# 1964 Owners Manual

1964 Avion Owners Manual Type written pages are from Owners Manual #210092. Courtesy Gregory T. Hicks

## GENERAL PROCEDURE FOR "HOOKING-UP" BEFORE A TRIP

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

- 1. See that all clothing, dishes, golf clubs, fishing gear etc. are properly stored. Heavy gear should be located near the floor and as near to the center of the trailer as possible. It is wise to use square plastic containers in your refrigerator. DON'T leave ice cubes in the freezer compartment, unless your refrigerator has an ice water drain lose or is gas operated, while traveling. Pack rolled towels in front of containers in refrigerator so they won't move about or spill over. 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 drawers in your Avion Coach are notched on the bottom slide edge; this notch prevents the drawers from opening while traveling. It is import ant that you form the habit of lifting and pulling as you open a drawer.
- 3. Radio, television, books, folding chairs, etc. should NOT be placed on top of beds while traveling. The jiggling of the mattress and springs has a tendency of moving everything forward and if you use a quick brake this will throw everything off the beds onto the floor. Place radios, T. V., vases, etc. in boxes, pack carefully and place on floor in center of trailer.
- 4. If your utilities are hooked up, disconnect electric at the meter and then at trailer, flush toilet and if your trailer does not have pressure water system open all faucets to drain water system. If your trailer has a pressure water system see instruction in this booklet for filling, draining, and proper use of pressure water system. Disconnect sewer and water hose and store after they are completely drained.
- 5. Close all windows, ventilators, and lock exterior door. At times while traveling on extremely dusty roads, it is advisable to leave the front roof vent open slightly. This has a tendency to create an air pressure inside of the trailer and prevent dust from filtering into the trailers.
- 6. Remove stabilizing jacks or blocks from under the coach. Stabilizing jacks for Avion Coaches should be placed under the frame at the front and tear of trailer. CAUTION: DO NOT place stabilizing jacks or blocks under aluminum under-belly skin. DO NOT use jacks to level the trailer. Level the trailer by driving up on boards or backing into holes. The and only then use stabilizer jacks to stabilize the coach.
- 7. Hook-Up. Raise the front of the coach with the post jack, have your partner back the car into place. We find the best system of signals to be "clock-wise" or "anti-clockwise and about two feet, now about two inches" and so on, until the car is in position. Lower the front end of the coach so that the ball and socket are together. Move the car back and forth a little to be sure they are together, then put the ball lock in place. It is important to secure this lock by placing a small lock or pin through the eyelet back of the latch. Jack the front of the coach up again (the car will come up with it) and put on the hitch and adjust for straight line in both units. Lower the coach onto the hitch. Hook-up the electric connection from car to coach. Hook-up safety chin. It is advisable to use an equalizer type hitch. Make all adjustments according to hitch manufacturers instructions.
- 8. Check brakes and lights.
- 9. Re-check all previous steps and be sure you leave your parking area clean.

This information is general and normally may prove helpful to the novice trailerite. Most experienced trailer travelers have their own pet way of doing most of these steps.

## **IMPORTANT**

The 2-5/16 in. hitch ball should be mounted on your car so that the top of the ball is 20 in. from the ground. At this height and with an equalizer type hitch property adjusted your Avion will ride level. With a single axles trailer it is not necessary that the trailer ride perfectly level to tow properly. We recommend that the trailer and car ride level for appearance sake.

With a tandem axle trailer it is absolutely necessary that the trailer ride level so that each axle will carry the same load. If the trailer is not level you will experience a "fish-tailing" or swaying while traveling. The wheel bearing should be packed with grease every 10,000 miles.

You must produce a defective tire for inspection if you expect to get an adjustment from your Armstrong distributor. Do not throw a defective tire away until such inspection has been made The Avion Service Corporation is authorized to adjust Armstrong Tires.

Do not travel with a sewer hose connection (elbow or nipple) inserted in the drain manifold of the trailer. Serious damages to the drain system or toilet installation may result if the sewer hose connection is not removed for this hose connection will scrape the pavement when entering or leaving a gas station or similar entrances.

## IMPORTANT INSTRUCTIONS FOR WINTERIZING YOUR AVION

- 1. Level the coach.
- 2. Open the petcock on the inlet faucet on outside of coach.
- 3. Open all faucets on the inside of the coach and remove filler cap from the water tank.
- 4. Open the valve in the line from the water heater through the floor of the trailer to drain the water tank.
- 5. Open the bowl filler valve on the toilet and hold open for 15 to 20 seconds. It is most important that you drain this valve
- 6. If you coach is equipped with a septic tank, open the septic tank valve. Fill the toilet bowl and release with foot lever.
- 7. Work the foot pedal of the toilet up and down several times.
- 8. Open wash basin faucet and drain water out of the shower spray hose by raising it above the faucet.
- 9. Raise the front end of the trailer as high as it will go by cranking the jack all the way up and allow to drain, then crank jack to lowest position and allow to drain. Return to level position.
- 10. Use suction pump to remove water from taps or pour about one (1) cup of permanent type anti-freeze in each of the three traps--one in the kitchen sink, one in the bathroom sink, and one in the bathtub, using caution not to spill any on plastic bathtub where discoloration may take place. (Caution: do not use alcohol base anti-freeze.)
- 11. If your trailer is equipped with a purifier, remove the cartridge and place in heated area until spring.
- 12. CAUTION--before traveling, you should either flush out the bathtub drain, or place the plug in position and tape down, so that the alcohol will not spatter on the tub.
- 12. If your coach is equipped with a water tank you can blow the lines out by putting 75 lbs. of pressure in the tank and opening the drain valves and faucets one at a time. However, this procedure should not be necessary but may be done for additional protection.

# CARE OF THE EXTERIOR

If you should travel with your coach on roads that were salted to melt ice, it is suggest that the chloride be washed off the trailer as soon as possible. A very light wiping with a soft cloth with a straight back and forth motion while hosing will remove the chloride, which if left on might cause discoloration. The use of a mild soap or detergent will aid in the removal of road file. Never use a strong alkali or abrasive.

The sealer for all exterior seams of your Avion carries the brand name of Ten-X (mfg. by Electro Cote Company, Minneapolis, Minnesota) and can be purchased from most trailer dealers and automotive supply stores. Exterior seams should be examined periodically for holes or shrinkage of the sealer caused from long exposure to the elements

## TRAILER INTERIOR

The paint used on the interior walls of your Avion is of a high industrial grade and can be cleaned occasional with a mild soap or detergent and warm water.

The identifying numbers of this paint manufactured by Sherwin Williams, are #E63W3 white primer and #L66W42 ripple.

## **TIRES**

Your Avion is equipped with Armstrong Nylon Tires. These are rated to carry the weight of your Avion plus ample allowance for clothes, dishes, and personal items. For maximum load carrying capacity, your tires should be inflated to 45 lbs. in a  $7.00 \times 15 \times 6$  ply; 60 lbs. in a  $7.00 \times 15 \times 6$  ply; and 75 lbs. in a  $7.50 \times 15 \times 6$  ply. If you should require an adjustment on a faulty or defective tire secure the name of your nearest Armstrong distributor from the list in the back of this book. Take the defective tire to the distributor and he will make an adjustment according to the terms and conditions of the Armstrong guarantee.

# RADIANT SPACE HEATER

If your Avion is equipped with a space heater it is installed according to the recommendations of the manufacturer. The lighting instructions are located inside the louvered door at the bottom of the heater. The heater has been tested and adjusted at the Avion plant after installation. A list of gas service centers is supplies in the back of this book, for your convenience, should your gas space heater need servicing.

Coleman Company, Ind., Mobile Home Division, is located at 250 N. St. Francis Avenue, Wichita 1, Kansas. Their factory representative is Day's Moving and Storage, P.O. Box 754, County Road #3, Elkhart, Indiana. Phone - COngress 4-4121

## WATER HEATERS- BOWEN ELECTRIC

If your coach is equipped with an electric water heater it will be a Bowen electric water heater. A heater switch with a warning light is installed in each Avion that is supplied with an electric water heater. When the light is on the water heater is on. DO NOT leave the heater turned on unless you have a water supply to the heater (either a hose supply or a pressure ware system supply).

If you coach is equipped with a Bowen Gas water heater it will be located under the bed on the left side of the trailer in a twin bed model and on the right under the bed in a double bed model. To light the heater you must remove the lower panel of the heater on the outside of the coach. This panel may be removed by turning the two (2) winged screws at the bottom edge of the panel. Open the gas shut off valve in the lower left corner and floor the instructions for lighting as listed on the tag inside of the heater.

For service under the terms of the Bowed warranty contract one of the authorized Bower Service Centers as listed in the back of this book.

# MARINE STOOL

If your coach is equipped with a Mansfield marine stool, parts may be obtained by writing to: Bristol Trailer Plumbing, Inc., Bristol, Indiana. Phone Thrown 1-4715 or Thrown 1-2765.

## PRESSURE WATER SYSTEM

If your coach is equipped with a pressure water system you can fill this tank the different ways listed below:

- 1. Apply one end of a hose to the hose connection on the trailer (left front underneath) and the other end of hose to a pressure water supply. Make sure all faucets in the trailer are closed and open the valve on the trailer where the hose is connected. Open the hot water tap on the kitchen sink and the valve on the supply. When water starts to flow out of the hot water faucet at the kitchen sink in a steady stream close the faucet and allow the water to run into the tank until it stops running. Close the valve on the trailer and at the supply. Remove the hose. You will have a tank 3/4 full of water under pressure equal to that of the supply source.
- 2. The second method of filling the tank is as follows: Remove the cap on the filler spout and pour water in until it overflows. Close all faucets in the trailer. Replace the filler spout cap and put pressure in the tank by using a hand pump or a service station air supply hose.

Re recommend a maximum of 60 lbs. pressure-10 to 15 lbs. is ample to supply water at all faucets. The air valve will be found on the filler spout.

#### **RANGES**

If your coach is equipped with a Magic Chef range you will find lighting instruction attached. Follow the instructions as listed when use your burners or oven for the first time.

For service on your Magic Chef Range, contact Magic Chef- Pan-Pacific Division, 2053 E. 38th St., Los Angeles 58, CA 233-8251 or Magic Chef, Inc. US 20 W and County 'Rd. 3, Elkhart, Indiana, Phone CO 4-5472, or Magic Chef, Inc., Cleveland, Tenn.

## REFRIGERATORS

#### GENERAL ELECTRIC REFRIGERATOR

In the back of this book you will find a special warranty certificate for General Electric appliances installed in Avion trailers. If you coach is equipped with a General Electric Refrigerator and you should require service, present your warranty to any major General Electric Dealer who will give your service according to the terms of the warranty. There is a warranty card in the refrigerator, which should be filled out and mailed: also you will find a service manual in the refrigerator for your convenience.

# NORCOLD GAS-ELECTRIC REFRIGERATOR

If you coach is equipped with a Norcold refrigerator you will find the lighting instructions in the crisper tray. When lighting hold the match under the zip tube going back to the main burner. For gas operation be sure that the gas valve to the right of the gas thermostat control is turned open. It is very important that the refrigerator be level in all directions for proper operation.

During hot weather do not turn the thermostat to highest position. If the unit is turned on high in hot weather it will freeze and then begin to defrost and will not freeze again until it is turned off and the unit is allowed to cool. The thermostat should be set on normal during hot weather.

If you Avion is used when the outside temperature is below freezing the exterior louvered door should be covered. This can be done with an ordinary piece of cardboard. Open louvered door, fit cardboard on inside of door and then close door. (CAUTION: be sure to remove this cover when using refrigerator in warm weather).

When a gas tank is going empty your refrigerator might not freeze properly, this is due to a lack of pressure. Your gas burner will be operating but not with a sufficient heat to operate the refrigerating unit properly. When your gas tank is going empty the gas will burn with a smell similar to a gas leak. Change tanks and refill.

For service of your Norcold refrigerator contact either Norcold Inc., 16200 S. Maple Avenue, P.O. Box 250, Gardena, California. Phone FAculty 1-9300 or Florence Dist. Co., 2900 W. Mishawaka Road, Elkhart, Indiana, Phone Jackson 34510.

## SEPTIC TANK

If your trailer is equipped with Avion fiberglass sewage waster storage tank, please follow these recommendations for using it.

To retain waste (from toilet only) close the holding tank valve. This valve is located outside at the sewer outlet at the rear left, up against the floor of the trailer. It is operated as follows: To close the valve push the small black knob forward (toward the front of the trailer) as far as it will go. Twist the black knob clockwise until it becomes tight. The valve is now in a closed position. To open the valve twist the black know several turns in a counter-clockwise direction and pull back. It should pull back about 4". It is now in an open position. Keep the shaft of this valve lubricated for easy operation.

Only the waster from the stool goes into your sewage storage tank. It is recommended that this tank be given a rinsing as often as possible. When in park with water and sewer connections, run water into toilet bowl and keep flushing with pedal in down position.

The wastewater from shower and sink drains does not go into the holding tank.

## WATER PURIFIER

If your coach is equipped with an Ogden water purified it will be located to the left in back of the kitchen sink. This purifier is designed to remove harmful bacteria, odor, and impurities from your drinking water. The filter should be changed when the water begins to run slowly from the filter unit.

The replacement packs #SM1 are available direct from Western Ogden Purifier Co. at 7906 Santa Monica Blvd., Hollywood 46, California or from the Avion Service Corporation.

If your coach is equipped with an Everpure filter it will be located under the sink. The filter pack should be replaced when the water begins to run slowly. The filter pack for this unit is "U-fill #150" and is available from the Ewert Trailer Products, 211 Edgemont Lane, Hoffman Estates, Roselle, Illinois 60173, or from the Avion Service Corporation.

Filter packs should be removed when winterizing the trailer.

## 12-VOLT SYSTEM

If your Avion is equipped with a 12 volt system, you will find the following equipment: a 12 volt battery mounted in a case behind the gas bottles, a fuse box and batter charger under the shelf under front window inside of trailer, a 12 volts and 110 volt fixture over the sofa or dinette, a 12 volt 110 volt fixture over the sink, a 12 volt 110 volt fixture over each bed or over one bed and vanity in a double bed model, a 12 volt 110 volt fixture in the bathroom with a 12 volt 110 volt fan on the heater. There will be two power fans that operate off the 12-volt battery only -- they can be operated indefinitely when you have 110-volt power because the battery charger will keep the battery supplied with current. One fan will be located in the front roof vent, another in the range hoods.

The 12-volt power should be used sparingly and equipment turned on only when being used when 110 power is not available (don't leave lights on in areas where no one is present, etc.).

Charger will charge average battery in approximately 3½ to 4½ hours. When charge is completed, the high charge rate will automatically shut off and turn on a trickle charge, which will remain "on" until charger is disconnected. Trickle charge may be left "on" for an indefinite period as long as cells have sufficient water in them. The reset-charging rate, remove both battery clips and AC plug, then reconnect charger.

If the trailer is to be stored for several months without being hooked up to 110 volt power on e of the charge cables should be disconnected from a battery terminal making sure to connect it back up when trailer is again used.

# **BRAKES**

Your coach is equipped with Kelsey-Hayes Brakes (unless) hydraulic. These brakes are 2 inches by 12 inches on single axles and 1 inch by 10 inches on tandems and 18' models. All brakes are 12 volt. A brake service-data booklet is placed in the back of this booklet for your convenience. Contact an authorized service center to insure service under the terms of the Kelsey-Hayes Warranty.

If your coach has hydraulic brakes, they will be Stromberg hydraulic brakes. For service on the Stromberg hydraulic brakes contact the Stromberg Hydraulic Brake and Coupling Co., at 5453 Northwest Highway, Chicago 30, Illinois. The telephone number of this company is NEwcastle 1-7712.

# 12-VOLT AIR COMPRESSOR

If you coach is equipped with an air compressor for the water system it will be located in front at one end of the water tank. This compressor will keep the pressure in your water supply tank between 20 and 40 lbs. An on-off switch and fuse will be located above the water tank at the front of the coach. You may conserve your battery by turning on the compressor with the switch and turning off when the compressor has run a few minutes. Three or four lbs. of pressure are sufficient to circulate the water through your system.

For service information on Grover air compressor contact Grover Products Co., 1233 South Hope Street, Los Angeles 15, California. Phone RIchmond 9-7633.

For service information on Buell #3614-2 12-volt air compressor contact Buell Mfg. Company, 8125 West 47th Street, Lyons, Ill. Phone

#### HI 7-6320

## AVION SERVICE AND REPAIR

The Avion Coach Corporation does not have any authorized service centers other than their factory service departments.

These service departments operate on an appointment and C.O.D> basis only.

Our service and repairs pertain mostly to the trailer proper and most service and parts for the major appliance must be obtained from one of their respective manufacturers or authorized service centers.

For a service or repair appointment call or write:

Avion Service Corporation Avion Coach Corporation 1500 E. Empire Avenue 39661 Espanade Avenue Box 457 Benton Harbor, Michigan 49022 San Jacinto, California 92383 Phone WA 5-0631 Phone 654-3711 or 654-3712

## PARTS BREAKDOWN FOR AXLE ASSEMBLIES

Single Axle for 20' and 21' consists of: 1 D-3568-8F Axle w/51 ½ S.C. (1 3/4") 1 pr #13 Hub & Drums (K.H. #45090) 2 #2788 Bearings

2 #1779 Bearings

12 #15085 Lug Nuts

2 #29031 Grease Seals

2 #33457 Grease Caps

1 31-40 Spring on right side

1 31-40x spring on left side

2 48442 Wheels Heavy Duty

1 Right hand Kelsey Hayes 12" brake #45400

1 Left hand Kelsey Hayes 12" brake #45401

Single Axle for 24' and 27' consists of 2" axles.

1 D-40680F Axle w/51 ½ S.C.

1 pr #13 Hub & Drums (K.H. #45090)

2 #2788 Bearings

2 #1779 Bearings

12 #15085 Lug Nuts

2 #29031 Grease Seals

2 #33457 Grease Caps

2 36-45 springs

2 48442 Wheels Heavy Duty

1 Right hand Kelsey Hayes 12" brake #45400

1 Left hand Kelsey Hayes 12" brake #45401

All Tandem Axle assemblies - - 1 3/4" consists of:

2 D-3368-4F Axle w/511/2 S.C.

1 pr 655-U Hub & Drums (K.H. #44433)

4 #15123 Bearings

4 #09067 Bearings

24 #19374 Lug Nuts

4 #33617 (6362) Grease Seals

4 #38032 Grease Caps

4 26-26 springs

4 48442 Wheels

2 Right Hand Kelsey Hayes 10" brakes (#46666)

2 Left hand Kelsey Hayes 10" brakes (#46667)

#### **DUO THERM Service Bulletin**

## CONDENSATION IN MOBILE HOMES

Too much moisture in the air resulting in condensation of water on the windows and walls of coaches has been a problem to many mobile home residents. This is just the reverse of what happens in the conventional frame house where most people equip their furnaces with humidifiers to add moisture to the air. It is not uncommon even in these homes to see water or frost on the windows.

If you will follow the suggestions listed below, your coach will stay dry and comfortable and you will avoid damage to the finish of the interior that so often results if the condition is allowed to continue.

- 1. Do not dry wet clothes inside the coach.
- 2. Use the kitchen vent fan when the range is burning.
- 3. Open the bathroom vent and keep bathroom closed when using shower.
- 4. Keep one or more vent windows cracked open.
- 5. Install storm windows.
- 6. Keep blower on heater in operation.
- 7. Inspect and clean blower wheel at least twice each heating season.
- 8. A thermostat is a worthwhile investment. It will not only save you fuel but it will maintain uniform temperature.
- 9. Open the fresh air damper on the heater by moving handle forward or as shown on damper nameplate.

We have often heard mobile home residents complain that moisture is coming through the plywood and damaging the interior of the coach. Actually what happens is that moisture in the air of the coach condenses on windows and walls.

The amount of water that a cubic foot of air will hold depends upon the temperature of the air. The higher the temperature, the more moisture the air will hold. Engineers have a method of measuring the moisture content of the air. When they say the relative humidity if 60 per cent, they mean that the air is holding 60 per cent of the moisture it could hold at the particular temperature at which it was measured.

Everyone has seen a glass of ice water "sweat" in the summertime. Actually the same thing causes the "sweating" on the glass of ice water and the water on the window of your coach

The reason for moisture condensation is that the air close to the water glass or window is cooled to what is called the dew point. When the Dew point is reached, the air next to the object has a relative humidity of 100 percent. Just like a dripping sponge saturated with water, the extra moisture in the air condenses on the window.

With an inside room temperature of 70 degrees and an outside temperature of zero, the inside surface of a single window will be about 22 degrees. Under these conditions if the relative humidity is more than 15 per cent, moisture will start to condense on the glass.

Now when we install storm windows and with the same inside and outside temperatures as above the inside surface of the window ill be warmer than it was with single glass. With the warmer glass surface, condensation will not start until the relative humidity is about 31 per cent.

We often see people operate the gas range without turning on the vent fan. The vent fan should be used for two reasons. The boiling of water during cooking obviously adds moisture to the air, but many people do not realize that the gas flame itself gives off some moisture.

In the average 40-foot mobile home, there are about 2100 cubic feet, which would be an average of 700 cubic feet of air per person for three people. A conventional house with a foundation 24 x 32 feet will give over 2000 cubic feet per person for three people. This smaller amount of air per person together with the tight construction of a coach and its unusually well insulated walls add to the condensation problem.

Know that the amount of moisture in each cubic foot of air in a coach would be larger; the coach manufacturer has used tarred paper or aluminum foil in the construction of his coach to serve as a barrier of the moisture filled air. The heater manufactures have provided means for bringing in the dry outside air to help reduce the moisture content of the air in the coach.

There is a very definite reason for every suggestion made in the list above. Keep in mind that when you encounter a fogged windshield in your automobile, the first thing you do is crack open a window. Follow the nine suggestions religiously and take advantage of feature provide by your mobile home manufacturer and its heating system for a dry, comfortable coach.

Form #DST-441 Motor Wheel Corporation Consumer Products Service Department

I have an original price list from 1960 for the following 5 trailers: 20' Tourists....\$3480.00 21' Sportsman.....\$ 3490.00 24' Holiday....models H-24TB, H-24DB....\$ 4213.00 27' Travelcader...models T-27TB, T-27DB.....\$ 4707.00 30' Imperial...models 1-30TB, 1-30DB.....\$ 5587.00 Another list from 1963 does not have the 21' Sportsman on it but does have a 18' Sportsman for \$3452.00

