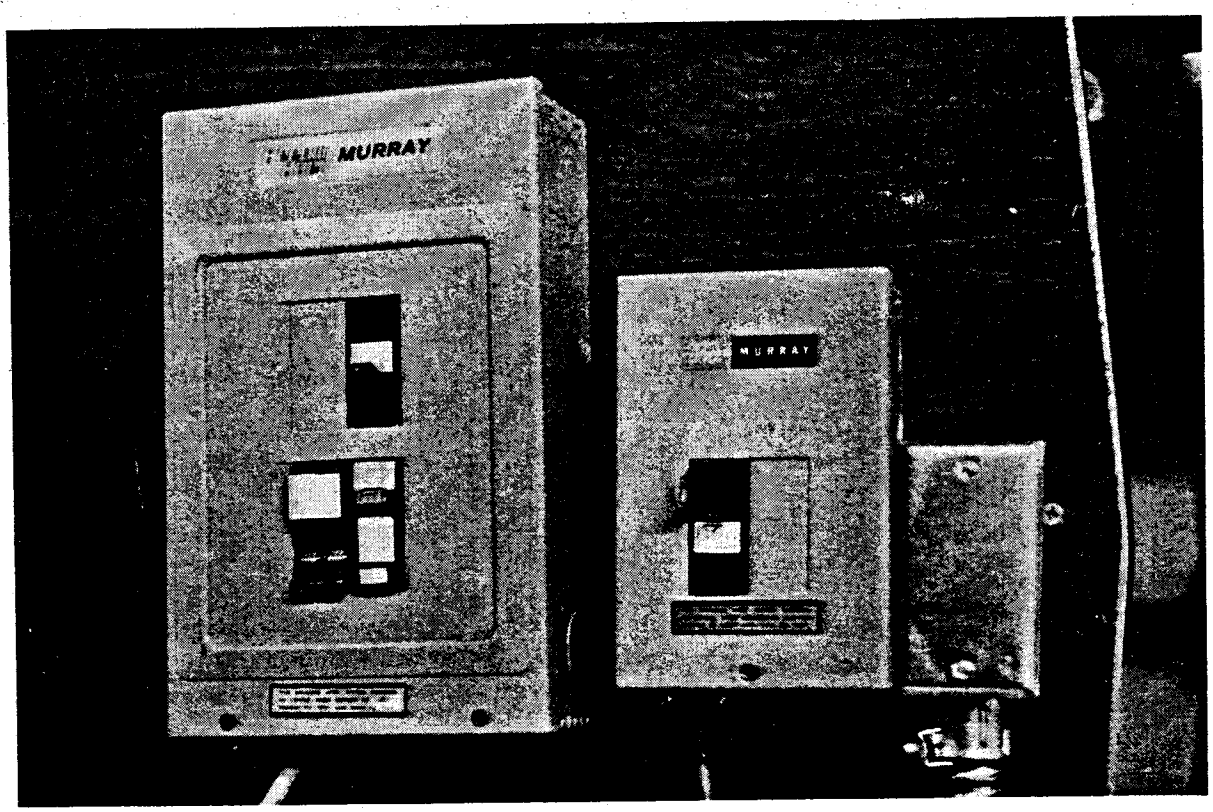


Figure 5-4. Typical Circuit Breaker Panels for Rear Bath Coaches

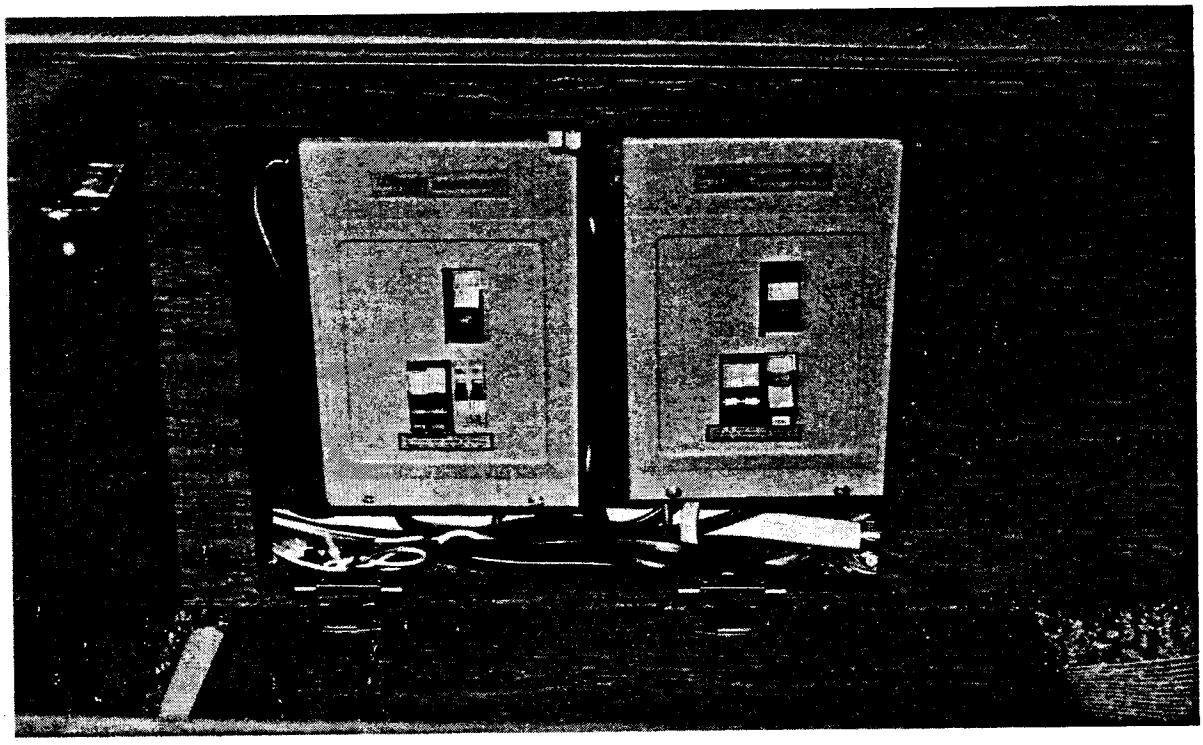


Figure 5-5. Typical Circuit Breaker Panels for Side Bath Coach

Power Cord (cont.)

to split the 120 volt electrical load. The front air conditioner, all receptacles, the power converter, the refrigerator and the blender (if fitted) are connected to the power cord, and can be powered by either the power plant or by shore power. If fitted, the rear air conditioner, microwave oven, and vacuum cleaner are connected directly to the generator, and cannot be operated off the power cord.

Receptacle Circuit Tester

When connecting to a questionable outside 120 volt power source, this tester will assure you of safe operation. This device checks electrical polarity and proper grounding. The tester may be purchased at electronic hardware stores.

15 AMP Power Source Connection

Many parks and campsites do not have 30 amp service. If you want to connect to available 15 amp power source, you must meet the following conditions:

1. Use a 30 to 15 amp 3-wire cord adapter with a U-blade ground.

WARNING

Coach must be grounded through power cord or electrocution may result.

2. Keep electrical use to a minimum and do not exceed 15 amp consumption.

CAUTION

If these conditions are not met, damage to roof air conditioner and other components may result.

Circuit Breakers

Circuit breaker panels provide protection for circuit overload as well as a means of disconnecting individual circuits from the supply source. See breaker panels for component control designation.

On rear bath coaches the circuit breaker panels are located on the rear wall inside the wardrobe or behind a door on the rear wall of the bedroom. (See Figure 5-4).

On side bath coaches the circuit breaker panels are located behind hinged door below bed on road side. (See Figure 5-5).

Circuit Breakers (cont.)

Should circuit overload occur the breaker will trip, disconnecting power from the circuit. Turn off all items on affected circuit. Reset breaker to ON position.

NOTE

If breaker continues to trip, a short circuit is indicated. Have system checked by qualified technician.

A Ground Fault Circuit Breaker is used to protect the bathroom and outside 120 volt receptacles. The breaker is designed to prevent injury due to electrical shock by sensing ground faults at low levels.

If the breaker trips, disconnect load and reset circuit breaker to ON. See testing instructions for ground fault circuit breaker mounted near the circuit breaker.

CHANGING 120 VOLT A.C. SOURCE

A. Shore Power to Power Plant

1. Turn off electrical components.
2. Remove power cord from outside source.
3. Place cord in storage compartment and plug cord into receptacle located in compartment.
4. Power plant may now be started.

B. Power Plant to Shore Power

1. Turn off electrical components.
2. Stop power plant.
3. Unplug and remove power cord from storage compartment.
4. Plug cord into proper 30 amp 120 volt A.C. outside source.

POWER CONVERTER

This device located in cabinet above refrigerator, behind a removable panel, performs two vital functions for the electrical system.

POWER CONVERTER (cont.)

1. When operating on 120 volts the converter transforms and rectifies the 120 volt A.C. power into 12-volt D.C. power.

2. When operating on 120 volts the converter will charge the auxiliary battery and maintain it at full charge.

When 120 volts are supplied to the coach by an outside source or power plant, the converter automatically switches from battery to converter power.

Automatic reset circuit breakers in the converter protect the circuitry from overload. Should an overload occur, the breaker will break the power and all 12 volt light and motors will stop. After a few seconds, the breaker will reset and 12 volt power will be restored.

NOTE

Should overloading occur, turn off some 12 volt lights and motors. If breaker continues to trip, a short circuit is indicated. Have system checked by qualified electrical technician.

Power Converter Operational Check

1. Turn on interior lights.

2. Plug power cord into generator receptacle in power cord compartment.

3. Start power plant.

4. Observe that lights become brighter as plant reaches operating speed.

5. Stop power plant.

6. Check that lights go dim, then off.

7. Check that lights go on when plant has fully stopped.

NOTE

These steps indicate the converter is functioning properly.

Care and Maintenance

CAUTION

Power converter must have sufficient ventilation for proper operation. Do not put anything on or

around unit. Your warranty does not cover damage resulting from unauthorized alterations.

1. Clean converter and surrounding area periodically.

FUSE BOX

A fuse box mounted in cabinet above refrigerator protects individual 12 volt circuits within the coach. (See Figure 5-6).

If a fuse blows, locate and correct cause. Turn off all lights and motors, then install new fuse. Fuse amperage is indicated inside fuse box.

CAUTION

Be sure that fuse does not exceed recommended amp rating.

NOTE

If fuse continues to blow, a short circuit is indicated. Have system checked by qualified electrical technician.

ELECTRIC POWER PLANT

This gas engine power plant, located at rear roadside, will provide power for all 120 volt needs of the coach.

The power plant receives fuel from the main chassis fuel tank. As a safety measure the power plant cannot use up the entire fuel supply. Approximately 10 to 15 gallons of fuel will be left in the main tank for the coach engine should the plant exhaust its supply. The power plant does not draw fuel from the auxiliary fuel tank on coaches with two fuel tanks.

Electric power for starting the power plant is provided by the rear batteries. If the charge of these batteries is low, use the dual battery switch on the dashboard to connect the chassis battery in parallel with the rear batteries.

CAUTION

USE ONLY REGULAR GASOLINE. The power plant consumes approximately 3/4 gallon per hour with a full load.

OPERATION

The power plant may be STARTED/STOPPED at three locations.

1. Dash Panel
2. Central Control Panel
3. Power Plant

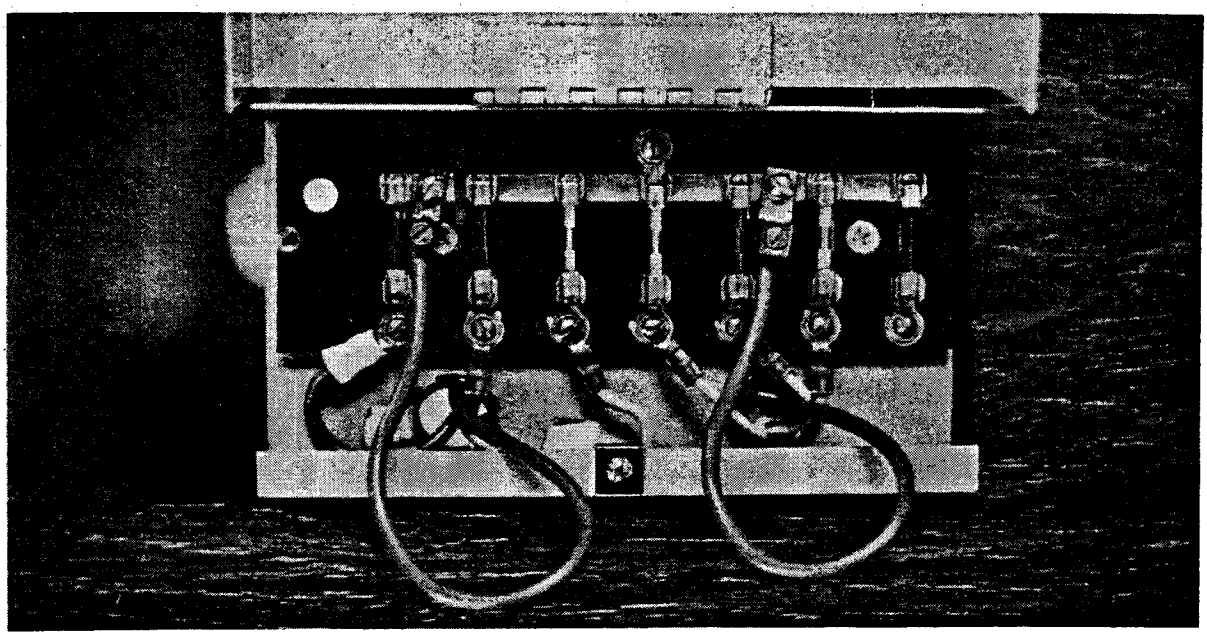


Figure 5-6. Typical Fuse Box

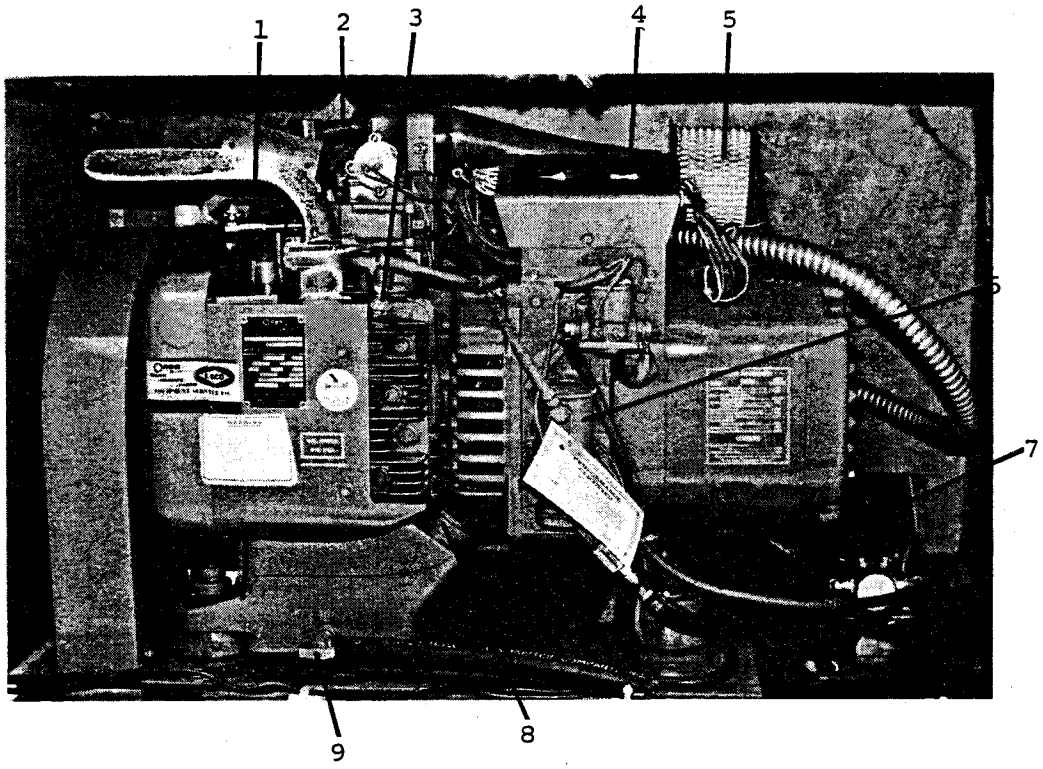


Figure 5-7. Power Plant Installation

1. Governor Linkage
2. Crankcase Breather
3. Spark Plug
4. Start/Stop Switch
5. Air Cleaner
6. Fuel Filter
7. Battery Cable Connection
8. Oil Filler & Level Check
9. Drain Valve

A. Before starting, check following:

1. All major electrical loads (i.e., Air Conditioner,) must be OFF.

2. Plant approximately level.

3. Observe reading on hour meter at Central Control Panel.

B. Start Unit

1. Depress momentary START switch.

2. Release switch when power plant starts.

NOTE

Allow plant to operate at least one minute before applying load.

C. Stop Unit

1. Depress momentary STOP switch.

2. Release switch when power plant stops.

Maintenance (See Figure 5-7)

The hour meter located on the Central Control Panel records power plant operating time. Use this instrument as a guide to preventive maintenance. Follow the recommended maintenance schedule to ensure safe and dependable operation of unit and warranty coverage. Instructions herein apply to Onan Power Plants. If your coach is equipped with another brand, refer to material supplied with the unit for maintenance procedures.

NOTE

Under extremely dusty conditions, oil, air cleaner, and governor linkage may require service more often than indicated.

8 OPERATIONAL HOURS

1. Check that oil level is FULL.

2. Check that fuel supply is adequate.

50 OPERATIONAL HOURS

1. Check that air cleaner is clean

Maintenance (cont.)

2. Clean governor linkage and check for smooth operation.

3. Check that compartment is clean.

75 OPERATIONAL HOURS

1. Change oil.

   a. Open crankcase drain valve.

   b. Close valve when oil is drained.

NOTE

Use proper grade oil for expected temperatures.

   c. Pour four quarts oil into crankcase.

100 OPERATIONAL HOURS

1. Check fuel filter.

   a. Turn hex nut on base of electric fuel pump counterclockwise.

   b. Remove filter element and gasket.

   c. If element dirty or damaged, replace.

   d. Install element, gasket and cover.

2. Clean and adjust spark plug gap.

3. Clean Spark Arrester (See Figure 5-8)

   a. Remove clamps on exhaust pipe and remove unit.

   b. Remove nut and lockwasher.

   c. Separate inlet and outlet caps and remove gaskets.

   d. Separate housing and remove stainless steel screen.

   e. Using compressed air, clean core and screen.

NOTE

At 500 hours of operation the screen should be replaced.

   f. Replace gaskets on end caps.

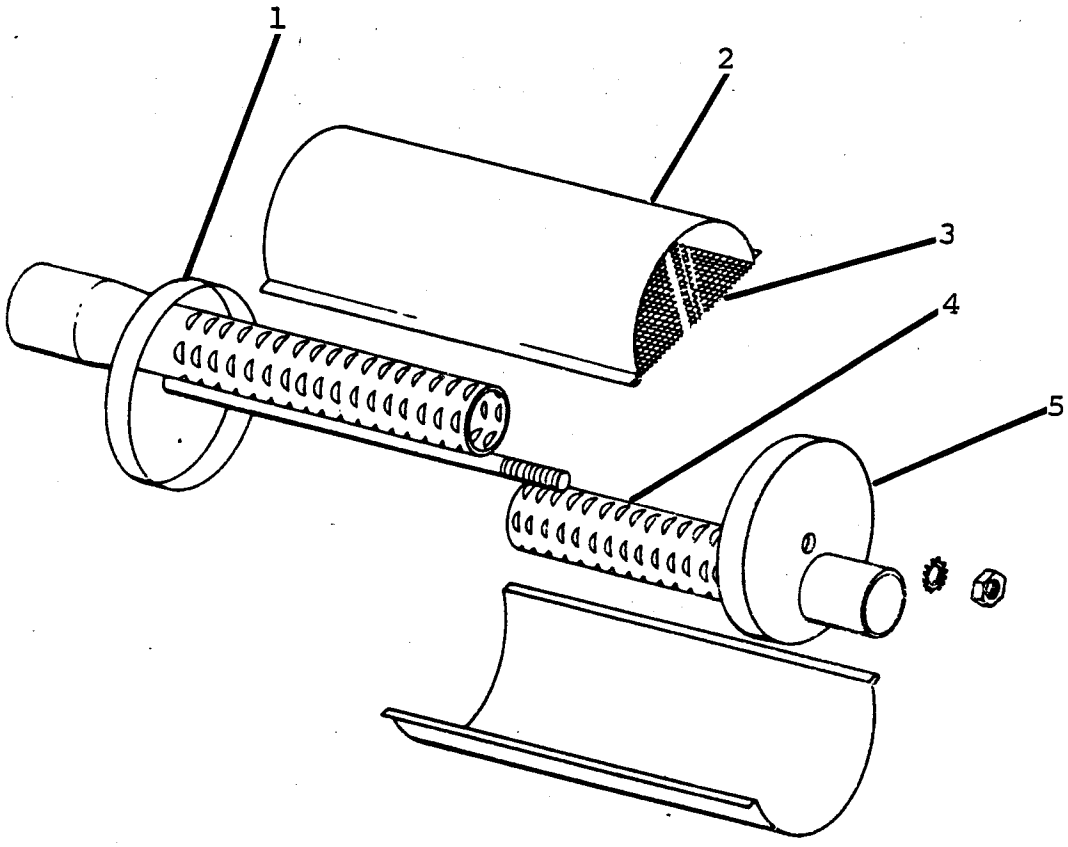


Figure 5-8. Spark Arrester

1. Inlet Cap
2. Housing
3. Screen
4. Core
5. Outlet Cap

Maintenance (cont.)

g. Place screen over edge of one side of housing and in slot on other side of housing.

h. Press on both sides until screen and housing edges go together.

i. Insert inlet core into housing.

j. Insert outlet core.

200 OPERATIONAL HOURS

1. Clean crankcase breather.

a. Remove rubber breather cap.

b. Remove valve from cap.

c. Clean valve in solvent.

d. Dry and install valve with perforated disc toward engine.

The following maintenance schedule should be performed by qualified maintenance personnel.

MAINTENANCE ITEMS	OPERATIONAL HOURS 200	500	1000	5000
Check Breaker Points	X			
Check Brushes	X			
Clean Commutator & Collector Rings	X1			
Remove Carbon & Lead	X			
Check Valve Clearance	X			
Clean Carburetor	X			
Clean Generator			X	
Remove & Clean Oil Base			X	
Grind Valves			X	
General Overhaul				X

X1 - Perform more often in extremely dusty conditions.

Operational Tips for Power Plant

NOTE

If plant is used infrequently, extended shut-down periods can result in difficult starting. Start and warm up plant at lease once a week.

Operational Tips for Power Plant (cont.)

A. High Temperature Conditions

1. Check that air flow around plant is not obstructed.
2. Clean cooling fins.
3. Keep ignition timing properly adjusted.
4. Use proper grade oil.

B. Low Temperature Conditions

1. Use proper grade oil.
2. Check auxiliary battery and keep charged.
3. Clean and adjust spark plugs and ignition breaker points.

C. Dusty Conditions

1. Service air cleaner frequently.
2. Change oil more frequently.

Troubleshooting

A. Power Plant Won't Start

1. Check battery (use momentary DUAL switch while starting).
2. Check fuel supply.
3. Check position of START/STOP switches.
4. Refer to Service Manual supplied with unit.

B. Mechanical or Electrical Failure

1. Power plant should be inspected and serviced by qualified service personnel.

On the following page is a service log provided to assist you in maintaining an accurate record of service procedures.

Refer to manual supplied with power plant for additional information.

CCK SERIES MOBILE

SERVICE LOG

PERFORM SERVICES CHECKED - - - - WRITE DATE SERVICED

PERFORM 8-HOUR SERVICES (A, B, C) BUT OMIT WRITING THIS DATE.

Accurate records of hours operated aid servicing at the proper time!

HOW TO KEEP THIS LOG

For example, when plant has run 100 hours, DO 50-hour services (air cleaner and battery) and DO 100-hour services (plugs, lube oil, and breather). Then WRITE date in space "†" under "1st 1000 hrs."

HOURS OF RUNNING	AREA OF SERVICE → / SERVICE NOTES →	D - AIR CLEANER E - BATTERY	F - SPARK PLUGS G - OIL CHANGE H - CRANKCASE BREATHER	J - IGNITION POINTS K - OIL FILTER CARTRIDGE L - GENERATOR	M - COMBUSTION CHAMBER (Except LPG Fueled) N - VALVE TAPPETS	1st 1000 hours	2nd 1000 hours	3rd 1000 hours
	50	X						
	100	X	X			†		
	150	X						
	200	X	X	X				
	250	X						
	300	X	X					
	350	X						
	400	X	X	X				
	450	X						
	500	X	X		X			
	550	X						
	600	X	X	X				
	650	X						
	700	X	X					
	750	X						
	800	X	X	X				
	850	X						
	900	X	X					
	950	X						
	1000	X	X	X	X			
	As Req.	Complete Tune-up.						

HOW TO KEEP THIS LOG

For example, when plant has run 100 hours, DO 50-hour services (air cleaner and battery) and DO 100-hour services (plugs, lube oil, and breather). Then WRITE date in space "†" under "1st 1000 hrs."

POWER CONSUMPTION GUIDE

It is important not to operate your electrical system beyond its capacity. The following is a guide to assist in preventing and determining the cause of electrical overload.

Fixed Appliances	Average Wattage
Power Converter/Battery Charger	720 - 1200
Roof Air Conditioner	1500 - 2000 (Starting)
Refrigerator	300

Portable Appliances	Average Wattage
Coffee Maker (12-cup)	1090
Toaster (2 slice)	1050
Frying Pan (11 inch)	1255
Broiler Oven (Portable)	1300
Television	300 - 750
Griddle	1470
Iron	900 - 1200

SECTION VI

AIR CONDITIONING SYSTEM

The 13,500 B.T.U. roof mounted air conditioner(s) is the largest single load on the 120 volt electrical system. Therefore it is important that the power level to start and operate the air conditioner is adequate. Be sure that shore power is adequate when used and keep power plant in good operating condition.

Several cautions should be observed when operating the Air Conditioning System.

CAUTIONS

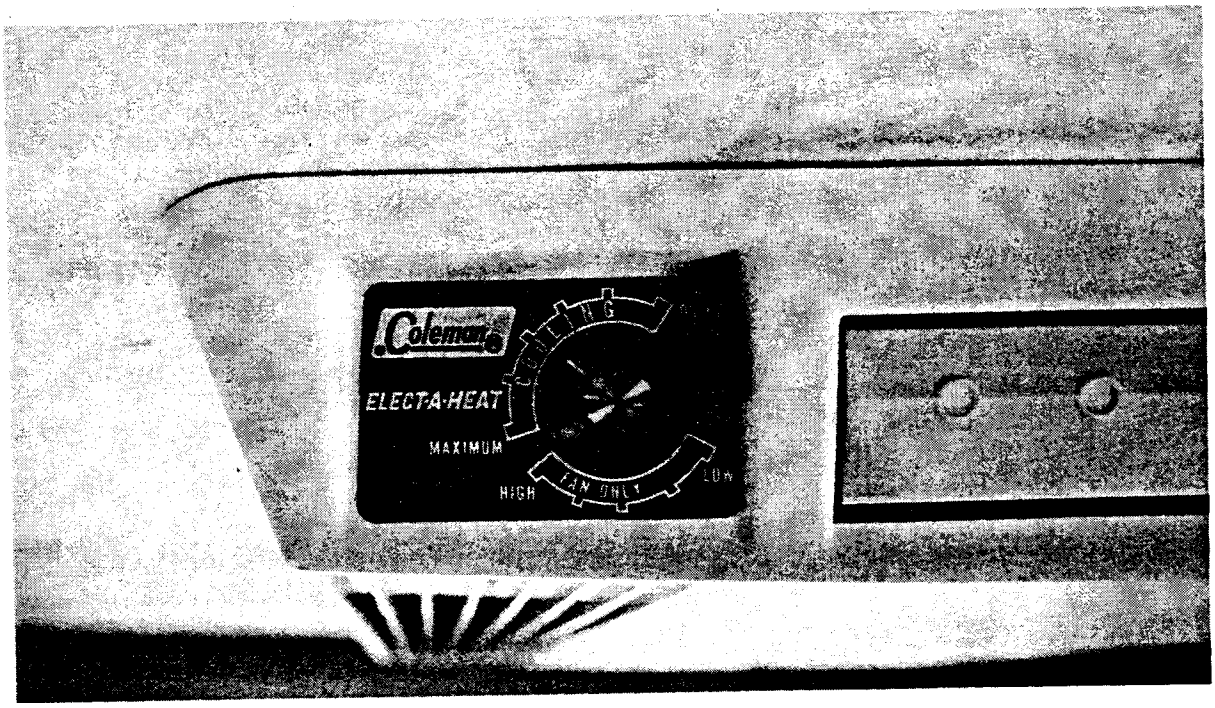
1. Do not apply power or change power source with air conditioner ON.
2. Do not start power plant with air conditioner or any electrical load ON.
3. When operating air conditioner, keep additional 120 volt loads to a minimum.
4. When air conditioner has been shut down, wait at least five minutes before re-starting unit.
5. Do not operate unit without filter installed.

HELPFUL NOTES FOR USING AIR CONDITIONER

1. Keep window curtains closed.
2. Park rear of coach downwind to increase compressor cooling and removal of exhaust.
3. Park in shade.
4. Operate bath vent fan for showering to reduce heat and humidity.
5. Use kitchen vent fans when cooking.
6. Use as few range burners as possible.
7. Air conditioning removes moisture from the air and it is normal to have water discharge off the roof.

OPERATION (See Figure 6-1)

A. Prepare Unit for Operation.



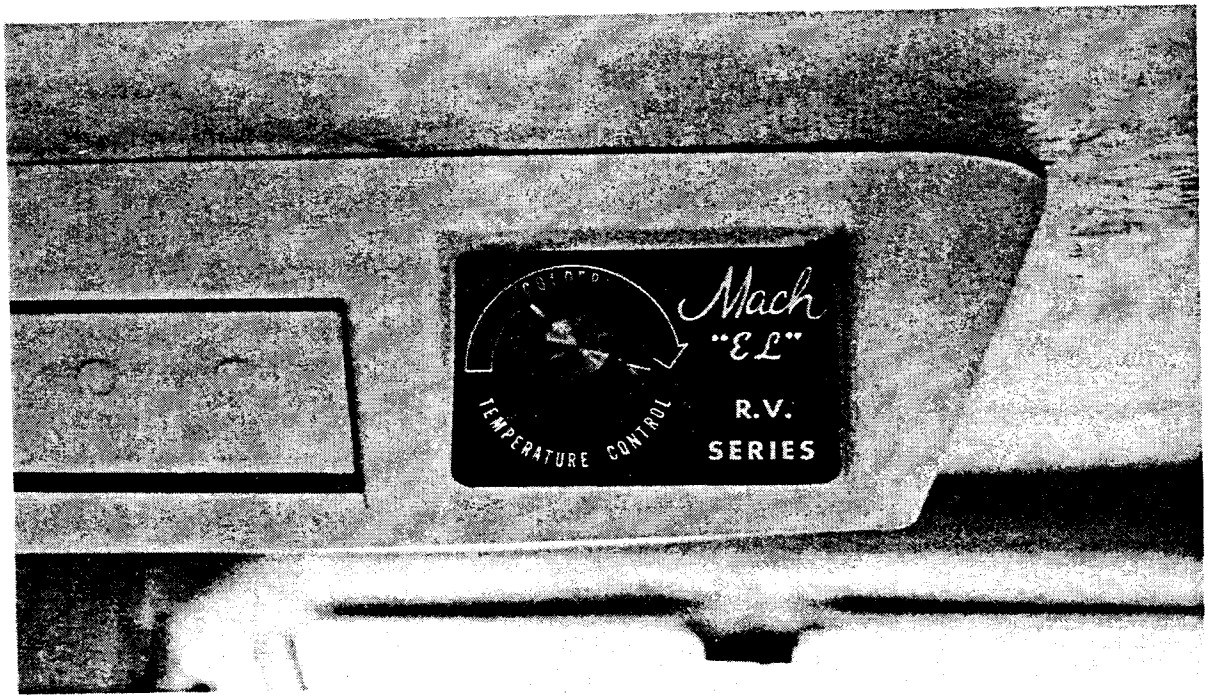


Figure 6-1. Roof Air Conditioner Controls

OPERATION (cont.)

1. Check that air conditioner selector switch is OFF.

2. Connect power cord to adequate shore supply or start power plant.

NOTE

Allow power plant to operate at lease one minute before activating air conditioner.

ATTENTION

(29 and 31 Foot Coaches)

OWNERS WITH TWO AIR CONDITIONERS

The rear air conditioner is wired such that it will not operate on shore power. The front unit will operate as described. When using the power plant, both front and rear units will operate. Each unit is controlled independently. Front unit must be started first. After one minute the rear unit may be started.

B. Cooling Operation

1. Set selector switch to COOLING.

2. Position selector switch within COOLING range to obtain desired air flow.

3. Set temperature control to desired setting.

C. Air Circulation Only Operation

1. Set selector switch to FAN ONLY.

2. Position selector switch within FAN ONLY range to obtain desired air flow.

D. Dehumidifier Operation

1. Set selector switch to minimum COOLING range.

2. Set temperature control to lowest position where compressor will cycle on and off for cooling.

MAINTENANCE

A. Clean filter (every two weeks of operation).

1. Remove air conditioner interior shroud.

MAINTENANCE (cont.)

2. Remove air filter.

3. Clean filter with mild soap and water and rinse.

4. Dry filter and install in unit.

5. Install shroud.

B. Refer to material supplied with your A/C Unit for additional information.

Contact your nearest authorized service center, for your particular brand, regarding malfunctions of the air conditioning system.

SECTION VII

LIQUID PETROLEUM GAS SYSTEM

ATTENTION

The LP gas system is the most potentially dangerous part of your coach. Please read and understand this section. Observe the warnings and cautions contained herein to ensure safe and dependable operation.

DESCRIPTION

LP gas is delivered to the various components (i.e., range, furnace) in a gaseous form. It is stored in a high pressure tank in liquid form. The LP gas tank is mounted on the chassis of the coach. It is a 24 gallon tank but may legally be filled with only 20 gallons. The law requires at least a 20% vapor space for safety. A special valve called the 20% valve is installed in the tank to indicate when the tank has reached 80% capacity.

WARNING

> Do not allow tank to be filled beyond 80% capacity or personal injury and damage to equipment may result. The 20% vapor space provides expansion space for the liquid and ensures that only vapor and no liquid passes from the supply tank. Without this space, one would risk expelling high pressure gas into the atmosphere.

Figure 7-1 shows the LP gas tank and locates the four operation valves. The fill valve(3) is used when filling the tank. The 20% valve (2) indicates when the tank is 80% full. The service outlet valve (5) controls the flow of gas to the regulator. The safety relief valve (4) is a safety feature used to discharge any excess fuel pressure within the tank. The level gauge (1) indicates the liquid level in the tank.

The service outlet valve is designed to close leak-tight by hand. If the valve leaks when hand tightened, do not tighten with a wrench, repair or replace valve. The two stage pressure regulator (6) is attached to the service outlet valve. It decreases the tank pressure to 6-1/2 ounces per square inch and supplies all gas appliances. When system is not in use, close outlet valve. This will prevent damaging moisture from entering the system.

FILLING

The fill valve is designed to be filled by 1-3/4 Acme or POL. Be sure to attach the plastic dust cover to the valve

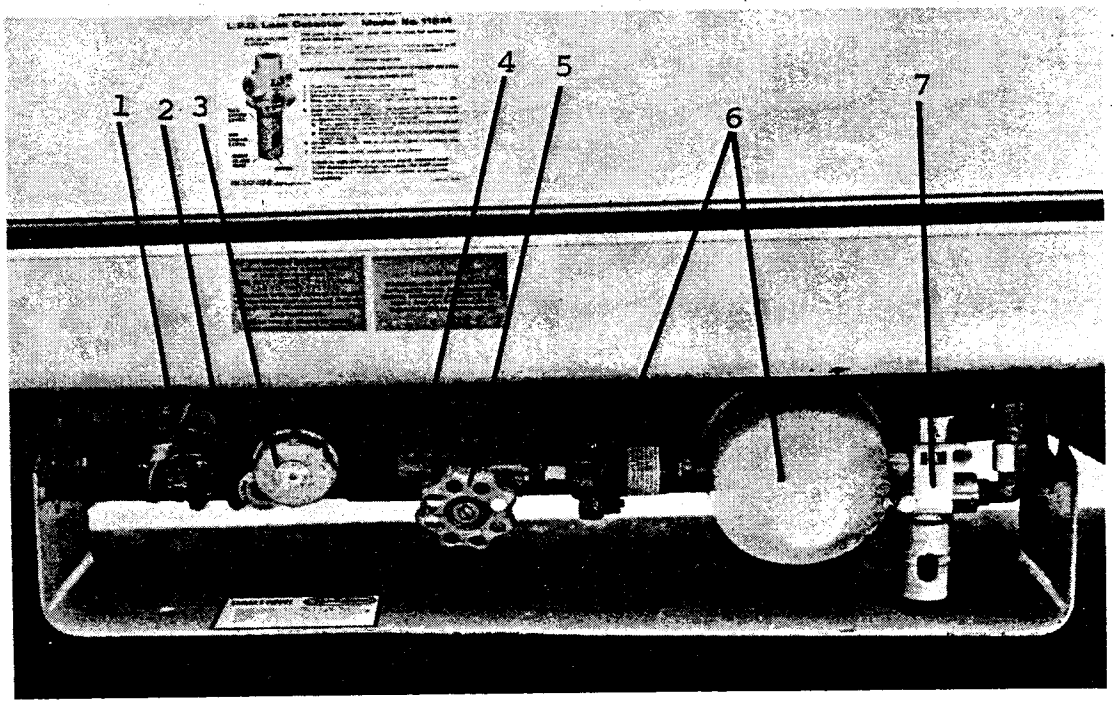


Figure 7-1. LP-Gas Controls

1. Level Gauge and Sending Unit
2. 20% Valve
3. Fill Valve
4. Safety Relief Valve
5. Service Outlet Valve
6. Regulator
7. Leak Detector

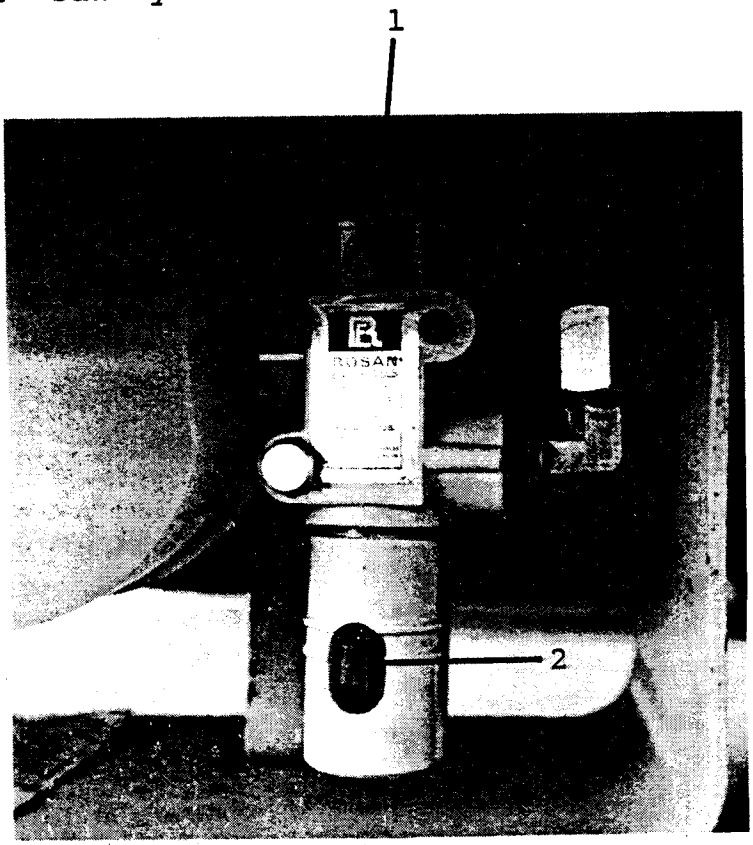


Figure 7-2. Leak Detector

1. Red Plunger
2. Sight Glass

FILLING (cont.)

when not in use. Filling should be done only at authorized LP gas fueling stations. Please observe the following warnings during filling operation.

WARNINGS

1. Do not connect natural gas to system.
2. Do not smoke.
3. Extinguish all appliance pilot lights.
4. Do not operate engine.
5. Do not operate power plant.
6. Do not fill tank beyond 80% capacity.

TEST FOR LEAKAGE

LP gas is colorless but does have a distinct garlic-like odor. It is heavier than air and if a leak occurs, it would tend to collect in pockets along the floor. If a leak is suspected, close service outlet valve on LP gas tank. Open all windows, vents and door.

WARNINGS

1. Do not operate any electrical equipment or light any matches until leak is found and coach is free of gas vapors.
2. Never use a match to detect a leak.

The coach is equipped with a built-in leak detector installed next to the gas regulator. The leak detector should be used when a leak is suspected and also periodically before and after trips which could loosen connections.

The following describes the operation of the leak detector. (See Figure 7-2).

1. Check that fluid level in sight glass is correct.
2. If below minimum, depress red plunger on top of detector rapidly several times until level is correct.
3. Close LP gas tank outlet valve.
4. Open doors and windows of coach.

TEST FOR LEAKAGE (cont.)

5. Shut off LP gas appliances, including pilot lights.

6. Turn on and light one stove burner.

7. When flame goes out, turn off the burner.

NOTE

The pressure has now been depleted from the system.

8. Depress and hold red plunger; then open tank outlet valve.

NOTE

Bubbles will appear in sight glass but should disappear in about two seconds if system is leak free.

9. Check that no bubbles are visible in sight glass in 5 to 10 seconds.

10. If bubbles are visible in sight glass in 5 to 10 seconds, perform a soap-water test at all line connections.

11. Tighten any leaking connections.

12. Repeat leak test.

13. If leakage is still indicated, close outlet valve and contact your recreational vehicle dealer.

LP GAS CONSUMPTION GUIDE

One gallon of gas produces about 92,000 BTUs. The supply tank when full (20 gallons) will produce about 1,840,000 BTUs. The estimated hourly usage of each appliance is given below.

Range burner	5,200 BTU/Hr
Oven	10,000 BTU/Hr
Refrigerator	1,360 BTU/Hr
Furnace (single)	31,000 BTU/Hr
Furnace (double)	23,000 BTU/Hr (each)
Water heater	8,800 BTU/Hr

OVEN-RANGE

The following descriptions and instructions are provided as a supplement to the information furnished by the manufacturer. Due to possible changes in design or equipment installed, material supplied by the manufacturer takes precedence should any discrepancy occur. More detailed and specific information will be found in that material.

Description

The range operates much the same as your home range. The oven temperature is thermostatically controlled and the stove burners are adjustable. One top burner pilot is used to ignite all burners and a separate oven pilot is located on the oven burner.

A 12 volt power range hood removes heat and smoke from the interior. A switch on the front controls the exhaust fan and stove top light.

The oven thermostat control will lock in positions OFF and PILOTS OFF. Depress control and rotate to reach another setting. The PILOTS OFF position totally shuts off the gas from the range and all pilots are extinguished.

WARNINGS

1. In OFF position both top burner and oven pilots are supplied with gas. Both pilots must be lit to prevent gas from excaping.

2. NEVER USE OVEN AS A HEATER!

3. Do not leave gas burning while traveling.

Pilot Adjustment

The range pilots have been pre-adjusted at the factory and should require no adjustment. Should a problem develop, refer to the instructions supplied by the manufacturer or your nearest dealer.

Lighting Instructions

1. Place all burner controls at OFF position.

2. Place oven thermostat at PILOTS OFF position.

3. Wait 5 minutes.

4. Depress and turn oven thermostat to OFF position.

5. Lift cook top panel and light top burner pilot.

6. Open oven door and light oven pilot.

Lighting Instructions (cont.)

NOTE

If pilots do not light immediately, it may be due to air in the line.

7. When oven pilot is lit, depress and turn thermostat counter-clockwise to desired temperature setting.

NOTE

As a safety feature it will take 30 to 45 seconds for the oven safety valve to open, allowing gas to enter and burner to ignite.

Shut Down Oven-Range

Turn thermostat dial to OFF when oven is not in use. When travelling or not using coach, turn thermostat dial to PILOTS OFF position.

Maintenance

CAUTION

Do not use chrome cleaner or any abrasives when cleaning range.

1. Clean range regularly with warm detergent solution and soft cloth.

2. If top burner becomes clogged, use a toothpick to clean ports. Do not use metal to clean ports as they may become enlarged.

3. Clean range hood filter regularly in hot water and mild detergent. Also clean interior hood housing.

GAS/ELECTRIC REFRIGERATOR

The following descriptions and instructions are provided as a supplement to the information furnished by the manufacturer. Due to possible changes in design or equipment, material supplied by the manufacturer takes precedence should any discrepancy occur. More detailed and specific information will be found in that material.

Description

This deluxe, two door refrigerator works on either gas or electricity. It automatically defrosts and has no moving parts.

In the lower interior of the unit is the combination electric switch and gas supply valve. This allows the unit to operate on either gas or electricity but never both. All controls necessary to operate the unit are located in the lower interior compartment.

The refrigerator is an absorption type unit which uses heat to vaporize an ammonia/water mixture which later condenses back into a liquid. The liquid evaporates into a gas in the evaporator. The cooling process is actually accomplished by absorbing heat from air surrounding the evaporator. The heat is absorbed, thereby cooling the air.

Leveling

The cooling process is dependent upon liquid flow which will be impaired if the unit is not level. When the coach is in motion, the continuous movement will not affect the proper operation of the unit.

CAUTION

When parked even temporarily, if the refrigerator is in use it must be level to prevent damage.

The refrigerator is equipped with a bubble type leveling device. Place the bubble on lower freezer shelf. Check that the bubble is in the center ring.

CAUTION

Allow twenty minutes between changeover from gas to electric or electric to gas.

LP-Gas Operation (See Figure 7-3).

1. Level refrigerator.
2. Turn knob (5) to GAS.
3. Turn knob (4) to setting 4. (Higher numbers decrease refrigerator temperature.)
4. Pull and hold knob (3).
5. Depress button (1) repeatedly until burner is lit in reflector (2).
6. When burner is lit, hold knob (3) in out position for 15 seconds.
7. Release knob (3).
8. Check that burner is lit.

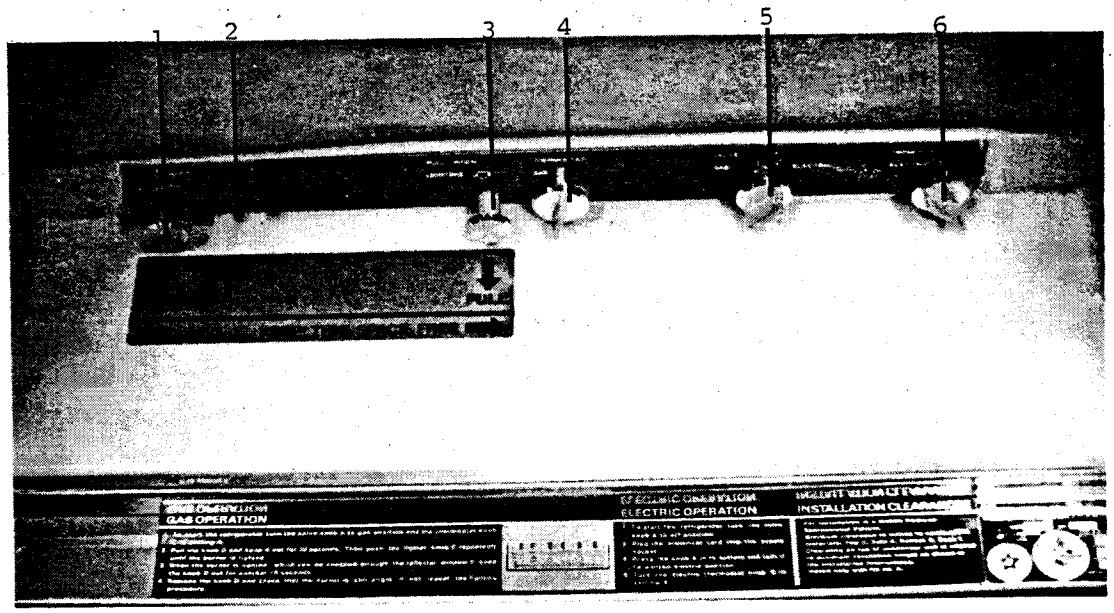


Figure 7-3. Refrigerator Controls

1. Lighter Button
2. Reflector
3. Bypass Knob
4. Gas Temperature Control
5. Gas/Electric Selector Knob
6. Electric Temperature Control

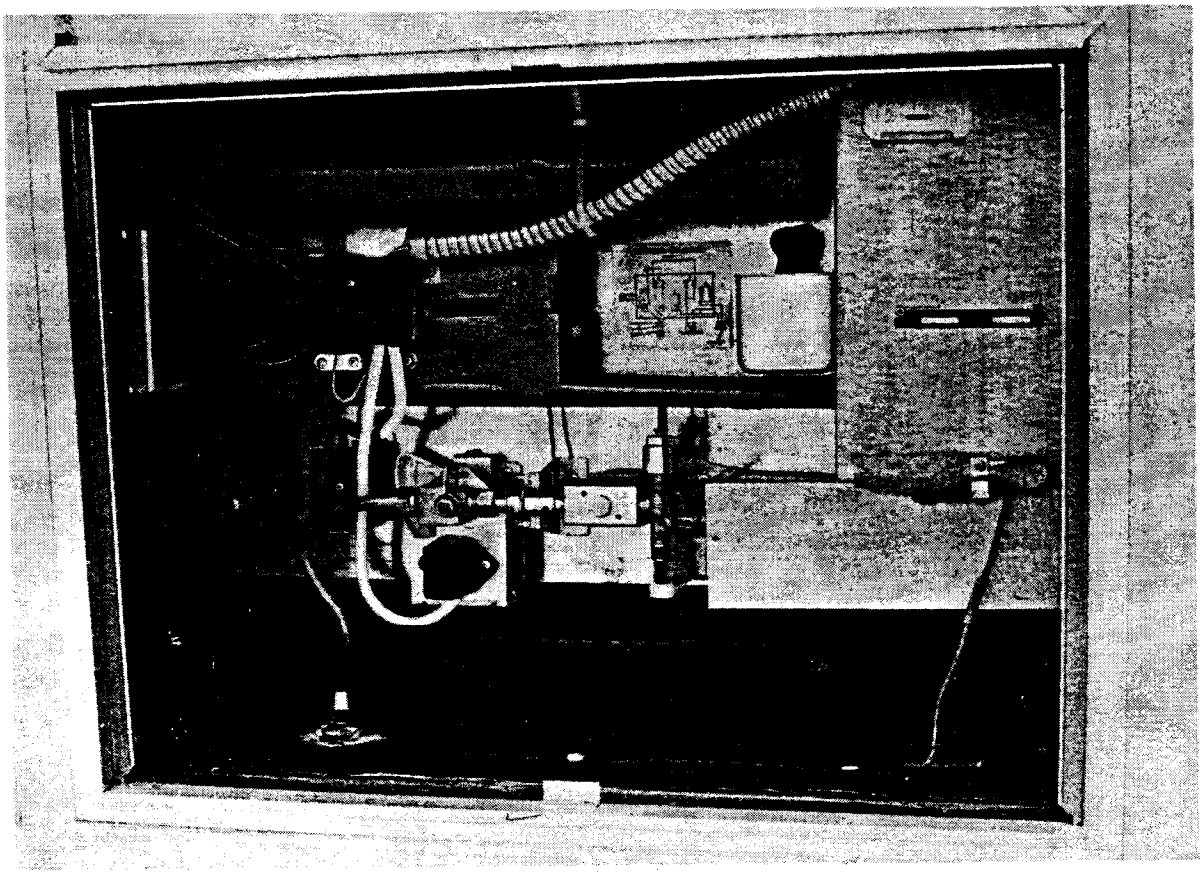


Figure 7-4. Exterior Access to Refrigerator

LP - Gas Operation (cont.)

NOTE

Slow lighting may be due to air in the lines. Repeat procedure until burner is lit.

Electric Operation (See Figure 7-3).

1. Level refrigerator.

2. Plug coach power cord into a 120 volt shore power supply or start power plant.

3. Turn knob (5) to OFF.

4. Depress knob (5) and turn to 110 volt position.

5. Turn knob (6) to setting 4. (Higher numbers decrease refrigerator temperature.)

Shut Down Refrigerator (See Figure 7-3).

1. Turn thermostat knob (4) or (6) to zero.

2. Turn knob (5) to OFF.

NOTE

If unit is not to be used for some time, empty and clean unit. Remove ice trays and leave door ajar.

Defrosting

Most units are equipped with autmoatic defrosting. However, over a period of time, frost may build up. Shutdown unit until frost melts. Empty drip tray and dry inside of unit before restarting.

Maintenance

1. Clean and adjust burner assembly at least once a year. Refer to refrigerator owners manual or authorized repair station.

2. Annually clean flue and baffle and exterior compartment. (See Figure 7-4).

3. Using a lukewarm weak soda solution, clean interior lining of unit.

Maintenance (cont.)

4. Use water only to clean evaporator, ice trays and shelves.

5. Using bubble solution, periodically check for gas leakage.

HEAT EXCHANGER WATER HEATER

The following descriptions and instructions are provided as a supplement to the information furnished by the manufacturer. Due to possible changes in design or equipment installed, material supplied by the manufacturer takes precedence should any discrepancy occur. More detailed and specific information will be found in that material.

Description

The hot water heater uses heat from the coach engine cooling system to provide hot water while driving. The water is heated by LP gas while parked.

The heater holds 6.2 gallons of water. While driving, the water will reach 140 degrees F in two hours. Operating on LP gas, the heat recovery is 100 degrees on 7.4 gallons each hour.

The heater has an automatic gas shut-off system activated by high water temperature.

Access to the heater controls is through the outside service door.

Lighting Instructions (See Figure 7-5).

CAUTIONS

1. Check that fresh water system is full or coach hooked-up to city water supply.

2. Open heater relief valve (5) and check that water flows without presence of air.

1. Turn gas cock (4) to OFF.

2. Wait at least 5 minutes for gas to escape.

3. Turn gas cock (4) to PILOT.

4. Depress and hold reset button (3).

5. Light pilot (6).

6. Wait 30 seconds and release reset button (3).

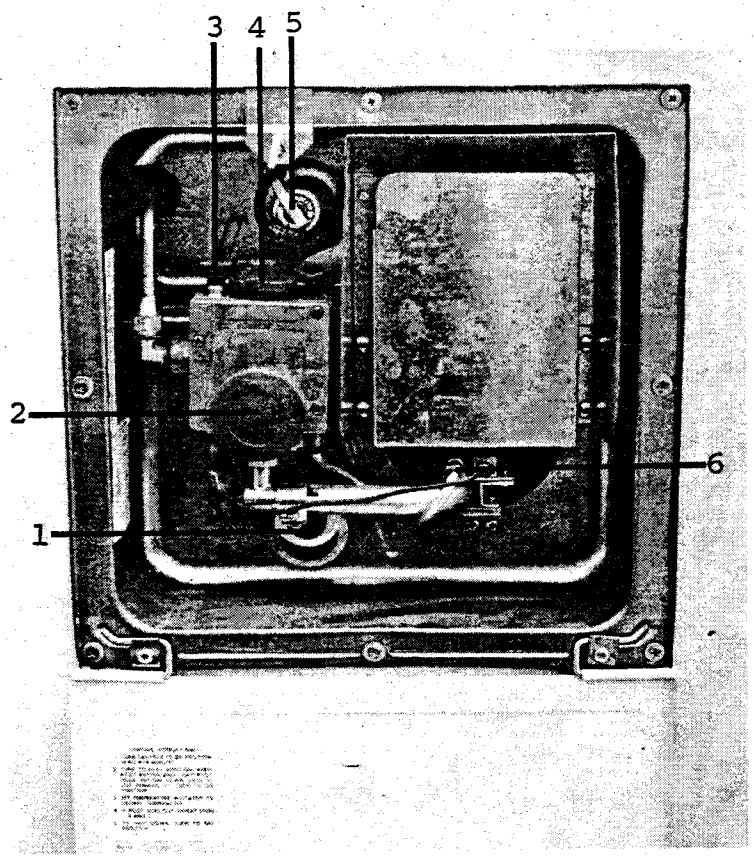


Figure 7-5. Water Heater

1. Drain Valve
2. Temperature Dial
3. Reset Button
4. Gas Cock
5. Safety Relief Valve
6. Pilot

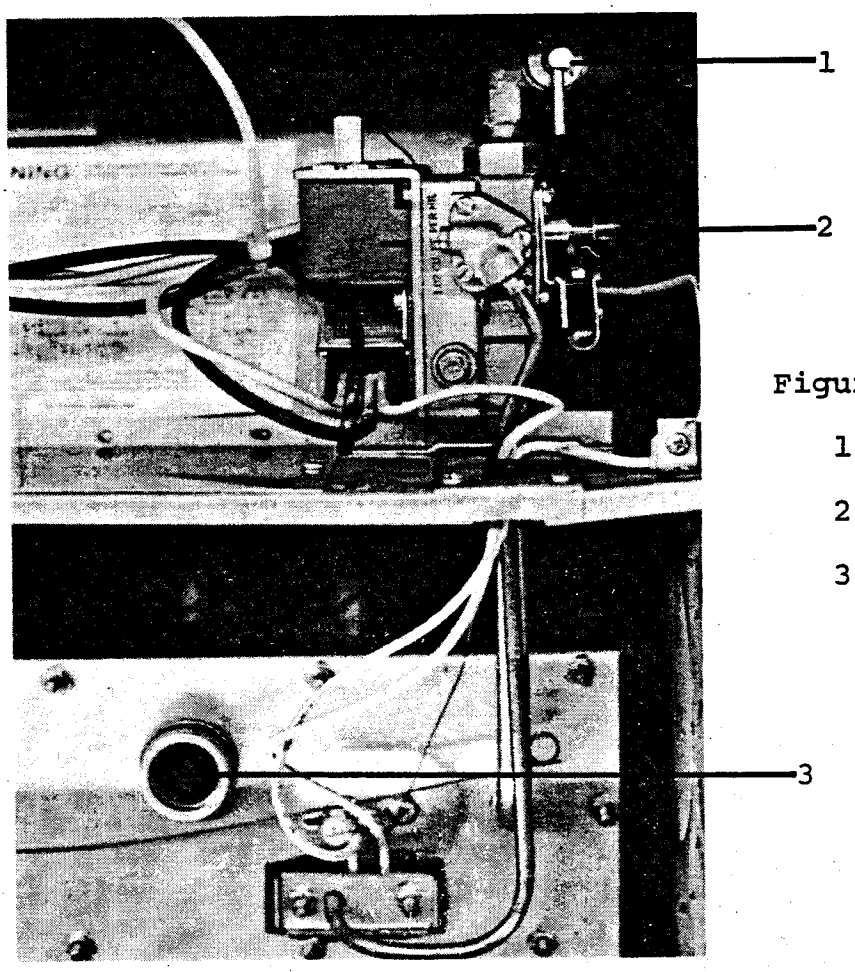


Figure 7-6. Forced Air Furnac

1. Cutoff Valve
2. Ignition Button
3. Pilot Observation Cap

Lighting Instructions (cont.)

7. If pilot goes out, repeat steps 4 through 6.

8. Turn gas cock (4) to ON.

9. Turn temperature dial (2) to desired setting.

Check Thermostat Shut-Off

1. Turn temperature dial (2) fully counter-clockwise.

2. Check that gas shuts off completely.

Maintenance

1. Clean intake/exhaust vent.

2. Drain heater when not in use:

   a. Open drain valve (1). (See Figure 7-5).

   b. Open hot water faucet in sink.

FORCED AIR FURNACE

The following descriptions and instructions are provided as a supplement to the information furnished by the manufacturer. Due to possible changes in design or equipment installed, material supplied by the manufacturer takes precedence should any discrepancy occur. More detailed and specific information will be found in that material.

Description

The coach is equipped with either one or two sealed combustion furnaces with dual blowers. One blower draws air from the outside cap. The other blower circulates heated air through a system of ducts and registers.

A return air grille located next to the furnace draws in cold air for heating and circulation.

CAUTION

Do not block air flow to return air grille.

A room thermostat mounted on the bedroom wall, and on the front of the galley counter on 29' and 31' models is used to regulate the desired heating and to shutdown the furnace when not in use.

FORCED AIR FURNACE (cont.)

Lighting Instructions (See Figure 7-6).

1. Open LP gas tank outlet valve.
2. Set wall thermostat to OFF.
3. Remove furnace access door.
4. Turn cutoff valve (1) to OFF or vertical position.
5. Wait five minutes.
6. Turn valve (1) to OFF or vertical position.
7. Turn thermostat up until blower comes on.
8. Depress and hold red ignition button (2).

NOTE

1. The blower will stop.
2. Glow coil will ignite pilot or remove observation cap (3) and light pilot with match. Replace cap.

9. Keep button (2) depressed for one minute and release.

NOTE

Blower and main burner will come on when button (2) is released.

10. Check that pilot is lit. If not lit, repeat steps 8 and 9.

NOTE

If pilot is hard to light, it may be because air is in the line.

11. Install access door.
12. Set thermostat to desired setting.

ATTENTION

Most new appliances when first used will smoke somewhat due to burning paint in the combustion chamber. Open windows to allow smoke to escape. The smoke will dissipate quickly.

Pilot and Burner Adjustment

Flames should be blue with slight yellow at the tip.

The pilot and burner are pre-set at the factory. Should they require adjustment, refer to service instructions supplied with the unit or your nearest dealer.

Shut-Down Furnace

1. Turn cutoff valve (1) to OFF. (See Figure 7-6).

2. Turn thermostat located on bedroom wall and on the front of the galley cabinet on 29' and 31' models to OFF.

Maintenance

1. Clean air blowers.

2. Clean inside furnace casing.

3. Clean burners.

4. Using bubble solution, check furnace controls and line connections for gas leakage.

5. If sooting builds up in the combustion chamber, use a vacuum cleaner at the access holes to clean unit.

SECTION VIII

FRESH WATER SYSTEM

DESCRIPTION

The fresh water system utilizes a gravity feed storage tank coupled to a 12 volt DC self-priming water pump. The size of your storage tank and component location will vary according to your particular coach. Refer to Model Specifications, Section XIV.

With pump switch, located on Central Control Panel, in ON position, the pump will automatically turn on and off as faucets are opened and closed.

The system may be connected directly to a commercial water supply by a garden hose. This method bypasses the storage tank and water pump. In this case the electric water pump should be turned OFF.

The system is also equipped with a filter-purifier designed to remove all dirt and matter and eliminate tastes and odors. It filters and purifies the cold water at the galley sink for drinking.

The system supplies water to all faucets, shower and toilet.

SANITIZE FRESH WATER SYSTEM

NOTE

Fresh water system should be sanitized at initial filling, when out of use for some time and if contaminated.

1. Drain system.
2. Prepare a chlorine solution with one gallon of water and 1/4 cup of household bleach.
3. Pour one gallon of solution for each fifteen gallons of tank capacity into fill spout. (See Figure 8-1).
4. Fill tank with fresh water.
5. Open faucets and water heater relief valve until water flows.
6. Place pump switch at OFF.
7. Allow to stand for three hours.

SANITIZE FRESH WATER SYSTEM (cont.)

8. Drain system and flush with fresh water.

9. Remove remaining chlorine taste or odor with a solution of one quart vinegar to five gallons water.

10. Allow to agitate in tank by vehicle motion several days if possible.

11. Drain system and flush with fresh water.

FILL FRESH WATER SYSTEM

1. Fast fill (city water available)

   a. Connect garden hose to water service connection (1) located on roadside of coach. (See Figure 8-1).

   b. Release retainer clip on water fill spout (2) and pull spout out.

   c. Open fast fill valve and storage tank cutoff valve. Refer to Model Specifications, Section XIV for component location.

   d. Fully close fast fill valve when water flows from fill spout or from overflow vents under the coach.

   e. Push in spout and attach clip.

   f. Disconnect hose.

   g. Go to step 3.

2. Slow fill (city water not available)

   a. Release retainer clip on water fill spout (2) and pull spout out. (See Figure 8-1).

   b. Open tank cutoff valve.

   c. Fill tank through spout until water overflows.

NOTE

Do not force water into spout since air within the tank must be released through vent tube in spout during filling.

   d. Push in spout and attach clip.

3. Go to step 3.

FILL FRESH WATER SYSTEM (cont.)

3. After filling water storage tank, purge system of air.

   a. Turn pump switch ON.

   b. Open each faucet until water flows without air bubbles.

   c. Open water heater relief valve until water flows without air bubbles.

CONNECTING TO CITY WATER (See Figure 8-1).

1. Attach a garden hose to water service connection (1).

CAUTIONS

1. Due to high city water pressure, use a heavy duty hose able to withstand pressures to 125 pounds per square inch.

2. A water pressure regulator can be installed to prevent possible damage to the coach water system due to excessive pressure.

2. Check connections for leakage.

3. Check that pump switch is OFF.

4. Open each faucet until water flows without air bubbles.

5. Open water heater relief valve until water flows without air bubbles.

DRAIN WATER SYSTEM

1. Level coach.

2. Turn pump switch OFF.

3. Open all faucets and shower head.

4. Open tank drain valve, fast fill valve, tank cutoff valve and petcock. Refer to Model Specifications, Section XIV for component locations.

5. Open water heater drain valve.

DRAIN STORAGE TANK

1. Open tank drain valve, fast fill valve and tank cutoff valve. Refer to Model Specivications, Section XIV for component locations.

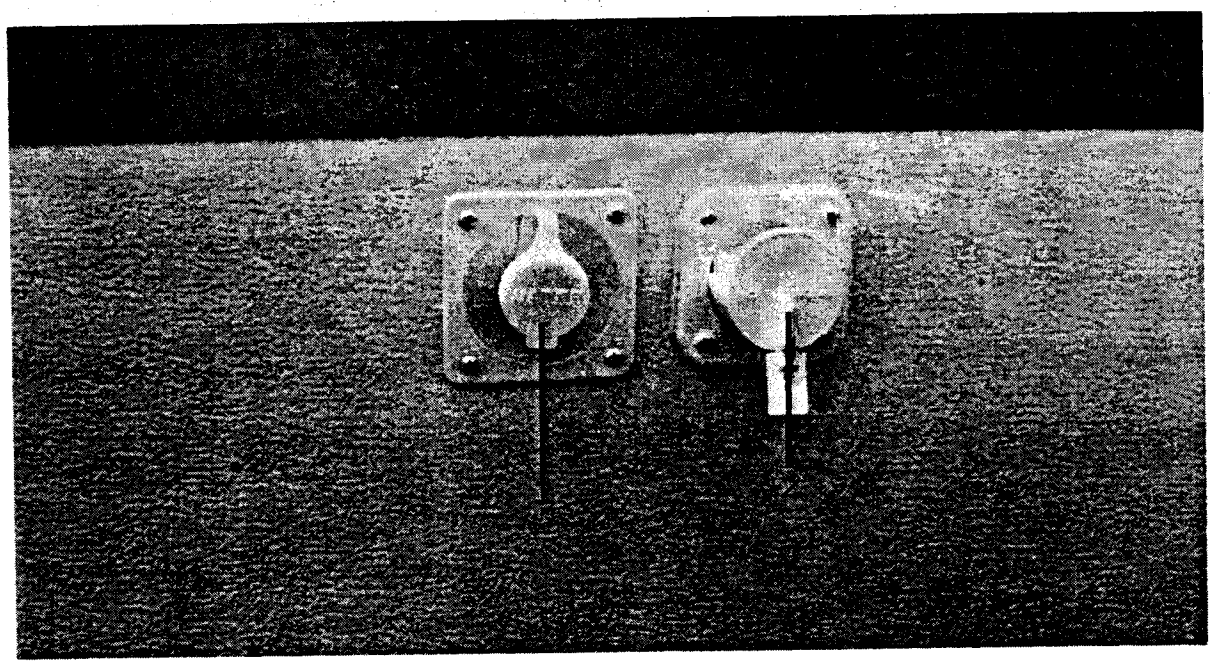


Figure 8-1. Typical Fresh Water Service Connections

1. City Water Connection
2. Water Fill Spout

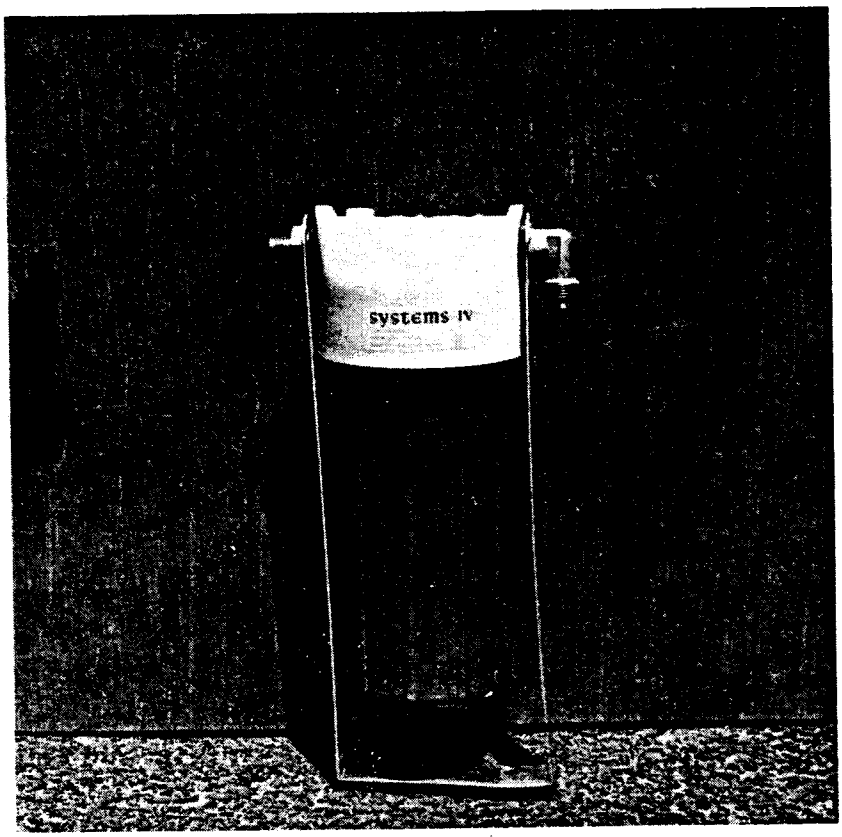


Figure 8-2. Water Filter

REPLACE WATER FILTER CARTRIDGE (See Figure 8-2).

Refer to Model Specifications, Section XIV for component locations.

NOTE

Replace filter cartridge if water pressure drops noticeably or a change in taste or odor is evident.

1. Turn pump switch OFF.
2. Close storage tank cutoff valve.
3. Open water faucet and allow water pressure to escape.
4. Unscrew lower portion of filter and remove filter cartridge.
5. Install new cartridge. Check that cartridge is centered.
6. Install lower portion of filter and hand tighten.
7. Close faucet.
8. Open tank cutoff valve.
9. Turn pump switch ON and check filter for leakage.

WATER PUMP

This pressure sensitive water pump starts any time 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. The pump control switch on the Central Control Panel merely controls operating power to the pump and does not directly start or stop it.

CAUTION

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

INITIAL PUMP START (Or system out of use for some time)

1. Check water level in storage tank.
2. Open tank shut-off valve. Refer to Model Specifications, Section XIV, for component location.
3. Close fast fill valve.
4. Open all faucets and turn pump switch ON.
5. Close faucets when water flows smoothly.

SECTION IX

WASTE DISPOSAL SYSTEM

DESCRIPTION

Your Sportscoach is equipped with two waste holding tanks. One retains toilet wastes and the other retains liquid waste from sink, lavatory, and shower. The tanks are made of seamless plastic which will not corrode.

A slide valve attached to each tank permits draining through a common drain outlet. A flexible three-inch O.D. drain hose supplied with the coach ensures sanitary waste disposal. (See Figure 9-1).

Waste holding tank capacity and component location will vary according to your particular coach. Refer to Model Specifications, Section XIV.

Waste level of holding tanks is indicated on the Central Control Panel.

TOILET AND HOLDING TANK

This tank is located directly below the toilet. Proper operation and service of these components will prevent any unpleasant chores. Several cautions should be observed to ensure trouble free operation.

CAUTIONS

1. Do not put facial or wet strength tissues down toilet.
2. Do not put detergent, bleach or lye down toilet.
3. Do not put petroleum products, alcohols or ammonia down the toilet.
4. Use anti-freeze products approved by manufacturer only.
5. Solid build-up is usually due to insufficient amounts of water in tank. Be sure to prime tank and add water before dumping to facilitate good drainage.

Tank must be primed with two gallons of water and one odor control chemical package each initial use. Add more odor control chemical as required until dumping is desired. See package for instructions.

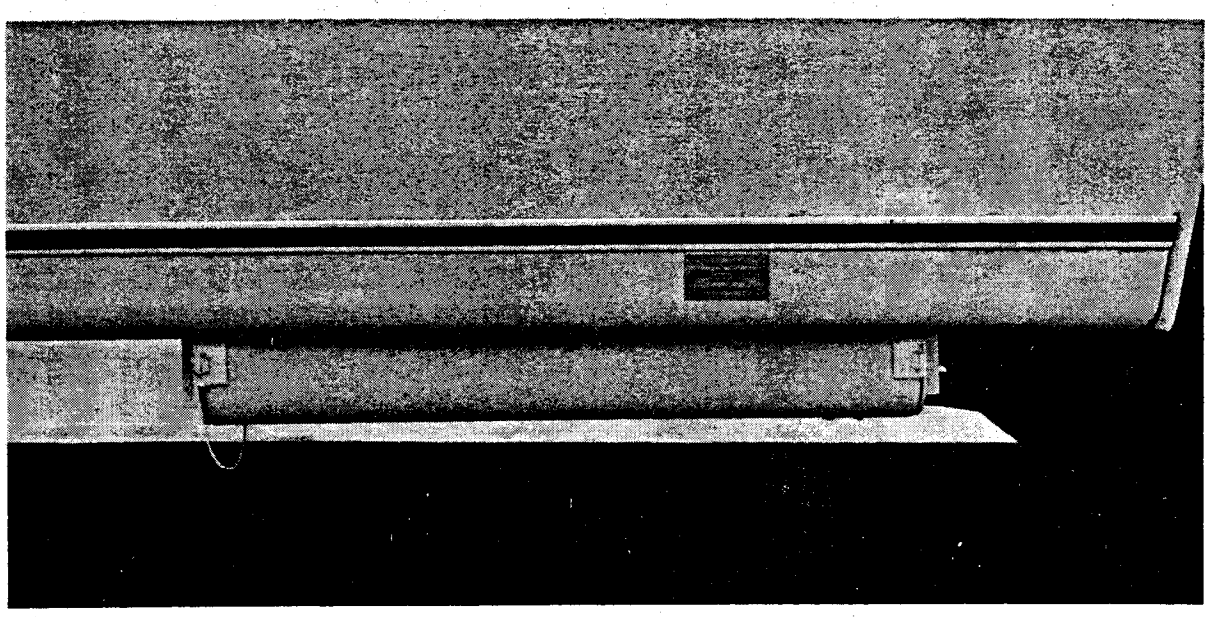


Figure 9-1. Drain Hose Carrier

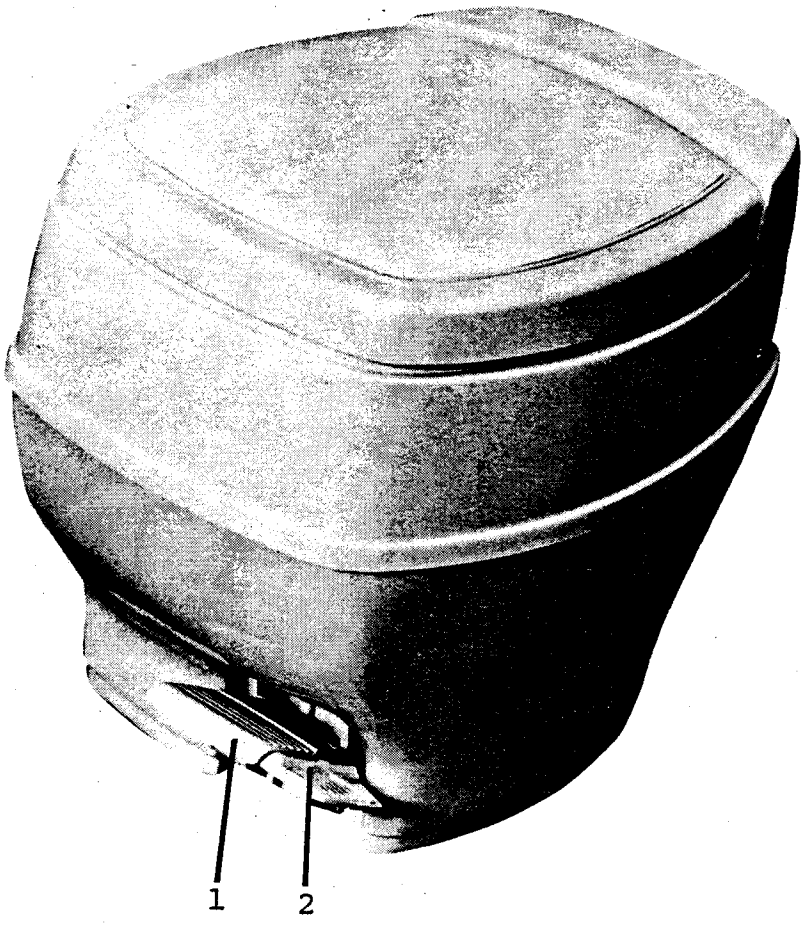


Figure 9-2. Aqua Magic Toilet

1. Large Pedal

2. Small Pedal

Toilet Operation

NOTE

Refer to material supplied with toilet for additional information.

Aqua Magic Toilet (See Figure 9-2).

1. Automatic flush and refill

   a. Step on large pedal until water swirls in bowl.

   b. Release pedal.

2. Fast flush and refill

   a. Step on small pedal until water swirls in bowl.

   b. Release pedal.

   c. Step on large pedal until waste drains.

   d. Release pedal.

3. Add water to bowl.

   a. Step on small pedal until water reaches desired level.

   b. Release pedal.

Electric Recirculating Toilet (Optional)

1. Initial flush charge.

   a. Open refill control valve or pour water in bowl until charge level (c) or indicator lens is reached. (Requires approximately three gallons of water.)

   b. Pour in an eight ounce bottle of Aqua Ken Concentrate.

2. Flush

   a. Depress flush button.

NOTE

Do not depress button when unit is empty.

3. Evacuate toilet.

   a. Pull out Slide-Ez valve handle at bottom of toilet.

Electric Recirculating Toilet (cont.)

b. When toilet has drained, push in valve handle.

c. Perform initial flush charge procedure, step 1 above, for continued use.

LIQUID WASTE HOLDING TANK (Shower, sink, & lavatory)

This holding tank receives all liquid waste from the shower, sink and lavatory. Use care not to over-fill tank as waste can back up into the shower or leak through trap connections. Check content level at the Central Control Panel frequently.

DRAIN HOLDING TANKS

CAUTION

Do not allow wastes to drain on ground. For safety, place a bucket under the drain outlet when draining.

Due to model variations the location of drain outlet and control handles will vary. Figure 9-3 shows a typical arrangement for a side bath coach. Figure 9-4 shows a typical arrangement for a rear bath coach.

Operating Self Contained

Most drainage problems are the result of a build-up of solids, usually caused by insufficient quantities of water within the tank. It is advisable to retain toilet wastes until the tank is fairly full. Movement while driving will help liquify solids. Adding additional water to tank before dumping will help carry the waste away more effectively.

NOTE

Toilet waste must be drained ONLY at approved disposal facilities. Liquid waste may be drained at other sites. Consult with park or camping officials.

1. Position coach drain outlet opposite septic tank inlet at disposal station.

2. Remove drain hose from carrier.

3. Check that both holding tank valves are closed.

4. Turn drain cap counter-clockwise and remove cap.

5. Connect drain hose to outlet. (See Figure 9-5).

6. Connect drain hose to septic tank inlet.

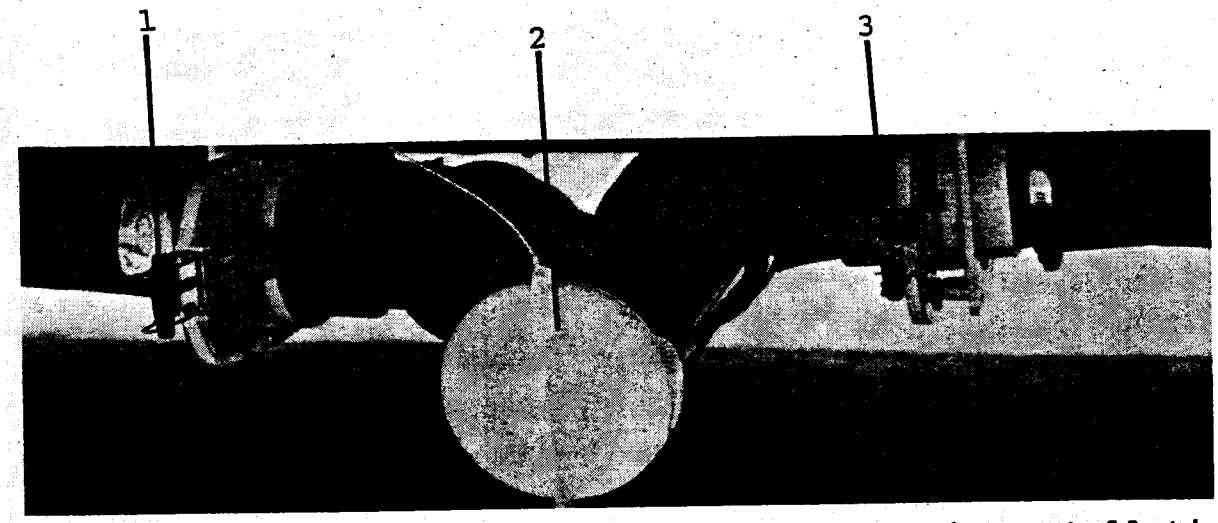


Figure 9-3. Typical Side Bath Holding Tank Drain Installation

1. Liquid Waste Drain Valve
2. Drain Outlet
3. Toilet Waste Drain Valve

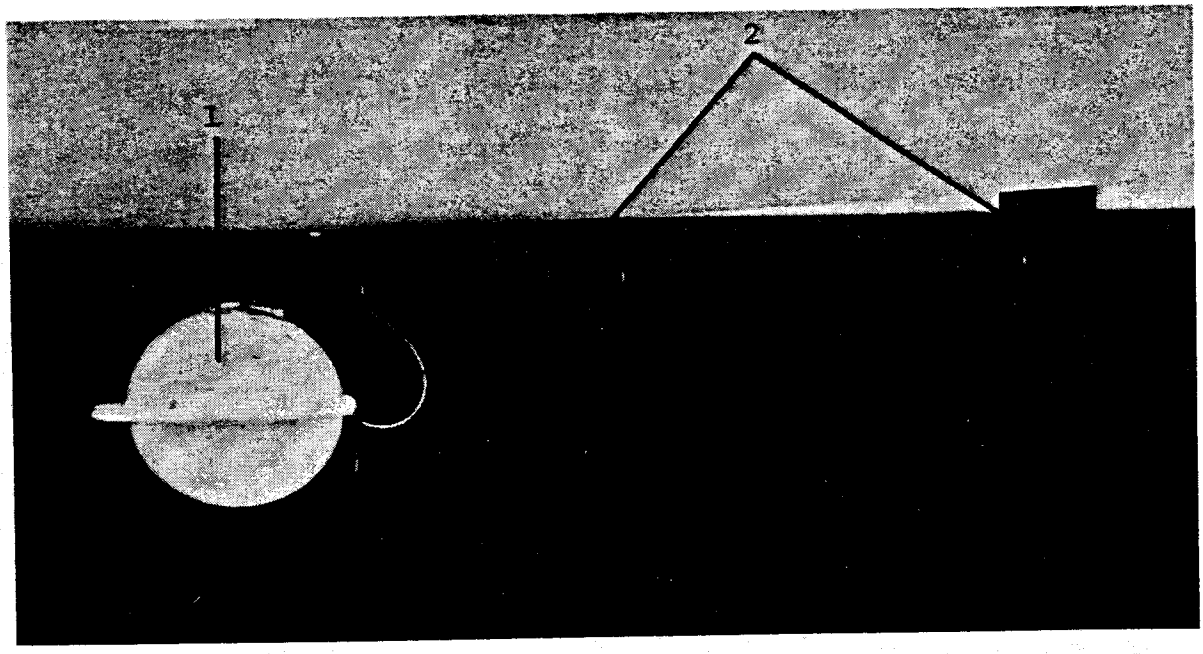


Figure 9-4. Typical Rear Bath Holding Tank Drain Installation

1. Drain Outlet
2. Drain Valve Handles

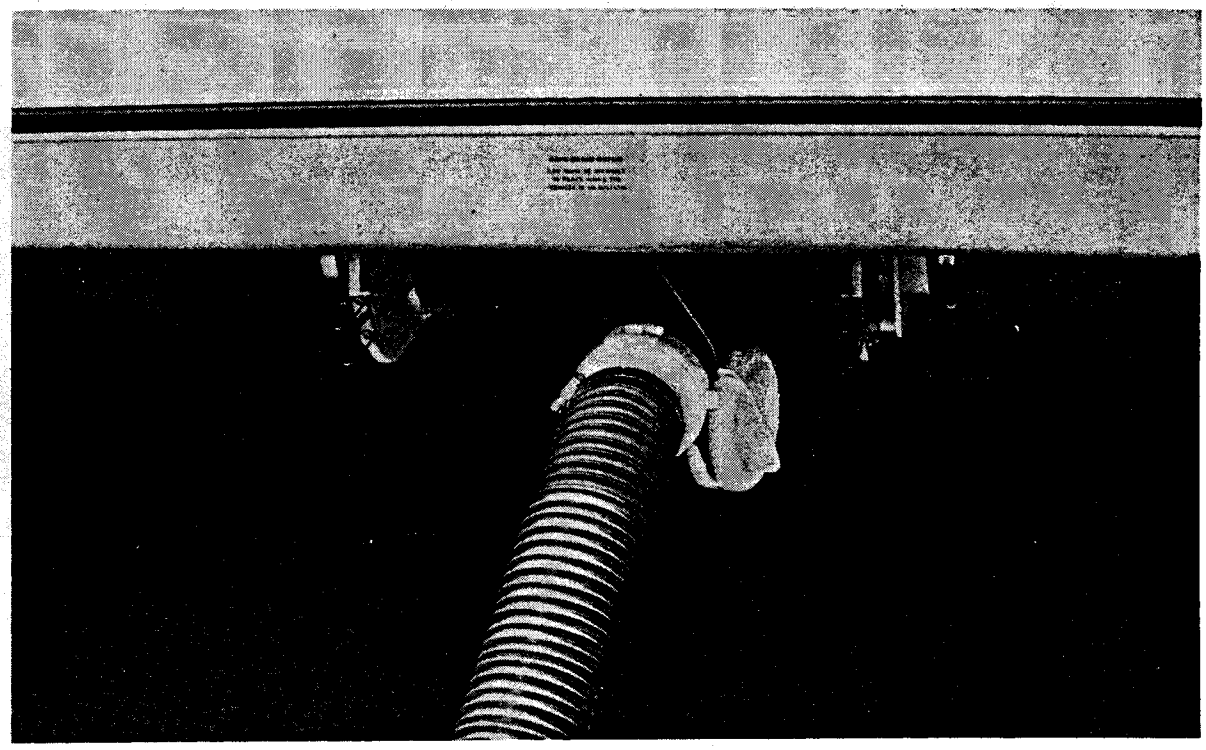


Figure 9-5. Typical Drain Hose Connection

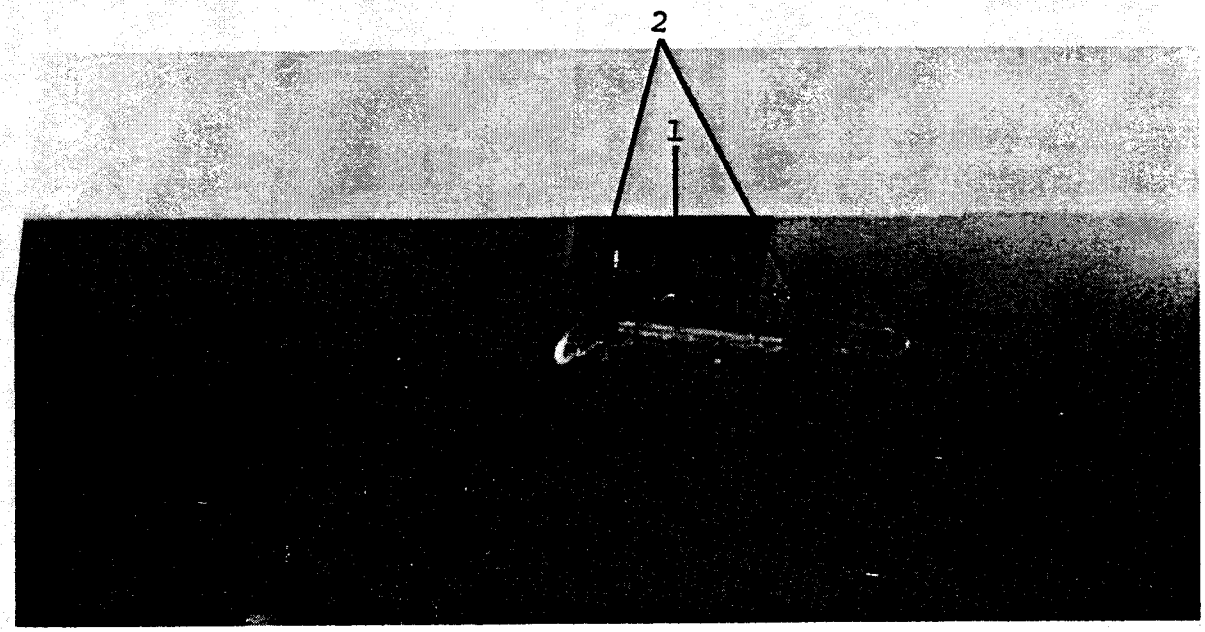


Figure 9-6. Drain Valve Control Handle Detail

1. Control Handle

2. Retaining Clip

Operating Self Contained (cont.)

7. Check that drain hose has smooth downward flow throughout its length.

NOTE

The rear handle is for toilet waste and the front handle is for liquid waste.

8. Release spring clips from toilet valve handle. (See Figure 9-6).

9. Pull handle out smoothly and quickly until it stops.

10. Allow waste to drain.

11. Flush toilet for at least one minute.

12. Push handle in and fasten clips.

13. Release spring clips from liquid valve handle.

14. Pull handle out smoothly and quickly until it stops. Allow waste to drain.

15. Push handle in and fasten clips.

16. Disconnect drain hose and clean with fresh water. Place hose in carrier.

17. Install drain cap.

Operating Connected to Sewer/Septic Lines

1. Connect coach to sewer/septic line as outlined in self-contained operation.

2. Liquid waste holding tank valve may be left in the open position providing continuous drainage.

NOTE

Drainage of toilet waste is more effective when a larger volume is released at one time.

3. Keep toilet holding tank valve closed, allowing wastes to build up.

4. When draining is desired, release spring clips and pull out valve handle smoothly and quickly. (See Figure 7-6). Allow waste to drain.

Operating Connected to Sewer/Septic Lines (cont.)

5. Flush toilet at least one minute. Push handle in and fasten clips.

NOTE

If solids should build up in tank or lines, fill tank half full of water and drive coach. The movement will help dislodge the solids. Then drain the tank.

6. When disconnecting from sewer/septic line:

   a. Push in both valve handles and fasten spring clips.

   b. Disconnect drain hose and clean with fresh water. Place hose in carrier.

   c. Install drain cap.

WASTE DESTRUCTION SYSTEM (Optional)

The Thermasan waste destruction system will destroy all waste and water stored in the holding tanks. The system utilizes the exhaust system of the coach to burn solid particles and vaporize liquids. The result is that harmless, odorless and invisible by-products are expelled through the engine exhaust pipe.

Operation

To function properly, a reaction temperature of 900 to 1,000 degrees F is required. The system is fully automatic when activated. Simply turn unit ON at Thermasan Control Panel located below the instrument cluster. (See Figure 9-7). The READY light will glow when the unit is activated.

The REACTION light will glow when reaction temperature has been reached and a speed of at least 40 MPH has been reached. Wastes are being destroyed at this point.

The EMPTY light will glow when reaction is completed and all wastes destroyed.

This system may be installed at any time. For additional information contact your nearest Sportscoach Dealer or SCA Service Center.

Figure 9-7. Thermasan Control Panel

SECTION X

GETTING UNDERWAY

CAUTION

Your Sportscoach needs at least 11 feet height clearance. Be sure of adequate clearance with overpasses, bridges, tunnels and gas stations. Don't risk severe damage to your coach!

Your Sportscoach, being larger and heavier than an automobile, requires more room to stop and pass. Learn the handling limitations of the coach and drive defensively.

LOADING

The components of your Sportscoach chassis are designed to provide satisfactory service if the chassis is not loaded in excess of the gross vehicle weight rating (GVWR) of the chassis, or the gross axle weight ratings (GAWR) of the front and rear axles. These weight ratings are specified on the Sportscoach vehicle identification tag to the left of the driver's seat, and on the chassis manufacturer's identification plate attached to the firewall under the hood.

Overloading can create serious potential safety hazards and may also shorten the service life of your chassis. Your chassis New Vehicle Warranty does not apply to any part of your chassis "which has been subject to misuse". Any part that fails because of overloading has been subject to misuse within the meaning of this provision of the warranty.

Gross Vehicle Weight Rating is the chassis manufacturer's maximum design load that the chassis is designed to carry. This weight includes the chassis, the body built onto the chassis, all equipment added to the chassis, the driver and all occupants and everything that is loaded into (or onto) the motorhome and/or the chassis.

Gross Axle Weight Rating is the maximum design load that each of the axles is designed to carry by the chassis manufacturer. The sum of the front and rear GAWR may exceed the GVWR of the vehicle. In this case the vehicle may still be loaded only to the GVWR, and neither axle load should exceed the GAWR.

In Section XIV the approximate curb weight of your Sportscoach is listed. This is the weight of the vehicle with full capacities of gasoline, fresh water and LPG, with the holding tanks empty, and without any occupants. The difference between this curb weight and the GVWR is the approximate payload capacity of the coach. The curb weight given in Section XIV is only an approximation, since this weight will vary significantly from vehicle to vehicle depending on the

particular equipment fitted. To get a correct picture of the payload capacity of your particular Sportscoach, you should weigh the vehicle, both the total weight and the axle weights. This can be accomplished through either highway or private weigh stations.

Weighing your Sportscoach

Before and after your motorhome is loaded, weigh the front and rear axles and the total vehicle to determine the exact weight. Obtain these weights at any authorized weigh station and save the weight receipts. Record these weights in the spaces provided in this manual so that you have a permanent record of the weight of your Sportscoach.

First drive your motorhome onto the scales and get a total weight of the vehicle. Then back up so that the rear wheels are off the scale and front wheels are on the scale and get a front axle weight. Then drive ahead to get a rear axle weight. You will probably find that the front and rear axle weights do not exactly add up to the total vehicle weight. This is normal, since large scales with capacities of up to 100,000 pounds will have small errors when weighing loads as light as motorhome axle loads. The actual measured total vehicle weight should be considered more accurate than the sum of the axle weights. This weighing procedure should be performed both with the vehicle completely empty and with the vehicle loaded.

Sportscoach Weight Record

1. Sportscoach unladen, empty tanks, less driver and passenger:

   Front Axle _____ lbs. Rear Axle _____ lbs.

   Total Unladen Weight _____ lbs. Date: _____

2. Sportscoach laden weight, full gasoline, fresh water, and LPG, includes driver only:

   Front Axle _____ lbs. Rear Axle _____ lbs.

   Total Laden Weight _____ lbs. Date: _____

Vehicle Loading Procedure

In loading your Sportscoach try to distribute the load as evenly as possible both from side to side as well as from front to rear. Always put the heaviest items as low as possible. Proper distribution of the load will lead to the easiest and safest driving of your Sportscoach on the road, particularly under difficult driving conditions.

Never exceed the GVWR and the GAWR of the chassis. If you need to carry a heavy load, remember that you can increase your payload capacity by reducing the amount of gasoline and fresh water that you are carrying. Gasoline weighs about 6 pounds per gallon and water about 8 1/3 pounds per gallon, so that by reducing the amount of these liquids that you are carrying on the road, you can increase the payload capacity.

Wheel Lug Nuts

The torque, or tightness, of the lug nuts that hold the wheels onto the axles of your motorhome should be checked regularly. They should be checked at least every 6000 miles. See your chassis owner's manual for more details.

MIRRORS

Because of the size of your Sportscoach, the outside mirrors are very important. Learn to use them effectively and frequently.

Adjust side mirrors so that a small section of the coach sidewall is visible on the inside edge of each mirror. The wide angle mirror provides additional visibility but requires getting accustomed to since things appear out of proportion.

Use the left mirror to view center lane stripe to acquire correct lane position.

REAR OVERHANG

Rear overhang is the distance that the coach extends beyond the

REAR OVERHANG (cont.)

rear wheels. Use care when pulling away from curbs, when parking, when turning sharply, and when driving on narrow roads to avoid hitting any object with the rear end.

Use care when going in or out of driveways and over dips to avoid dragging the rear bumper.

STEEP GRADES

Use a lower gear when going up steep or long grades to avoid lugging the engine and prevent overheating of engine and transmission.

Use a lower gear when going down steep or long grades to prevent the brakes from overheating.

PRE-TRIP CHECKS (See Figure 10-1).

1. Coach Exterior

    a. Check for fluid leaks.

    b. Check tires and wheels for damage.

    c. Check that access doors are securely closed.

    d. Check engine oil level.

    e. Check engine coolant level and windshield washer reservoir.

    f. Check water level of all batteries.

    g. Fold and push in entry step.

    h. Check power plant oil level.

    i. Check that holding tank drain valves are closed and drain cap is secure.

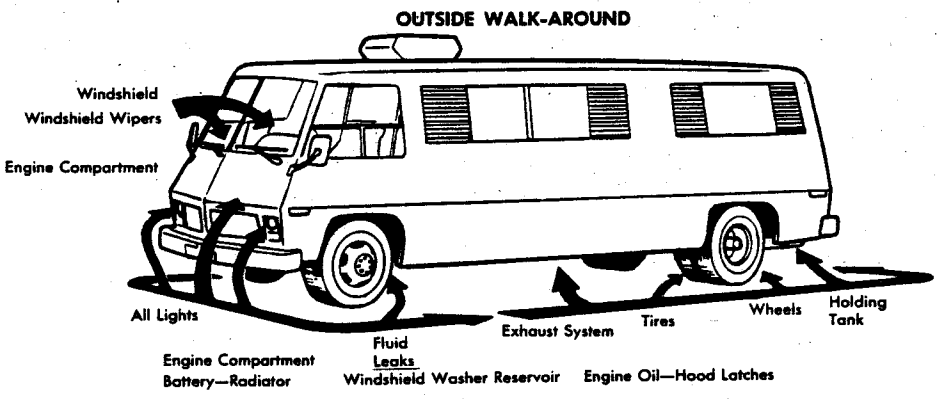
2. Coach Systems

    a. Fill fresh water tank.

    b. Drain holding tanks.

    c. Check operation of interior and exterior lights (turn signals, stop lights, etc.)

Five-Minute Walk-Around Safety Check



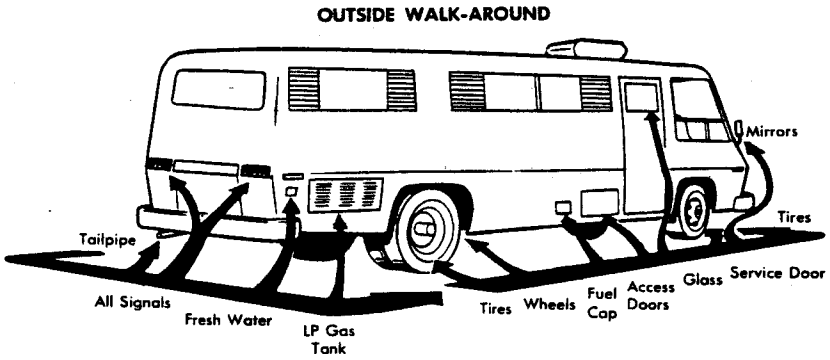


Figure 10-1. Pre-Trip Checks

PRE-TRIP CHECKS (cont.)

d. Test operation of power plant.

e. Check LP gas level.

3. Coach Interior

a. Check that entry door is locked.

b. Secure all loose items.

c. Close all drawers and cabinets.

d. Secure doors on range and refrigerator.

4. Behind the Wheel

a. Adjust seat and mirrors.

b. Start engine and check all instruments for proper indication.

c. Check that windshield wipers and washers operate.

d. Test brakes.

QUICK LOADING CHECK LIST

LINENS
____Sleeping bags
____Sheets
____Pillow cases & Pillows
____Mattress pads
____Extra blankets
____Laundry bags
____Storage dishes

COOKING
____Can opener
____Bottle opener
____Spatula
____Long fork
____Serving spoon
____Skillet
____Pot with cover
____Oven pan
____Plastic shaker
____Mixing bowl & cover
____Aluminum foil
____Wood type matches
____Plastic bags
____Plastic waste baskets
____Measuring spoon

BATHROOM
____Hand soap
____Shampoo
____Tooth brushes & paste
____Combs and brushes
____Bath towels that can double as beach towels
____Shower caps
____Toilet kits
____Shaver
____Toilet tissue

PERSONAL
____Credit Cards
____Traveler's checks
____Money
____Drivers license
____Proof of citizenship for Mexican or Canadian crossing
____Camera equipment & film
____Games, toys, coloring book
____Fishing equipment
____Binoculars
____Extra eye glasses
____Sun glasses
____Pocket knife
____Sewing kit

QUICK LOADING CHECK LIST (cont.)

CLEANING

____Scouring pads
____Cleanser
____Dish Soap
____Sponge
____Laundry soap
____Cleaning rags
____Air freshener
____Broom & small hand vacuum

BABY NEEDS

____Porta-crib
____Car bed or similar
____Expanding gate with rubber bumpers on end--like fits in door jamb
____Back carrier for your "papoose"

PET NEEDS

____
____
____

FOOD

Carry enough for the first couple of days or so. Buy as you go. Use plastic, paper or other disposable containers. Remember seasonings.

CLOTHES TIPS

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

MISCELLANEOUS

____String
____Clothes line
____Fly swatter
____Insect repellent
____Masking tape
____Small barbecue grill
____Charcoal
____Lighter fluid
____Notebooks
____Pencils
____Crayons, marking pens
____History or other "lower" books on areas you plan to visit
____Bird watching books
____Boy Scout and/or Girl Scout manuals
____Geology or rock & mineral type books
____Stamps for post cards & letters
____Address book
____Heavy-duty electric extension cord
____Wash & Dry napkins
____Sharp knife
____Coffee pot
____Scissors
____Shot glass
____Hot pads & mits
____Paper towels

STARTING ENGINE

CAUTION

If engine stalls or falters in starting, wait a few seconds before re-engaging starter. This will prevent possible damage to starter or engine.

NOTE

If air temperature is below ten degrees or coach has been idle for several days, depress accelerator two or three times before starting engine.

1. Cold Engine Start

   a. Place transmission selector at "P" (PARK).

   b. Turn ignition key to ON.

   c. Depress accelerator completely and release.

   d. With foot off accelerator, turn key to START.

   e. Release key when engine starts.

   f. Allow engine to warm-up approximately fifteen seconds before engaging transmission.

2. Warm Engine Start

   a. Place transmission selector at "P" (PARK).

   b. Turn ignition key to ON.

   c. Depress accelerator halfway and hold in this position. NOTE: Do not pump accelerator.

   d. Turn key to START.

   e. Release key when engine starts.

3. Flooded Engine Start

   a. Place transmission selector at "P" (PARK).

   b. Depress accelerator completely and hold in this position.

   c. Turn ignition key to START.

   d. Release key when engine starts.

   e. Release accelerator gradually as engine speed increases.

USING TRANSMISSION

The transmission shift lever is located at rear of the switch panel. The shift lever has six positions.

1. "P" (PARK): This position locks rear wheels and transmission with engine on or off. Coach must be at a full stop before shifting into "P". Start engine in this position.

2. "R" (REVERSE): Coach must be at a full stop before shifting into or out of this position.

3. "N" (NEUTRAL): This position disengages transmission.

4. "D" (NORMAL DRIVE): In this position transmission will shift automatically from low to second and to high gear.

5. "2" (SECOND GEAR): This position is used for slippery surfaces, traffic braking and steep decents. Coach starts and remains in second.

CAUTION

Do not shift into "2" at speeds above sixty mph.

6. "1" (LOW GEAR): This position is used for sustained pulling power or braking on steep grades. Coach starts and remains in low. When shifting from "D" to "2" to "1", the transmission will remain in second until speed decreases and then downshift into low.

CAUTION

Do not shift into "1" at speeds above twenty mph.

SECTION XI

WINTERIZATION AND STORAGE

This section provides information on using the coach during freezing weather and storage of the coach. Particular attention is paid to the water systems and the storage batteries.

CAUTION

If water freezes inside system, it can damage piping and equipment.

OPERATING COACH DURING FREEZING WEATHER

1. Fresh Water System

   a. Keeping interior warm will aid in preventing water in storage tank, filter, pump and piping from freezing.

   b. Open cabinets and access doors inside coach to allow warm air to circulate over water system components.

2. Waste Disposal System

   a. Add non-toxic anti-freeze to the holding tanks. Refer to instructions with anti-freeze product.

   b. Electra Magic Toilet (Optional Equipment)

      Use half water and half non-toxic anti-freeze to charge toilet.

3. Check battery condition frequently and keep charged.

4. Follow chassis manufacturer's recommendations for the automotive system.

5. Partially open a window or vent to aid in air circulation and prevent condensation of moisture.

6. Install winter cover for air conditioner(s).

STORAGE OF COACH DURING FREEZING WEATHER

1. Fresh Water System (METHOD 1 - Drain System)

   a. Drain system. Refer to Fresh Water System.

   b. Leave all drains and faucets open.

STORAGE OF COACH DURING FREEZING WEATHER (cont.)

c. Remove water filter housing and cartridge. Store in a safe place. Refer to Fresh Water System.

d. Turn water pump switch ON. Allow pump to operate for several minutes then turn switch OFF.

e. Using compressed air, at low pressure blow out water lines at each faucet. This will force trapped water from low areas out of the system.

NOTE

Without using compressed air, it is impossible to remove all water from the system.

2. Fresh Water System (METHOD 2 - Anti-freeze)

a. Add non-toxic anti-freeze to water storage tank. Refer to instructions with anti-freeze product.

b. Turn water pump switch ON. Open faucets, drains, shower head, and water heater drain to allow anti-freeze to circulate throughout the system. Close faucets, drains, and shower head.

c. Before restoring system to use, completely drain and sanitize system. Refer to Fresh Water System and instructions provided with non-toxic anti-freeze.

3. Waste Disposal System

a. Aqua Magic Toilet

(1) Depress toilet pedal until all water has drained.

(2) With pedal depressed, insert an object (bottle) into bottom of bowl.

(3) Release pedal slowly so that the blade touches and holds the object.

b. Electra Magic Toilet (Optional Equipment)

(1) Pull out Slide-Ez valve handle at bottom of toilet.

(2) When toilet has drained, push in valve handle.

(3) Fill bowl to within three inches of top with water.

3. Waste Disposal System (cont.)

(4) Pour two inches (measured on bottle) of Aqua Bowl Cleaner into bowl.

(5) Flush toilet three times. Let stand for several minutes.

(6) Repeat steps (1) and (2).

c. Drain holding tanks. Refer to Waste Disposal System.

d. Close tank drain valves when draining is complete.

e. Using hot water, water softener and soap solution, flush sinks and shower. Rinse clean with hot water.

f. Fill both holding tanks half full. Drive coach a few blocks. Drain holding tanks. Refer to Waste Disposal System.

g. Fill tanks half full with fresh water, then drain tanks again.

h. Close tank drain valves.

i. Pour a cup full of approved plastic ABS pipe anti-freeze into each drain opening to prevent freezing of traps.

4. Check battery condition and fluid level every two weeks. Batteries must be kept properly charged to prevent freezing. If possible, remove batteries and store in a warm dry place.

5. Follow chassis manufacturer's recommendations for the automotive system.

6. Refer to following information for additional storage information which should be followed regardless of climatic conditions.

STORAGE OF COACH, GENERAL

1. Close L.P. gas tank outlet valve.

2. Turn furnace thermostat OFF.

3. Turn all electrical components OFF.

4. Defrost and clean refrigerator. Leave door slightly open.

5. Clean entire coach with particular attention to food and odor-causing items.

6. Close all windows and vents.

7. Seal vent openings to prevent birds and insects from nesting in coach.

8. Drain holding tanks. Refer to Waste Disposal System. Fill tanks with water, drive coach, and drain again. Fill tanks again and add one cleaning enzyme pellet for each seven gallons of water. If possible, allow to stand for four days. Drain holding tanks.

9. Check battery condition and fluid level every two weeks. Batteries will discharge themselves in 30-45 days. Keep batteries fully charged to insure long life and dependable service.

10. Drain fresh water system. Refer to Fresh Water System.

11. Install winter cover for roof air conditioner(s).

12. Operate automotive air conditioner five minutes each week to keep compressor lubricated.

13. Follow chassis manufacturer's recommendations for the automotive system.

14. Electric Power Plant

    a. Follow recommendations given in manual supplied by manufacturer of unit.

    b. Disconnect battery cable.

    c. Plug exhaust outlet to prevent entrance of moisture, dirt, and insects.

SECTION XII

SERVICE AND MAINTENANCE

COMPONENT SERVICE AND MAINTENANCE PROCEDURES

Refer to manual supplied with chassis for preventive maintenance and service information on the automotive system.

Refer to system and item in this manual for component preventive maintenance information.

Refer to manuals and instruction sheets supplied by component manufacturer for additional maintenance and service information.

OBTAINING SERVICE

Service on your Sportscoach may be broken down into three categories:

1. Separately Warranted Products
2. Chassis
3. Sportscoach Items

When obtaining service from your Sportscoach Dealer, it is important to know the Coach Model and Serial Number. The coach identification plate located below the driver's side window gives this information.

The chassis identification plate is located on the front firewall adjacent to the coolant recovery bottle. This plate gives the chassis model, serial number, and the gross vehicle weight rating.

Separately Warranted Products

NOTE

Sportscoach does not accept responsibility for Separately Warranted Products and does not maintain replacement parts or facilities for servicing those items.

Warranty Service

1. Contact authorized service and repair center from list provided by product manufacturer or manufacturer directly.

2. Understand warranty conditions and limitations.

CAUTION

Service performed by other than authorized service centers is not covered by your warranty.

3. Obtain a warranty work authorization number before work is performed.

4. Consult with authorized service personnel for details on warranty service for product involved.

Obtaining Parts for Separately Warranted Products

1. Contact authorized service center or manufacturer of product.

2. Provide product name, model and serial number.

3. Provice description of part and quantity needed.

4. State shipping instruction if applicable.

Chassis Service

Consult your Chassis Owner's Manual for service and maintenance information.

Sportscoach Service Items

Warranty Service

1. Contact your Sportscoach dealer.

Warranty Service (cont.)

2. Should the problem not be resolved at the dealer, contact Sportscoach Owner Relations Department, Sportscoach Corporation of America, 9134 Independence Ave., Chatsworth, California 91311.

   Provide the following information when contacting factory:

   a. Name, address and phone number.

   b. Model, serial number, month and year.

   c. Dealer name and address.

   d. Delivery date and current mileage.

   e. Exact nature of problem.

3. Obtain a warranty work authorization number before work is performed.

Obtaining Sportscoach Parts

1. Contact Sportscoach dealer.

2. Provide coach model and serial number.

3. Provide part description and information such as color, size, location, and quantity.

4. If in-warranty replacement part, the defective part must be returned to the dealer and ultimately to the Sportscoach factory for credit or refund.

SECTION XIII

EMERGENCY FEATURES AND PROCEDURES

Sportscoach meets or exceeds all federal and state requirements regarding plumbing, heating, electrical and LP gas systems.

EMERGENCY FEATURES

In addition to all the "safety" built into the coach, there are several emergency features which provide added security.

1. Emergency Brake: This brake should be used to slow the coach only if the conventional brakes fail. Under normal conditions, this brake is to be used only as a parking brake.

2. Emergency Escape Window: See Figure 13-1. The rear window is hinged at the top for emergency exit. To open window, release retaining bars at bottom of window and push outward on the bottom edge. The window will swing out and allow exit.

3. Emergency Flasher: The flasher control button is located on the steering column. Activating the flasher causes front and rear signal lamps to flash. Use only when coach constitutes a traffic hazard or in case of emergency.

4. Fire Extinguisher: A dry chemical fire extinguisher is supplied with the coach. Keep it in an easily accessible location.

5. Emergency Warning Triangle Set: This set of three warning trianges is stored with the tire jack. See instructions inside container for proper use should coach become disabled.

EMERGENCY PROCEDURES

1. Flat Tire

   a. Activate emergency flasher and apply emergency brake.

   b. Use tire jack under axles. Be sure jack is secure.

   c. Replace flat with spare tire.

NOTE

If one rear wheel is flat, decrease speed and proceed to service station for repair.

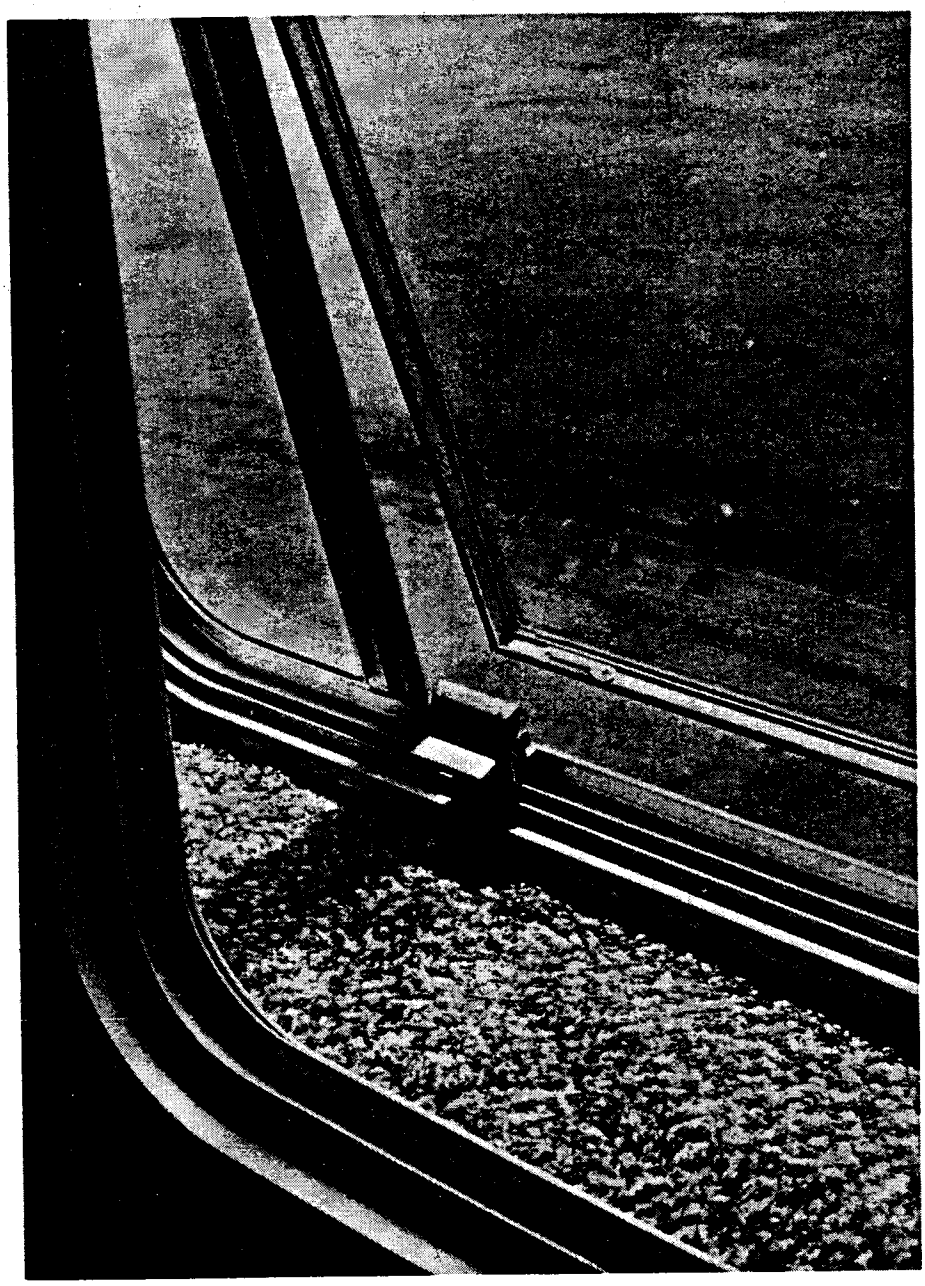


Figure 13-1. Emergency Escape Window

2. Disabled Coach

   a. Activate emergency flasher and apply emergency brake.

   b. Set up warning triangles for traffic.

   c. Call for assistance.

3. Towing

CAUTION

Remove hood before hooking-up to tow truck or damage may occur.

   a. Remove hood and disconnect wiring to hood light.

   b. If towing more than ten miles, disconnect rear drive line.

NOTE

Model 3100 Coach may require rear towing due to excessive rear overhand resulting in bumper drag if towed from front.

SECTION XIV

MODEL SPECIFICATIONS AND COMPONENT LOCATIONS

25 FOOT SPORTSCOACH

CAPACITIES

Fuel	64 gallons
LP-Gas	104 pounds
Water	75 gallons
Toilet Holding Tank	40 gallons
Liquid Waste Holding Tank	60 gallons

BODY SPECIFICATIONS

Engine	454 CID V8 (Chev) 440 CID V8 (Dodge)
Length	25 ft. 10 in.
Width	7 ft. 9 in.
Height	9 ft. 11 in. (Chev) 10 ft. 1 in. (Dodge)
Interior Height	6 ft. 3 in.
Curb Weight	10,600 pounds
GVW	12,300 (Chev) 12,000 (Dodge)
Front Axle Rating	4,880 pounds (Chev) 5,000 pounds (Dodge)
Rear Axle Rating	7,500 pounds
Tire Size	7.50 X 16 (Chev) 8.00 X 17.5 (Dodge)
Tire Pressure (cold)	Minimum Front 50 psi Full GVW Front 50 psi (Chev) Full GVW Front 60 psi (Dodge) Minimum Rear 40 psi Full GVW Rear 50 psi

COMPONENT SPECIFICATIONS

Air Conditioner	13,500 BTU
Furnace	31,000 BTU
Power Converter	40 amp
Power Plant	4,000 KW

SECTION XIV

MODEL SPECIFICATIONS AND COMPONENT LOCATIONS

2500 SPORTSCOACH

CAPACITIES

Fuel	100 gallons
LP-Gas	104 pounds
Water	100 gallons
Toilet Holding Tank	40 gallons
Liquid Waste Holding Tank	60 gallons

BODY SPECIFICATIONS

Engine	454 CID V8 (Chev) 440 CID V8 (Dodge)
Length	25 ft. 10 in.
Width	7 ft. 9 in.
Height	9 ft. 11 in. (Chev) 10 ft. 1 in. (Dodge)
Interior Height	6 ft. 3 in.
Curb Weight	11,900 pounds
GVW	14,000 pounds
Front Axle Rating	5,000 pounds
Rear Axle Rating	9,500 pounds (Chev) 9,840 pounds (Dodge)
Tire Size	8.00 X 19.5
Tire Pressure (cold)	Minimum Front 50 psi Full GVW Front 65 psi Minimum Rear 55 psi Full GVW Rear 65 psi

COMPONENT SPECIFICATIONS

Air Conditioner	13,500 BTU
Furnace	31,000 BTU
Power Converter	40 amp
Power Plant	4,000 KW

SECTION XIV

MODEL SPECIFICATIONS AND COMPONENT LOCATIONS

2900 SPORTSCOACH

CAPACITIES

Fuel	100 gallons
LP-Gas	104 pounds
Water	100 gallons
Toilet Holding Tank	40 gallons
Liquid Waste Holding Tank	60 gallons

BODY SPECIFICATIONS

Engine	454 CID V8 (Chev) 440 CID V8 (Dodge)
Length	29 ft. 10 in.
Height	10 ft. 1 in. (Chev) 10 ft. 3 in. (Dodge)
Interior Height	6 ft. 3 in.
Curb Weight	12,900 pounds
GVW	14,000 pounds
Front Axle Rating	5,000 pounds
Rear Axle Rating	9,500 pounds (Chev) 9,840 pounds (Dodge)
Tire Size	8.00 X 19.5
Tire Pressure (cold)	Minimum Front 60 psi Full GVW Front 65 psi Minimum Rear 60 psi Full GVW Rear 65 psi

COMPONENT SPECIFICATIONS

Air Conditioners (2)	13,500 BTU each
Furnaces (2)	23,000 BTU each
Power Converter	55 amp
Power Plant	6,500 KW

SECTION XIV

MODEL SPECIFICATIONS AND COMPONENT LOCATIONS

3100 SPORTSCOACH

CAPACITIES

Fuel	100 gallons
LP-Gas	104 pounds
Water	100 gallons
Toilet Holding Tank	40 gallons
Liquid Waste Holding Tank	60 gallons

BODY SPECIFICATIONS

Engine	454 CID V8 (Chev) 440 CID V8 (Dodge)
Length	31 ft. 10 in.
Width	7 ft. 9 in.
Height	10 ft. 1 in. (Chev) 10 ft. 3 in. (Dodge)
Interior Height	6 ft. 3 in.
Curb Weight	13,200 pounds
GVW	14,000 pounds
Front Axle Rating	5,000 pounds
Rear Axle Rating	9,500 pounds (Chev) 9,840 pounds (Dodge)
Tire Size	8.00 X 19.5
Tire Pressure (cold)	Minimum Front 60 psi Full GVW Front 65 psi Minimum Rear 60 psi Full GVW Rear 65 psi

COMPONENT SPECIFICATIONS

Air Conditioners (2)	13,500 BTU each
Furnaces (2)	23,000 BTU each
Power Converter	55 amp
Power Plant	6,500 KW

COMPONENT LOCATIONS

25 Ft. & 2500 REAR BATH

Component	Location
Brake Master Cylinder	In Roadside Front Wheelwell (Dodge) Under Access Door of Driver Floor (Chev)
Circuit Breaker Panels	Wardrobe Rear Wall
Fresh Water Valves (See Figure 14-1)	Under Roadside Bunk at Rear
Furnace	Under Curbside Bunk at Rear
Fuse Box	Above Refrigerator
Holding Tank Drain	Roadside behind Rear Wheel
Heater, Auxiliary	Under Curbside Bunk at Rear
LP Gas Tank	Curbside Rear
Petcock Drain Valve	Under Curbside Bunk at Front
Power Cord	Roadside behind Rear Wheel
Power Converter	Above Refrigerator behind Panel
Refrigerator Access	Roadside Center
Tire Jack	Roadside Compartment behind Front Wheel
Water Filter	Under Range
Water Heater	Curbside Center
Water Pump	Same as Water Valves

COMPONENT LOCATIONS

25 Ft. & 2500 SIDE BATH

Component	Location
Brake Master Cylinder	In Roadside Front Wheelwell (Dodge) Under Access Door of Driver Floor (Chev.)
Circuit Breaker Panels	Under Roadside Bunk at Rear
Furnace	Under Curbside Bunk at Front
Fuse Box	Above Refrigerator
Holding Tank Drain	Roadside Center
Heater, Auxiliary	Above Water Pump
LP Gas Tank	Curbside Rear
Petcock Drain Valve	See Fresh Water Valves
Power Cord	Roadside behind Rear Wheel
Power Converter	Above Refrigerator behind Panel
Refrigerator Access	Curbside Center
Tire Jack	Curbside Compartment behind Rear Wheels
Water Filter	Under Range
Water Heater	Curbside Center
Water Pump	Lower Cabinet in front of Roadside Bunk

COMPONENT LOCATIONS

2900 REAR BATH

Component	Location
Brake Master Cylinder	In Roadside Front Wheelwell (Dodge) Under Access Door of Driver Floor (Chev)
Circuit Breaker Panels	Wardrobe Rear Wall
Fresh Water Valves (See Figure 14-1)	Under Range (outside access)
Furnace (2)	Under Roadside Bunk at rear Under Kitchen Sink
Fuse Box	Above Refrigerator
Holding Tank Drain	Roadside behind Rear Wheel
Heater, Auxiliary	Under Curbside Bunk at Front
LP Gas Tank	Roadside Center
Petcock Drain Valve	See Fresh Water Valves
Power Cord	Roadside behind Rear Wheel
Power Converter	Above Refrigerator behind Panel
Refrigerator Access	Curbside Center
Tire Jack	Roadside Compartment behind Front Wheel
Water Filter	Under Kitchen Sink
Water Heater	Roadside Center
Water Pump	Under Range (outside access)

COMPONENT LOCATIONS

2900 SIDE BATH

Component	Location
Brake Master Cylinder	In Roadside Front Wheelwell (Dodge) Under Access Door of Driver Floor (Chev)
Circuit Breaker Panels	Under Roadside Bunk at Rear
Fresh Water Valves (See Figure 14-1)	Under Roadside Bunk at Front
Furnace (2)	Under Curbside Bunk at Front Under Kitchen Sink
Fuse Box	Above Refrigerator
Holding Tank Drain	Roadside Center
Heater, Auxiliary	Above Water Pump
LP Gas Tank	Curbside Rear
Petcock Drain Valve	See Fresh Water Valves
Power Cord	Roadside Behind Rear Wheel
Power Converter	Above Refrigerator behind Panel
Refrigerator Access	Curbside Center
Tire Jack	Compartment left of Entry Door
Water Filter	Under Kitchen Sink
Water Heater	Roadside Center
Water Pump	Lower Cabinet in front of Roadside Bunk

COMPONENT LOCATIONS

3100 REAR BATH

Component	Location
Brake Master Cylinder	In Roadside Front Wheelwell (Dodge) Under Access Door of Driver Floor (Chev)
Circuit Breaker Panels	Wardrobe Rear Wall
Fresh Water Valves (See Figure 14-1)	Under Range (outside access)
Furnace(s)	Under Roadside Bunk at rear Under Kitchen Sink
Fuse Box	Above Refrigerator
Holding Tank Drain	Roadside behind Rear Wheels
Heater, Auxiliary	Under Curbside Bunk at Front
LP Gas Tank	Curbside Rear
Petcock Drain Valve	See Fresh Water Valves
Power Cord	Roadside behind Rear Wheel
Power Converter	Above Refrigerator behind Panel
Refrigerator Access	Curbside Center
Tire Jack	Roadside Compartment behind Front Wheel
Water Filter	Under Kitchen Sink
Water Heater	Roadside Center
Water Pump	Under Range (outside access)

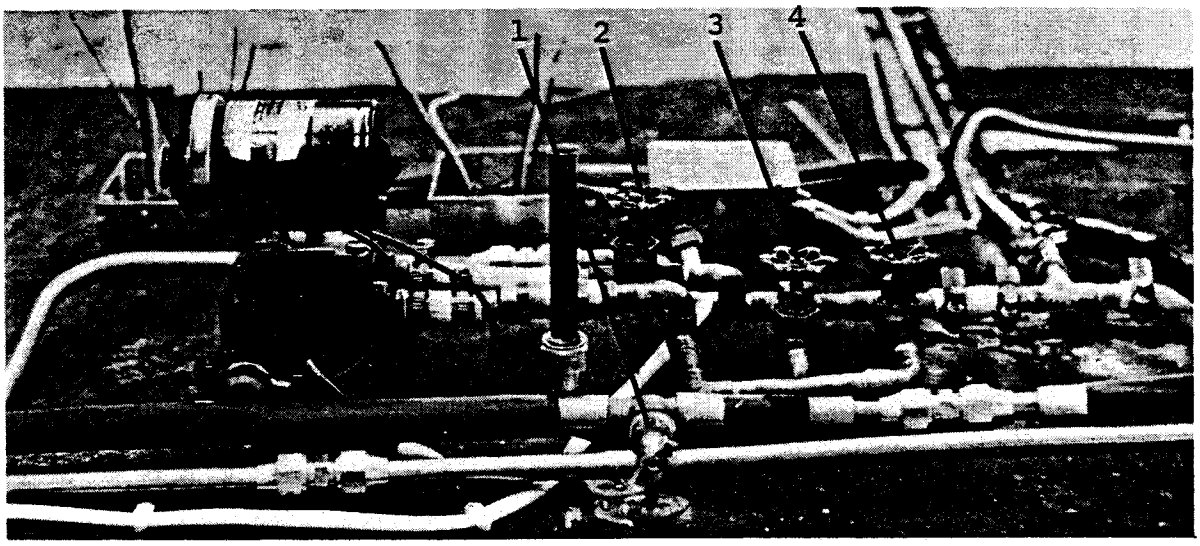


Figure 14-1. 3100 and 2900 Rear Bath Fresh Water Valves

1. Petcock Drain Valve
2. Tank Cut-off Valve
3. Tank Drain Valve
4. Fast Fill Valve

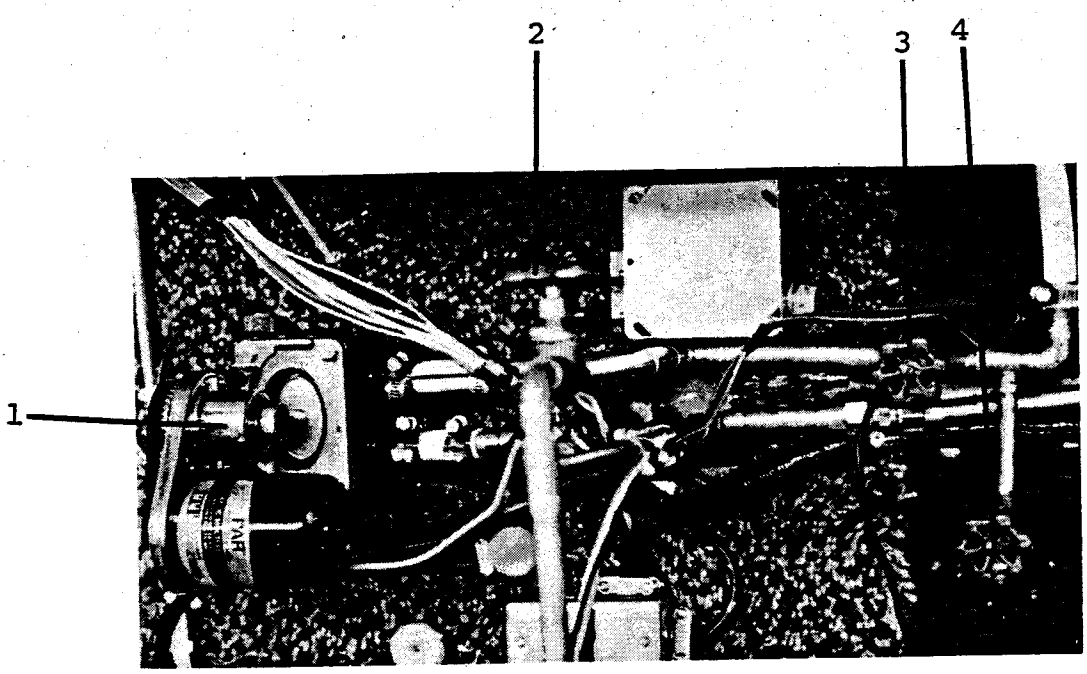
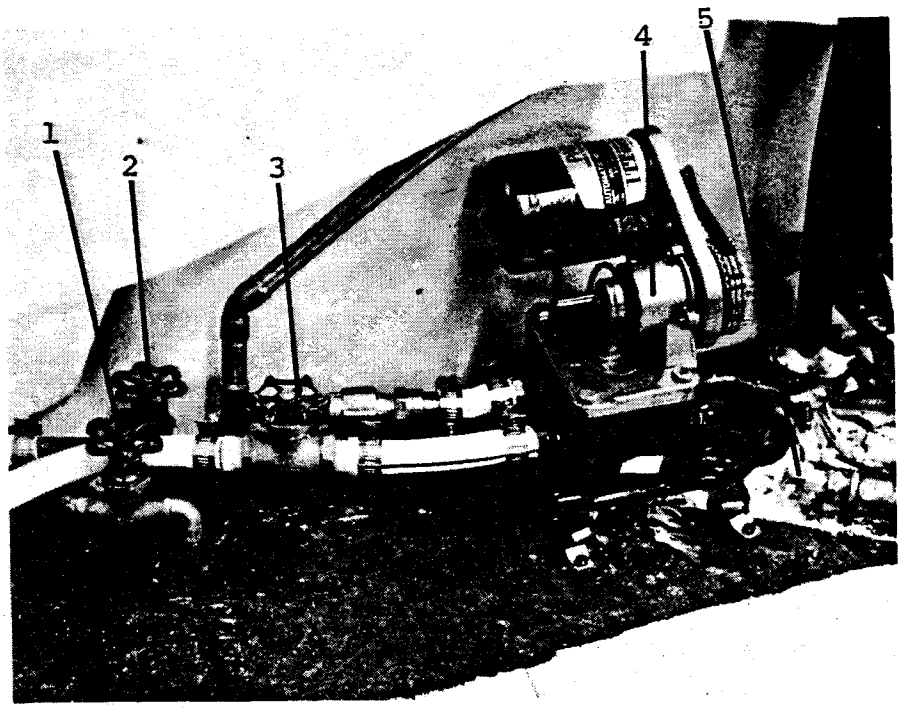


Figure 14-1. 25 Ft., 2500 Rear Bath Fresh Water Valves

1. Water Pump
2. Fast Fill Valve
3. Tank Cut-off Valve
4. Tank Drain Valve



1. Tank Drain Valve
2. Fast Fill Valve
3. Tank Cut-off Valve
4. Water Pump
5. Petcock Drain Valve

Figure 14-1. 25 Ft., 2500 & 2900 Side Bath Fresh Water Valves