

1973 AVION TRAVEL TRAILER

Operation and Service Manual

Keep this book with your Avion at all times

AVION COACH CORPORATION

1300 E. Empire Avenue, Benton Harbor, Michigan 49022

Avion - Neb.
402-895-1850
Chuck or Skypie

Holiday R.V.
Greer, N.C.
Donna
803-877-8218

Windows
Bill Kaye
616-468-3931
Mich. Chuck

27" x 7"
+ rubber gasket
plexiglass

AVION TRAVEL COACH

OPERATION AND SERVICE MANUAL

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SECTION I

GENERAL PROCEDURE FOR "HOOKING-UP" BEFORE A TRIP

The following steps are suggested as a check list before starting on your trip with your Avion Coach.

1. See that all clothing, dishes, golf clubs, fishing gear, etc., are properly stored. It is wise to use square plastic containers in your refrigerator. **DO NOT** leave ice cubes in the freezer compartment unless the refrigerator is operating while traveling. Pack rolled towels in front of the containers in the refrigerator so they will not move about or spill over. Be sure the travel latch is engaged to prevent the refrigerator doors from opening. Unless you plan extended stays far off the beaten path, there is no need to store up on food.
2. Be sure all drawers, cupboards and closet doors are securely latched. The single-piece bathroom door may be latched closed for traveling. If your trailer is equipped with a bi-fold door, it should be hooked open. Latch the adjustable mirror to prevent damage in transit.
3. Radios, TV sets, books, folding chairs, etc., should not be placed on top of beds while traveling. The vibration of the mattress and springs has a tendency to move everything forward and, if the brakes are applied quickly, they may be thrown to the floor. Heavy gear should be located near the floor and forward of the center of the trailer. **Do not overload your coach.** Refer to Section VIII, Table A for maximum cargo weight, gross vehicle weight and recommended hitch weight.
4. If your utilities are hooked up, disconnect the 120 volt Power Cord at the receptacle and store in the cord storage compartment. Close the range top pilot valve, if pilot has been used. Close the oven shut-off valve. See instructions for Range and Oven in Section IV.
5. Flush the sewage holding tank, refill with 2" of water and add a commercial holding tank chemical, if desired. Disconnect the sewer and water hoses, drain and store. The sewer hose may be kept in the rear bumper. **Be sure to lock the holding tank valves into closed position, and turn off the water pump switch.**

6. Close all windows and ventilators, lower the TV antenna and lock the entrance door. Be sure the front awning is closed and latched on both sides.

7. Remove the stabilizing jacks or blocks from under the coach and fold the step into the "stored" position.

8. A 2 $\frac{5}{16}$ " hitch ball should be mounted on your car, so that the top of the ball is 19" from the ground. At this height, and with an equalizing hitch properly adjusted, your Avion coach will ride level. Although the Avion will tow properly even if the coach is not perfectly level, we recommend that trailer and car ride as level as possible.

To hook the coach to the towing vehicle, raise the front of the coach with the post jack and have your partner back the car into place.

After the ball has been positioned under the hitch socket, check to be sure that the locking lever has been raised and pulled to the rear, then lower the front end of the coach onto the ball. Rock the car back and forth enough to be sure that the socket and ball are fully engaged, and put the ball lock in place. The lock should be secured by placing a safety pin or small lock through the hole just to the rear of the latch.

Jack up the front of the coach again (the car will come up with it) and put on the balance of the hitch, adjusting for level in both units. It is advisable to use an equalizer type hitch with sway control. Make all adjustments according to the manufacturers instructions.

Lower the coach onto the hitch, remove the dolly wheel, or any blocks that may have been used under the post, and crank the jack post to the highest possible position. Hook up the electric connections from the car to the coach, connect the safety chains and anchor the break-away switch cable to the auto.

9. Check the brakes and lights.

10. Re-check all previous steps and be sure to leave your parking area clean. It is a good practice to pull your coach a short distance from the parking spot and inspect the area before departing.

SECTION II

TOWING

1. Install side-mount rear view mirrors on the towing vehicle. Adjust them to show the corresponding side of the trailer and as much of the adjacent area as possible. The center mirror of the towing vehicle may be used to observe the front of the trailer. If a flat tire occurs on the trailer it will be evident by the angle of the trailer when viewed through the center mirror. Make it a habit to check all three mirrors regularly.
2. Adjust driving speed according to road conditions. Maintain an adequate distance from the vehicle ahead. Keep at least one car and trailer length for each ten miles per hour of speed.
3. Allow an adequate turning radius, particularly in city driving. When making sharp turns remember that the trailer will turn in a smaller arc than the towing vehicle.
4. A correctly adjusted brake control will apply the trailer brakes at the same time, or just slightly before the car brakes are engaged.
In an emergency situation the excessive sway or skidding of the trailer can be brought under control by using the brake control to manually apply the trailer brakes gently. The speed of the towing vehicle should be held steady so that the forward pull of the car and the braking force of the trailer wheels work to re-align the two vehicles.
5. Be sure to allow more time for passing a slower vehicle. Remember that acceleration will be slower with a trailer in tow. Allow more distance before returning to the right lane.
6. Set reasonable driving goals for each day traveling. Make numerous rest stops to stretch and exercise. Avoid driving when tired. Fatigue reduces driver alertness and contributes to accidents.
7. Provide emergency equipment. Include a jack, wheel blocks, flares, a tool kit and a fire extinguisher.

SECTION III

PARKING AND SET-UP PROCEDURE

1. When positioning the coach, try to select a spot as level as possible. Do not use jacks to level the coach. It should be leveled by driving up on a board, or by using a shovel to level the area under the wheels before positioning. Jacks can then be used to stabilize the coach.

CAUTION: When locating jacks or blocks, **DO NOT** place them under the aluminum underbelly or skin. Stabilizing jacks for Avion coaches should be placed under the frame at the front and rear of the coach. Extend the jacks only enough to support the frame.

2. Make water, sewage, and electric hook-ups if your stay will be long enough to require them.

3. Light pilot lights, raise front awning and lock in place.

4. If your coach is equipped with a TV antenna be sure to raise it before opening the rear ceiling vent.

SECTION IV

PROTECTION FROM FREEZING WEATHER

1. Level the coach and disconnect water supply hose. The water lines in your coach have been installed with a slope to permit gravity draining. Inspect these lines to be sure they have not been bent out of position. Water lines from bath lavatory should slope toward water heater, draining through the heater tank drain. The water lines from the galley sink should slope to the water tank drain valve.

2. Drain the water storage tank by opening the drain valve which is located at the end of the tank. The storage tank may also be drained by opening one or more of the faucets and pumping the water into the sinks, where it will drain through the sewer hose.

3. Shut off water pump at switch, open all faucet valves, and drain water heater tank. The valve for this tank can be reached by removing the panel on the outside of the water heater. Be sure that the water heater has been turned off before draining.

4. Remove water from the stool by holding both foot pedals down and allowing the system to drain. Be sure the water supply has been turned off and that the cold water faucet in the bathroom sink is open. This will vent the water line to the stool and allow it to drain.

Open the drain valve at the back of the stool. Hold stool pedals down or open sink faucets to vent the line. **BE SURE TO CLOSE THIS VALVE BEFORE USING THE WATER SYSTEM.**

Lay the water saver spray gun on the floor and put a rubber band around the thumb button to hold the valve open and allow it to drain. The spray head may also be removed from the hose to prevent damage from freezing.

Should water accidentally be left in the stool, damage may be prevented by allowing the unit to thaw out at room temperature before using. **DO NOT ATTEMPT TO FLUSH A FROZEN STOOL.**

5. Open tub valve and shower head valve button to drain the shower head.

6. Open both holding tank valves and drain tanks completely. (Drain should be connected to sewer for this operation.)

7. Raise the front end of the coach as high as it will go by cranking the jack all the way up and allow water to drain. Then crank jack to lowest position and allow water to drain. Return to level position.

8. Use suction pump to remove water from traps, or pour about one cup of any Ethylene Glycol type anti-freeze in each of the three traps — one in the kitchen sink, one in the bathroom sink, and one in the bathtub. Use caution to avoid spilling the solution on plastic surfaces where discoloration may occur. **DO NOT** use an alcohol base anti-freeze.

9. If your trailer is equipped with a purifier, remove the cartridge, allow to dry and store until ready to use again.

10. The water tank drain is located under the left bed in twin-bed models. To drain the tank, open the cold water faucets and the bi-pass valve — See Illustration B. Open the tank drain valve and allow to drain. Be sure to close both valves when preparing coach for use.

In double bed models the water pump, bi-pass valve and water tank drain are located under the double bed. Refer to Illustration C in Section VIII of this manual for identification of the various connections and valves. Follow the instructions given in the preceding paragraph.

To drain the pump open both the water tank drain valve and the bi-pass valve. Turn the water pump on and allow the pump to discharge any water remaining in it. Turn pump switch off but keep both valves open to allow gravity draining of any water that may be left in the lines. Close both valves when preparing coach for use.

11. Insert a stiff wire or slender rod into the water inlet fitting which is located in the hose storage compartment. Push inward to release the spring tension in the check valve and allow water to drain from it. Be sure faucets are open to vent the line.

12. If it is practical, remove the batteries and store in a warm place during freezing weather. If the batteries are kept on the coach, be sure that they have a full charge to prevent freezing.

13. **CAUTION**—Do not travel with the anti-freeze solution in the tub or lavatory drains unless the drain plugs are securely inserted to prevent the solution from splattering on the plastic.

SECTION V

OPERATION — CARE — MAINTENANCE

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CARE AND CLEANING

Windows — All flat windows are tinted safety glass. They may be cleaned with any type of glass cleaner, or with soap and water.

The two curved front windows are acrylic plastic. They should be dusted and cleaned with a damp cloth or chamois, wiping the surface gently horizontally. Wash with a mild soap or detergent and water. Use as much water as possible, applying with a clean soft cloth, sponge or chamois. The best method of drying is with a clean damp chamois.

You can protect them with a good grade of commercial wax. Apply and bring it to a high polish by rubbing with a soft dry cloth.

Cabinets and Woodwork deserve the same care as the furniture in your home. A furniture wax or polish will aid in maintaining the fine factory finish. Upper cabinet doors are equipped with a single-arm friction brace. Tighten the adjusting screw to increase friction if the door does not stay in open position.

Interior Walls are covered with vinyl. They may be cleaned by washing with a mild soap or detergent and water. DO NOT use an abrasive cleaner or a solvent as it may damage the vinyl or dull the finish. Avoid exposure to concentrations of propane or natural gas. The bathtub should have the same care as the interior walls.

Draperies, bedspreads and wall pads are of high quality synthetics and should be dry cleaned.

Carpeting is 100% polyester. It may be cleaned with any good grade of foam carpet cleaner. Follow the instruc-

tions on the container. The Johnson Wax product "Glory" has been found to work well.

Upholstery is soil resistant treated to minimize spotting. (Sponge up spills immediately.) Soiled areas may be cleaned with mild detergent and water.

Exterior Skin of anodized aluminum should be washed and cleaned in the same manner that you care for your automobile. Wash with a mild soap or detergent. Road tars may be removed with *kerosene*, *turpentine* or *naphtha*.

Follow the cleaning with a soap and water rinse and then dry with soft, absorbent material.

CAUTION: When using these liquids, do not allow them to get on the window panes. Do not use cleaners containing caustic or ammonia.

A polish may be used on the exterior surface to provide additional protection. A cleaner-wax-polish type material should prove satisfactory, if the manufacturer's instructions are followed. Be sure to do the polishing in the shade, rubbing the same direction as the grain in the metal.

A more permanent protection may be obtained by applying a coating of clear wax after the polishing is completed.

Exterior seams should be examined periodically for holes or cracks which may result from shrinkage of the sealer after prolonged exposure to the elements. The sealer for all exterior seams of your Avion carries the brand name of "Ten-X". It is manufactured by Electro-Cote Company, Minneapolis, Minn., and can be purchased from most trailer dealers and automotive supply stores.

2. WINDOW SCREENS and STORMS

Removal of the window screen is accomplished by pushing upward on the screen frame until it clears the bottom channel. It can then be pulled out from the bottom and removed.

3. DOOR LOCK

The entrance door is equipped with a "Dead-bolt" lock. Turn the key to the right (clockwise) to lock the door, and to the left (counter-clockwise) to unlock it.

The door can only be locked when the bolt is fully engaged. When locked, the bolt cannot withdraw or vibrate back and allow the door to come open. Always lock the door before towing your Avion. Check the lock by attempting to open the door with the outside handle.

The door can be locked from the inside by lifting the lever under the handle. Do not attempt to lock the door while open and then close it.

4. ELECTRICAL SYSTEMS

Each Avion coach is provided with three separate electrical circuits: (A) 12-volt exterior light and brakes; (B) 12-volt interior lighting system; (C) 120-volt interior system.

(A) **Exterior Lights** — The cluster lights and clearance lights are I.C.C. regulation approved. Check these lights periodically to be sure that the bulbs are burning. Replacement bulbs are G.E. type 1895 or equivalent. The tail lights and turn lights are in single lamps at the rear of the coach. They use double filament bulbs, G.E. type 1157 or equivalent.

Power for the lights and brakes is supplied from the automobile battery, through the 7-wire connector. The coach wires appear in a heavy cable at the trailer hitch.

WIRING CODE FOR AVION COACHES

#1 — White	connects to:	Brake — Ground
#2 — Blue		Brake — Hot
#3 — Green		Clearance Lights
#4 — Black		Battery Charging by Tow Vehicle
#5 — Red		Left Turn Light
#6 — Yellow (Brown)		Right Turn Light
#7 — Black-Center Post		Backup Lights

The black wire from the No. 4 terminal is connected to the positive terminal of the two self-contained trailer batteries. This wiring is correct for all tow vehicles with standard "negative ground" systems.

Brakes — Your coach is equipped with 12-volt electric brakes. The 25 ft. and 28 ft. tandem axle models are equipped with 10" brakes. The 31 ft. tandem axle model is equipped with 12" brakes.

These brakes have been adjusted at the factory for smooth, positive braking. If brake adjustment becomes necessary it should be done by your dealer's service department or by a competent automotive mechanic. The method of adjustment is the same as most automotive brakes.

INTERIOR LIGHTING

(B) **Interior Lights** — The lights, fans and water pump are operated on 12-volts direct current. This energy may be provided by the standard equipment batteries which are located at the front of the trailer, or by the converter.

Two 12-volt batteries are provided to give a greater amount of reserve energy for self-contained operation. These batteries are connected in parallel. Should one battery fail to function, the other battery will continue to provide power, to the limit of its capacity. If, for any reason, one battery is removed from the circuit, be sure that it is correctly re-connected, as illustrated on page 10.

The batteries should be checked periodically to be sure that they are at the proper charge level. Use a hydrometer to test the individual battery cells. A fully charged battery will have a specific gravity reading of 1.260 to 1.280 at 80 degrees fahrenheit.

When checking a battery, be sure that the level of the electrolyte (water) is adequate to cover the tops of the separators. Permanent damage may occur from charging and/or from traveling with plates not fully covered. When the electrolyte is low, add filtered or distilled water to obtain the proper level. Keep the battery terminals clean by wiping with a cloth wetted in baking soda or ammonia and water. Inspect wires and battery terminals for corrosion or poor connections.

To prevent damage to the batteries, never allow them to become fully discharged. The specific gravity should not be allowed to drop below 1.150. Be sure that the 120-volt power cord is fully plugged into the outlet whenever AC service is available. Use of 120-volt service will not only save battery energy, but it will also provide automatic charging to keep your batteries in top condition.

All trailer models are equipped with two General Battery TITAN 85 A.H. Recreational Vehicle Batteries. These batteries carry a 24 month service adjustment policy and a 90 day warranty against defects in workmanship or material.

For information as to the nearest Titan Battery dealer or distributor, see the Yellow Pages or call collect GENERAL BATTERY CORP., AC 215-929-0771.

The Titan Battery Stock No. is RVS-24-6. A copy of the battery Owner's Guide is included in each warranty package.

The converter, or charger, provides 12-volt direct current whenever the power cord is plugged into a standard 110-120-volt 60 cycle AC source. It also provides the energy to charge the batteries. As a battery charger, the unit

Electrical Systems (cont'd)

senses the state of the battery charge and will automatically charge and shut off as required. The converter is protected by a built-in circuit breaker. If a short, or overload is occurring, a 7 to 10 second clicking sound will be heard as the automatic reset breaker clicks off and on. The converter may be disconnected from the 120-volt source by removing the cord from the wall outlet adjacent to the unit. The converter is located on the trailer floor at the right front corner.

Two fuse blocks are provided to protect the 12 volt system. They are located inside the couch, underneath the front shelf. Circuits and fuse sizes are shown below.

The battery-to-converter circuit is protected by two 20 A. fuses in parallel. Both fuses must be in place at all times so that the load is divided between them. Two extra clips are provided for spare fuse storage.

12-VOLT INTERIOR LIGHTING SYSTEM

A 12 volt utility, or cigarette lighter, outlet is provided in the bathroom. If the trailer is equipped with a T.V. antenna an extra 12 volt outlet is provided at each antenna jack.

Use #1141 12-volt bulbs for ceiling and cornice light replacement. Clear bulbs are available at auto service stations. Frosted bulbs may be obtained from Avion Dealers, or Avion Service Corporation.

Replacement bulbs for the two 12v. recessed lights under the front end cabinet are G.E. Part No. 25 R 14 SC/SP. These are available from Avion Service Corporation.

A patio light receptacle is located on the exterior of the coach on the door side. It is a polarized single outlet with waterproof screw cap. This receptacle is wired for 12

volts and controlled by a switch adjacent to the entrance door. The entrance door light is controlled by the same switch.

LaGrande models are provided with a dimmer switch for the living room ceiling light. Push in on the switch knob to turn the light on or off. Turn the knob to adjust brightness when the trailer is connected to 115 volt service. The dimmer does not work when the trailer is operating from the self-contained batteries.

Two 18" ceiling vents are provided for maximum air circulation in the living and bedroom areas. Both are equipped with power fans. A 6" exhaust fan is installed in the ceiling of the bathroom. It is opened by pushing the handle upward and closed by pulling it down. Do not operate fan motors unless vents are fully opened.

The bathroom mirror is illuminated by two fixtures, and hinged at the top to allow adjustment. Be sure it is securely latched for traveling.

(C) **Interior 120-volt** — The numerous wall outlets in your coach are located to provide convenient electricity for the various 110-120 volt appliances such as an iron, toaster, percolator, etc. These outlets can be used whenever the 25 ft. Power Cord is plugged into a 120-volt AC source. The power cord is stored in a compartment on the left side of the trailer. When connecting it to an outlet, arrange the cord so that the weight of it does not cause a poor connection. The cord storage door has a slot in it so that the storage door may be kept closed while the cord is in use. An exterior outlet is located in the drop door compartment located near the rear of the trailer on the right side.

The 120-volt system is protected by circuit breakers. These are located in a box at the back of the bathroom closet. The main breaker is 30 amps. Turning it off will disconnect all 120-volt wiring in the trailer. Separate breakers are provided for: (1) Appliance Circuit; (2) Air Conditioning Circuit, & (3) General Purpose Circuit.

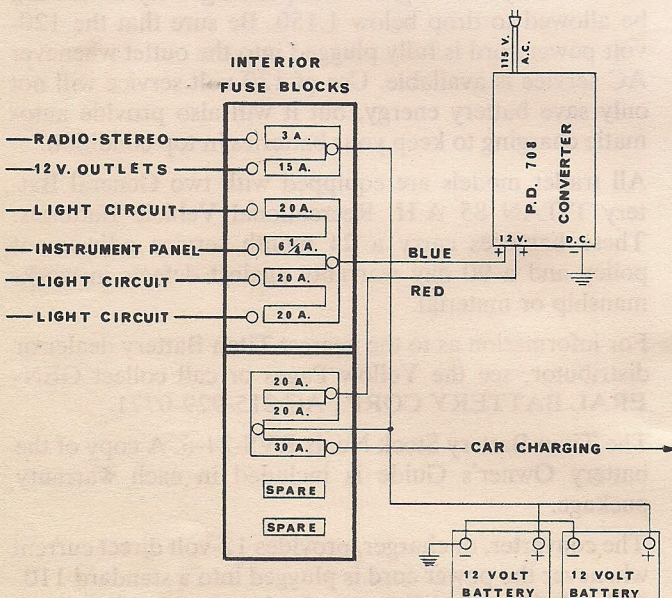
5. WATER SYSTEM

Your Avion is equipped to provide water service from a city water system or from the self-contained water tank.

Connection to a city water supply is made through a water hose connected from the city supply to the water fitting on the trailer. This fitting is located in the storage compartment on the left side of the coach. The hose may be stored without disconnecting it. A pressure reducing valve protects against excessive city pressures.

The molded plastic fresh water tank is located below the floor at the rear axle. A hot air duct connects the tank compartment with the forced air furnace for cold weather operation.

A cut-out in the trailer floor provides access to the tank fittings and drain valve. In twin-bed models the opening is located under the left or off-door bed. On double bed models the opening is under the double bed.



Water System (cont'd)

The fill spout is located on the outside of the coach. The tank may be filled by pulling out the spout cover and inserting the end of a water hose. A bi-pass line is also provided to permit filling the tank while connected to a city water supply. The location of the valve is shown in ILLUSTRATIONS B & C, manual section VIII.

To assure complete sanitation of your potable water system, it is recommended that the following procedures be followed on a new system, one that has not been used for a period of time, or one that may have become contaminated:

1. Prepare a chlorine solution using one gallon of water and $\frac{1}{4}$ cup of Chlorox or Purex household bleach (5% sodium hypochlorite solution). Pour one gallon of solution into tank for each 15 gallons of tank capacity.
2. Complete filling of tank with fresh water. Open each faucet and drain cock until all air has been released from the pipes and entire system is filled.
3. Allow to stand for three hours.
4. Drain and flush with potable fresh water.
5. To remove any excessive chlorine taste or odor which might remain, prepare a solution of one quart vinegar to five gallons water and allow this solution to agitate in tank for several days by vehicle motion.
6. Drain tank and again flush with potable water.

The water tank may be drained by opening any faucet with the pump turned on or by opening the drain valve at the end of the tank.

The coach is equipped with a Peters & Russell water pump to supply water pressure whenever a faucet is turned on. A switch is provided to turn the pump off while the coach is unattended, or when connected to a city water supply. **DO NOT TRAVEL WITH THE WATER PUMP SWITCH IN THE "ON" POSITION.** The surge of water, which can occur during starting and stopping, may cause the pump to turn on. Since no water can run and allow the pump to cycle, it will continue to run and not shut off.

The pump is mounted on the floor near the water tank access opening. It has a built-in check valve to prevent water from backing up into the storage tank when the system is connected to a city water source.

The model 6950-J pump is warranted by the manufacturer for a period of **one year**. Warranty service and parts may be obtained from: **Peters and Russell, Incorporated, 529 West Liberty Street, Springfield, Ohio 45501.** Their telephone number is AC 513 323-3777.

A filter is located in the water line between the tank and the pump. Inspect this filter periodically to be sure that an accumulation of foreign matter does not impair the water flow. The filter may be cleaned by removing it and

rinsing or back-flushing, or by disassembling the two halves and removing the screen to clean it.

The trailer plumbing fixtures are of the single control type. Lift up on the valve knob to turn on and push down to turn off. Turn to the right or left to select water temperature.

The bathtub is constructed of molded fiberglass. Cleaning should be done with a liquid detergent, then rinse. Do not use abrasive cleaners as they will dull the surface.

The tub has a Delta model 636 valve and spout. Push in on the valve divert button to use the shower head. When the valve is closed the button will return to the normal position so that the tub may be filled from the spout.

The built-in push button control in the shower head is designed for volume control (water saver) and is not intended as a shut-off valve. A slight trickle in the closed position is normal.

The bath lavatory is equipped with a Delta model 522 faucet. The galley sink has a Delta model 111 faucet. All Delta fixtures are warranted by **DELTA FAUCET COMPANY, Greensburg, Indiana 47240.**

6. GAS SYSTEM

The coach gas system consists of two gas tanks or bottles, a regulator, gas distribution piping, and the various appliances which operate on gas.

This system is designed for use of liquefied petroleum (LP) gas only. Do not connect natural gas to this system. Before turning on gas, make certain all gas connections have been made tight, all appliance valves are turned off, and any unconnected outlets are capped.

After turning on gas, test piping and appliances for leakage with soapy water, and light all pilots.

The two gas bottles are located at the front of the coach. Each is equipped with a valve to control the flow of gas. A regulator is used at the tanks to reduce and control the pressure from the tanks to the appliances. The regulator is preset at the factory to maintain a pressure of 11" water column, or approximately $6\frac{1}{2}$ ounces per square inch. All appliances are adjusted to operate at this pressure.

When filling bottles, do not leave end of gas line (pig tail) open, even for a few minutes. Bugs are attracted, die inside tubing and plug the line. Tape tube end shut while filling bottles.

Automatic Regulators

Automatic regulator provides uninterrupted service to your gas system. Both bottle valves must be open to permit automatic change-over. An indicator on the regulator will show red when the regulator automatically begins to draw from the reserve cylinder. The arrow on the flip-over lever will point to the empty service cylinder.

Gas System (con't)

Flipping the lever to the opposite position will change the Reserve cylinder to the Service cylinder. It will also cause the red indicator to disappear. Close the valve of the empty cylinder before removing it for refill. After refill and replacement, it will become the Reserve cylinder. The next time the red indicator appears the process should be repeated. **NOTE:** If the system is under heavy load, particularly in cold weather, the Service cylinder pressure may drop enough to indicate Reserve, even though there is fuel in the Service cylinder. Do not consider the cylinder exhausted until it shows red (Reserve) under a light load.

Testing for Gas Leaks

All gas line fittings, except those at the individual appliances, are located outside the coach. Several connections will be found under the coach, where the main gas line branches off to supply the individual appliances. These gas lines and fittings should be inspected and tested periodically for possible damage and leaks. Brush or spray a soap suds solution over all fittings and any damaged areas in the line. The bubbles will grow in size to indicate the presence of a leak.

If the odor of gas is detected inside the coach, extinguish all flames and test for leaks. If the leak cannot be detected, turn off the valves on both gas bottles and see your dealer's service department, or a competent gas appliance service man. **DO NOT CONTINUE TO USE YOUR GAS SYSTEM UNTIL THE LEAK IS LOCATED AND ELIMINATED.**

The gas appliances in your coach are designed and adjusted to use L.P. gas. Propane gas is the most common type. Butane may be used but will not vaporize, or turn to gas at temperatures below 31°F.

7. WATER HEATER

Your coach is equipped with a 6 gallon Bowen combination gas-electric water heater. It is located on the left side, near the rear of the coach. An exterior door is provided to give access to the gas controls and the drain valve.

Electric Operation

The heater is equipped with a 1,000 watt, 115-volt element for operation on electrical current. The heater is equipped with a power cord and plug that connects to the adjacent receptacle. A convenient "ON-OFF" switch is located on the electrical box, fastened to the heater jacket. It is accessible from inside the trailer.

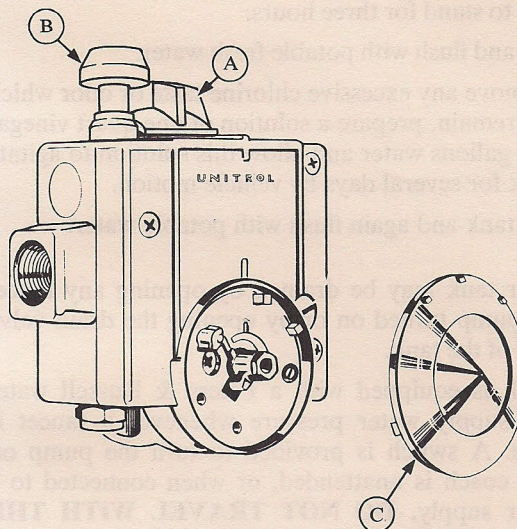
DO NOT TURN THIS SWITCH ON UNLESS THE HEATING ELEMENT IS COVERED WITH WATER.

Failure to do so may burn out element and void warranty.

Gas Operation

LIGHTING PROCEDURE

1. The water heater should be filled with water, gas bottles should be full and valves open.
2. Gas cock dial (A) should be in "off" position.
3. Wait sufficient length of time to allow gas which may have accumulated in burner compartment to escape. (at least 5 minutes if re-lighting).
4. Turn gas cock dial (A) to "pilot" position.
5. Depress and hold reset button (B) while lighting pilot burner (E). Allow pilot to burn approximately one-half minute before releasing reset button. If pilot does not remain lit, repeat operation allowing longer period before releasing reset button.
6. Turn gas cock dial (A) to "on" position and set temperature dial (C) to desired temperature.
7. To shut down the heater, turn gas cock knob to "off".



PILOT AND MAIN BURNER ADJUSTMENT

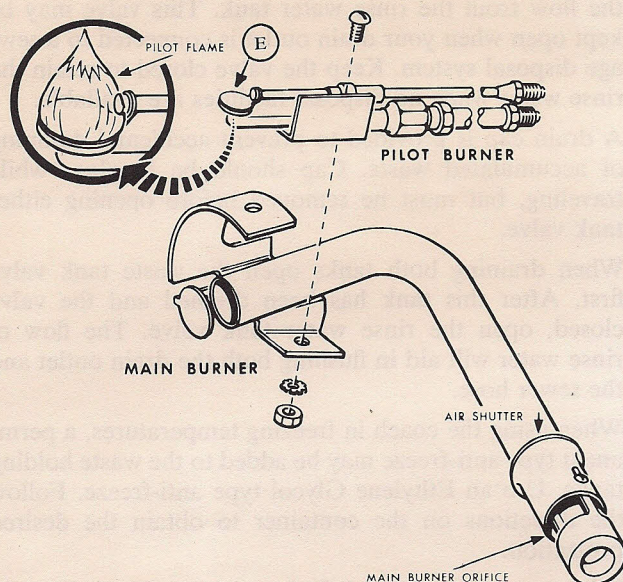
Your BOWEN WATER HEATER has been adjusted at the factory with proper air and gas mixture for both pilot and main burner. Should it be necessary to change these adjustments, use the following procedure:

1. **Gas Line Venting:** When unit is new or has run out of gas it may be necessary to repeat steps 4 and 5 in the LIGHTING PROCEDURE to remove air in the gas line. It is recommended that appliances such as the range or space heater be lighted first. This assures a supply of gas in the main gas line.
2. **Main Burner Adjustment:** Proper combustion de-

continued on next page

Water Heater (cont'd)

depends on the gas and air mixture at the main burner, this is obtained by sliding the air shutter. A yellow smoking flame indicates a lack of air and noisy hard flame indicates an excess of air. A good method of adjusting the air shutter is to slide the shutter closed enough for yellow tipping to occur on the main burner (not pilot) then slowly open air shutter until yellow tipping is gone, then tighten screw.



The drain valve is located in the front of the heater. The unit should be drained as required per Section III in this manual.

IT IS NORMAL FOR WATER TO DRIP FROM THE WATER HEATER RELIEF VALVE WHILE WATER IS BEING HEATED. THE VALVE IS RELIEVING THE PRESSURE BUILDUP CAUSED BY THE EXPANSION OF HEATED WATER.

The Bowen Model RGC6A water heater is warranted by the manufacturer for a period of 12 months, according to the terms of their warranty statement. Consult the warranty sheet for complete details.

Warranty service and parts may be obtained from: **ATWOOD VACUUM MACHINE COMPANY, 1400 Eddy Avenue, Rockford, Illinois 61101.** The telephone number is: AC 815 877-5771. Your coach warranty package includes detailed information on the Bowen warranty and a list of Bowen Service Stations where their work may be performed.

8. GAS FURNACE

All coach models are equipped with Suburban Dyna Trail forced air furnaces. The hot air is carried by ducting to several locations in each trailer. The 25 foot model is equipped with a 22,000 BTU furnace. The 28 ft. and

31 ft. models use a 30,000 BTU furnace.

The furnace is installed on the right side of the trailer. Combustion air is taken in and discharged through the trailer wall. Do not restrict the openings.

The furnace controls are located behind the vented cold air return door. To light the furnace, open first the cabinet door and then the metal door on the furnace. Lighting instructions are located on the back side of the metal door, and also explained in detail in the Suburban manual provided in each Owner's Envelope.

To turn the furnace off in warm weather, close the gas line valve and turn the thermostat to the "off" position.

The return air intake is through the perforated access door panel. Do not block the flow of air through this panel. The hot air registers should also be kept clear at all times.

Both furnaces, Model NT-30 and the NT-22 are warranted for a period of **one year** according to the terms noted on the warranty form. Warranty service and parts may be obtained from: **SUBURBAN MANUFACTURING COMPANY, Box 399, Dayton, Tennessee 37321.**

The telephone number is: AC 615 775-2131. Collect calls regarding warranty problems will be accepted.

9. WATER CLOSET (TOILET)

Your Avion is equipped with a Thetford Aqua Magic pedal-operated water closet. Operating instructions are as follows:

1. Directions for Automatic Flush and Refill:
 - A. Depress both foot pedals, thus opening the slide valve and dropping the waste into the holding tank. The small pedal turns the water on.
 - B. Keep both foot pedals depressed from one to three seconds until water begins to swirl in the bowl, rinsing it. This short time lag fills the rim storage (for bowl refill) and allows the bowl to drain.
 - C. Release both foot pedals. This closes the slide valve and stops the usage of fresh water. The rim storage now drains and refills the bowl.
2. Directions for Flushing with the Slide Valve Open a Minimum Amount of Time:
 - A. Depress the small pedal on the right and hold it down until the water begins to swirl in the bowl.
 - B. Release the small pedal.
 - C. Step on the large pedal, thus opening the slide valve and dropping the waste into the holding tank. The water will immediately swirl in the bowl, rinsing it. Note that the large foot pedal carries the small pedal down with it, when it is depressed. The time lag in the flush is eliminated,

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