1984 Avion Owner's Manual

Welcome to the era of Avion... the finest travel trailer ever built.

Your Avion brings together in one beautifully-crafted unit the essential trailering values of roadability, livability and durability. It has been designed and engineered without compromise to remain a timeless classic in styling and function for many years to come.

Avion is manufactured to exacting quality control standards by Avion Coach Corporation, a wholly-owned-and-operated subsidiary of Fleetwood Enterprises, Inc.... the world's largest, most experienced, most successful builder of recreational vehicles and mobile homes. Your new coach is the flagship product of the Fleetwood family, which includes such other familiar names as Terry, Prowler, Wilderness and Taurus trailers, and Pace Arrow, Tioga, Jamboree and Southwind motor homes.

Fleetwood has attained top position in the industry through the efforts of its founder and Board Chairman, John C. Crean. The company was originally established in 1950 as Coach Specialties, to manufacture an improved recreational vehicle venetian blind that he had invented and patented. Within a short time, however, he was also building a line of travel trailers, and the Fleetwood name emerged. What had started as a one-man business grew rapidly under the leadership and innovative marketing skills of John Crean into a far-reaching operation comprising over 50 manufacturing plants, 7000 employees, and more than 2700 authorized dealers who sell and service Fleetwood recreational vehicles in the United States and Canada.

This Owner's Manual is your guide to the operation and maintenance of your Avion. It has been prepared to familiarize you with the many features and capabilities of your new coach and to help you avoid unnecessary problems. We encourage you to read the Manual carefully and to keep it in your Avion at all times. A thorough knowledge of what to expect, and how to correct minor difficulties, will give you a feeling of complete confidence whenever and wherever you travel.

Avion incorporates latest state-of-the-art engineering and fine craftsmanship into every coach it builds. All systems and appliances function together to provide home-like conveniences for your traveling and camping enjoyment. Like all fine equipment, your Avion requires care and regular maintenance to keep it performing at peak efficiency. A basic understanding of how Avion's systems operate will enable you to accomplish many service and maintenance functions yourself, if you wish.

Your Avion is protected by Fleetwood's full warranty for a period of one year from date of purchase. See page 104 for warranty information. For more information about your nearest Avion authorized service representative, please call our nationwide toll-free number: *(800) 854-4755*. In California, call toll-free *(800) 442-4804*.

Due to variations in the availability of materials, and our continuous program of product development and refinement, Avion Coach Corporation reserves the right to change specifications without notice. All information contained in the Owner's Manual is based on the latest product data available at time of publication. If you have any questions regarding changes that may be incorporated into your trailer, please call the manufacturing plant at (616) 929-2271, for details. If you prefer, you may write to the plant at:

Avion Coach Corporation
1300 E. Empire Avenue
Benton Harbor, MI 49022

John Crean

John C. Crean, 81; RV firm founder was a major O.C. philanthropist
January 13, 2007|David Haldane | Times Staff Writer

John C. Crean was a man of simple tastes. He loved his family. He loved fishing, cooking and flying model airplanes. And he loved building things that changed people's lives. Crean did that in a big way in the 1950s by founding Riverside-based Fleetwood Enterprises, at one time the world's largest manufacturer of mobile homes and trailers and a business that revolutionized the housing industry. On Thursday the multimillionaire known as one of Orange County's most generous philanthropists died of congestive heart failure at his Newport Beach home. He was 81. "John was an amazing man," said Barbara Venezia, a longtime friend and neighbor who in the 1990s co-hosted a zany cable-TV cooking show with Crean called "At Home on the Range." "He was kind of larger than life. He was one of those people who grabs life with both hands." Crean started grabbing life early on. Born July 4, 1925, in Bowden, N.D., the son of a Depression-era farmer who moved his family to Compton in 1930, he was a high-spirited, trouble-prone kid who engaged in shoplifting and petty theft for kicks as a teenager. By the time he was 25, Crean later admitted, he had accumulated four drunk-driving arrests and was, he realized, an alcoholic. But in 1950, the year he founded Fleetwood Enterprises Inc. to design and manufacture Venetian blinds for travel trailers, his life began to change. Eventually the company grew into a $3-billion-a-year enterprise influential enough to prompt Builder magazine in 1999 -- the year after Crean retired -- to name the mobile-home pioneer one of American housing's most influential leaders of the 20th century, a list that included William Levitt and Frank Lloyd Wright. Crean, meanwhile, was on to new frontiers. He donated millions of dollars, especially to children's programs, through his Crean Foundation. He and his wife of 58 years, Donna, lived in a modest apartment on their 4-acre estate -- known as Village Crean and patterned after Tara in "Gone With the Wind" -- while making the house and grounds available for nonprofit fundraising events. And from 1992 to 1998, he and Venezia produced hundreds of weekly cooking shows out of Crean's garage that eventually became syndicated and can still be seen. "He had an incredible sense of humor," Venezia said of her friend, whose antics on the show included cooking dog food, dropping a spider into a salad and accidentally preparing a dish with water instead of milk. "He never felt that anything was too complicated," she said. "People would ask him about the key to success, and he would say that 99% of it is showing up. He was just a very basic person; he was always there for you -- for family, friends and anybody who needed his time or expertise." And he wasn't done building. In 2000 he financed a 132-home development in Hemet aimed at retirees. In a foreword to Crean's 2000 autobiography, "The Wheel and I," which he wrote with Jim Washburn and published himself, comedian Stan Freberg called him "one of the most interesting characters I have ever known ... an American original." Thomas A. Fuentes, then chairman of the Republican Party of Orange County, in which Crean was active, described him as "a man who is full of hope and who is constantly looking for the good in others." And Crean himself, in a passage that could serve as his epitaph, mused about death. "I think that there is a heaven," he wrote, "for a lot of reasons. For one thing, when you come out as a baby, you don't know anything about anything. You go through life, and when you die, you're the smartest you're going to be. I don't think that whoever put this whole universe together is going to waste that." Crean is survived by his wife; sons Johnnie of Chino (who ran unsuccessfully for Congress as a Republican in 1982) and Andy of Newport Beach; daughters Emily Crean of Newport Beach and Susie Crean Thomas of Temecula; and many grandchildren and great-grandchildren, according to Venezia. A memorial service open to the public will be held Thursday at the Crystal Cathedral, 12141 Lewis St., Garden Grove. A reception will follow at the Crystal Cathedral arboretum. Instead of flowers, donations may be made to the Children's Bureau of Southern California, 50 S. Anaheim Blvd., Suite 241, Anaheim, CA 92805.

July 20, 2012

Donna Crean, known for her philanthropy in Orange County, passed away at her home, the Village Crean in Newport Beach, with her family by her side Friday after a long battle with Alzheimer's disease. She was 82. Her husband, John Crean, died five years ago. "Our family is relieved that mom is now with dad," said son Andy Crean. The couple created The Crean Foundation in 1981. Last year alone, the foundation gave away $5 million to various charities. Donna Crean was the driving force behind the couple's philanthropy; children's charities, the arts and education were her passion. The Creans were major donors in creating the Orange County Discovery Science Center, and Newport's Mariner's library is named for them. The family also made the lead gift for the building of the Crean Lutheran High School in Irvine in 2007. They donated $10 million dollars to Chapman University in 2010. Born in 1929 in Long Beach, Donna Crean was an only child. As a young girl she enjoyed playing the violin and was voted best violinist in high school. She also was part of the child dance group the Meglin Kiddies, which was started in 1928 by Ethel Meglin. Shirley Temple and Judy Garland were also former Meglin Kiddies. John Crean loved telling the story of how he met his bride of 60 years, friends say. Donna Crean first caught his eye as he was driving down the street in Long Beach and she was sitting on a bench waiting for a bus, friends recall him saying. He stopped the car to chat – she was 18 he was 23. It was love at first sight, he told friends. They had a storybook rags-to-riches life. Newly married, Donna Crean worked side by side with her husband, first in their venetian blind business, and later when he started Fleetwood Enterprises in 1950, building mobile homes and travel trailers. When the children came along, she left the business world and focused on family and her faith. Fleetwood went public in the mid 1960's. The Crean's sold their interests in Fleetwood in 1998. But they never forgot their humble beginnings and had a strong belief in giving back to those less fortunate in their community, friends say. In 2000 John Crean wrote his biography, "The Wheel and I," cataloging the couple's life and times. Donna Crean will be buried alongside her husband at the Crystal Cathedral, which the couple supported for many years and where a tower bears their name. The family will hold a private graveside service, and a Celebration of Life is planned at the Village Crean. In lieu of flowers, the family asks donations be made to Orange County Children's Bureau and Alzheimer's Association of Orange County. "At the Fleetwood 50th Anniversary we were asked about our parents," daughter Emily Crean recalled. "We said the best thing dad ever did was marry mom." The couple had four children, Andy, Emily, Susan and Johnnie. They had 14 grandchildren and 8 great grandchildren.

Contents

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Preparation

Tow Vehicle

There is no substitute for proper equipment when it comes to towing the additional weight of a trailer. Your tow vehicle must be adequately equipped and maintained to insure both safety and continued trouble-free performance.

Proper equipment includes an engine with sufficient power to safely pull your Avion up long grades even under the most adverse conditions, as well as the correct drive and axle ratios, cooling system capability, tires, suspension and electrical system. Your Avion dealer will be happy to discuss tow car specifications with you.

Whether you plan to buy a new car or use your present one for towing purposes, purchase a trailer towing package. A typical package consists of heavy duty springs, shock absorbers, radiator, alternator and a battery. Many new car packages also feature heavy-duty fan and flasher units, and an automatic transmission cooler. Availability of these items may vary with vehicle manufacturer. Tires of the correct size and load capacity to carry the added hitch weight must also be used.

In addition, install a load equalizing-type trailer hitch with a friction type sway control, such as those manufactured by Reese Products, Inc., and Eaz-Lift Spring Corporation. This type of hitch spreads the weight of the coach as evenly as possible over all the wheels and axles, as well as providing for somewhat increased driving stability. The friction type sway control provides increased stability, and improves trailer handling during emergency manuevers and in crosswinds. Always inspect your hitch regularly. Tighten loose nuts and bolts, and immediately repair or replace any cracked or worn parts.

The Avion requires a 2 5/16 inch hitch ball. The distance from the top of the ball to the ground, measured with tow vehicle unloaded, will differ according to the model of your trailer. At the proper height, and with an equalizing-type hitch correctly adjusted, your Avion will ride level.

Although the trailer design permits safe towing even when it is not perfectly level, and your tow car may ride slightly lower at the rear, we recommend that both vehicles sit as level as possible.

If your tow car is equipped with adjustable load-leveling air shocks, the rear wheels may become overloaded. This can be corrected easily by weighting the car with a simulated typical load of passengers and luggage, then resetting the shocks to "level". Record the air pressure for future reference. To be sure you do not exceed the tow vehicle's rear Gross Axle Weight Rating (GAWR), weigh the tow vehicle as described in Loading, page 4.

Caution: Follow your vehicle manufacturer's recommendations on load limits, wiring modifications, and hitch and brake controller installation. If you are in doubt, consult your Avion dealer for assistance.

Please see "Rules For Equipment Selection And Preparation For Towing" at the end of this section.

Accessories

Your Avion comes factory-equipped with a wide variety of comfort and safety items that contribute to the full enjoyment of trailering. Some additional equipment is required for your tow vehicle, and you will probably want to consider outfitting your coach with a number of the many convenience items on the market, designed to meet your personal needs. Following is a list of these items, many of which are available from your Avion dealer.

1. 25-foot water hose
2. Lynch pin (hitch safety pin)
3. 20-foot sewer hose with clamp
4. Solid waste holding tank chemical (6 pack)
5. Tool kit (pliers, claw hammer, #2 Phillips head screwdriver, clutch head screwdriver, slotted head screwdriver, 12-volt test light, flashlight, 2 C-size batteries)
6. Battery booster cables
7. Battery hydrometer
8. Brake controller (with optional dash indicator light)
9. Electric broom
10. Emergency road flares
11. Exterior hook-up mirror
12. Exterior side-mounted rear view mirrors
13. First aid kit
14. Fuses (assorted sizes; see page 109)
15. Hitch ball lubricant
16. Leveling ramps (see page 21)
17. Light bulbs (assorted sizes; see page 108)
18. Short handled shovel
19. Spirit level
20. Sway control
21. Tire chocks
22. Tire pressure gauge (100 psi capacity)
23. Spray lubricant/cleaner
24. "Y"-type hose connector

Loading

Correct loading of your Avion is necessary to avoid damage to equipment carried inside, as well as to the tow vehicle and the trailer itself. The suggestions below are designed to assure safe loading and to prevent possible overloading of the coach.

Inside Your Avion

1. Make certain that everything in the trailer is stored properly . . . especially breakable items.

2. Prepare the refrigerator by wedging rolled-up towels around containers so they will not move or topple. We recommend using square plastic containers with tight-sealing lids for maximum stability and safety. **Do not** leave ice cubes in the freezer compartment unless the refrigerator is operating while you travel. Be sure the travel latch is engaged to prevent refrigerator doors from opening.

3. Latch all drawers, cabinets and closet doors securely.

4. Do not place objects on top of beds while traveling. The vibration of the mattress and springs has a tendency to move everything forward. If the brakes are applied too quickly, items may be thrown to the floor and damaged.

5. Place heavy gear as close to the floor as possible, and forward of the center of the trailer.

   Warning: Your Avion has been scientifically balanced for even weight distribution. **Do not** add heavy objects such as a motor bike, tool boxes, jacks, etc., to the rear of the coach. This could upset the weight balance, possibly causing instability and excessive sway while towing. If it is necessary to load heavy objects in the trailer **temporarily,** always place them as close as possible to the area either directly above the axles or slightly forward of the axles.

6. **Do not overload.** Refer to **Weights,** page 7, for maximum cargo weight, hitch weight and gross vehicle weight.

7. Do not carry passengers in the coach while it is in motion. It was not intended for this purpose. Furthermore, many states have laws which prohibit this practice.

Vehicle Weights

Overloading places undue stress on the trailer and can cause it to become awkward and unsafe. Your Avion has been engineered to function at its **Gross Vehicle Weight Rating (GVWR)** when fully loaded with all necessary traveling supplies. Thus, trailer weight and load distribution are major factors in safe and economical operation.

The GVWR is located on a metal certification plate mounted on the road side of the coach near the front. Also shown on this plate are the **Gross Axle Weight Ratings (GAWR).** These are the maximum allowable weights per axle when the trailer is hitched to the tow vehicle. The ratings help you establish the proper weight and balance for efficient, safe towing. Traveling as lightly as possible provides for better fuel economy, decreased engine loads, and ease of handling.

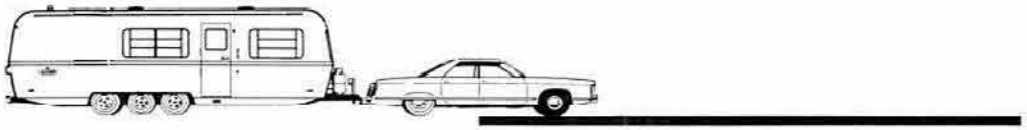
The recommended method for determining whether your Avion is within the prescribed limits is to weigh it **fully loaded.** Public scales for this purpose may be located by checking the Yellow Pages under "Weighing - Public," or by contacting a truck service center.

The following step-by-step procedure should be used for weighing the trailer and tow car. The vehicles must first be properly hitched together and fully loaded for travel, including fresh water tank, water heater, LPG bottles, supplies, gear and passengers.

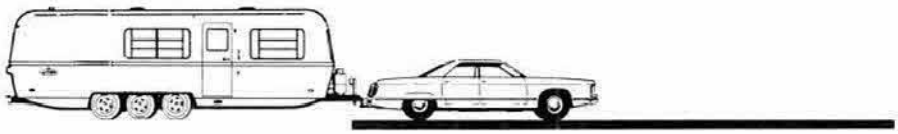
1. Drive the tow car forward until the **front wheels** are on the scale, and take a reading. **The load on the front wheels must not exceed the tow vehicle front GAWR as specified in the tow vehicle owner's manual or certification tag.**

Vehicle Weighing

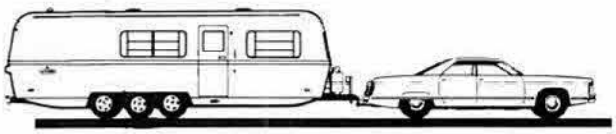
1st Reading



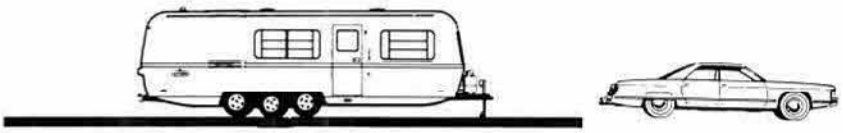
2nd Reading



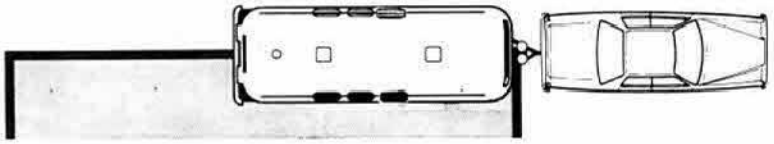
3rd Reading



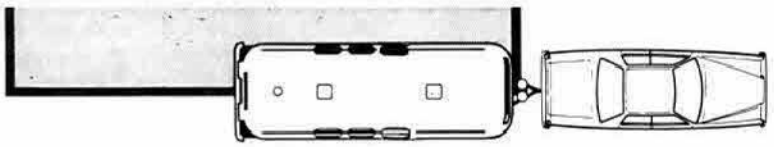
4th Reading



5th Reading



6th Reading



1st Reading	Load on front axle of tow vehicle
2nd Reading	Gross connected tow vehicle weight, including trailer tongue weight
2nd Reading minus 1st Reading	Load on rear axle of tow vehicle
3rd Reading	Total weight of tow vehicle and trailer
3rd Reading minus 2nd Reading	Load on axles of trailer
4th Reading	Gross vehicle weight of trailer
5th Reading	Weight of one side of trailer, while connected to tow vehicle
6th Reading	Weight of opposite side of trailer, while connected to tow vehicle (should nearly equal 5th reading)

2. **Pull forward until both the front and rear wheels** of the tow vehicle are on the weighing platform, and take a second reading. The first figure represents the load supported by the **front axle** of the tow car; the second figure is the **gross connected tow vehicle weight, which must not exceed the tow vehicle GVWR.** The load on the **rear axle** of the tow car is determined by subtracting the first reading from the second reading. The difference, which includes the trailer tongue weight, **must not exceed the tow vehicle rear axle GAWR.**

3. Now drive forward until **both the tow car and trailer** are on the weighing platform, and take a third reading. This figure is the **total weight** of the combined tow vehicle/trailer configuration. To arrive at the trailer's axle load, subtract the second figure (gross connected tow vehicle weight) from this third figure. **The load on the coach axles must not exceed the total of the coach's axle GAWRS.**

4. The **gross weight** of the loaded trailer can be obtained by uncoupling the tow car and driving it off the scale, leaving only the coach on the platform. This fourth reading is your Avion's **Gross Vehicle Weight. It must not be more than the GVWR listed on the certification plate.**

5. Side-to-side weight distribution should be as nearly equal as possible. It can be ascertained by weighing first one side of the trailer and then the other, **while it is properly hitched to the tow vehicle.**

Tongue Weight

The maximum recommended figure for your Avion's trailer tongue weight is 1000 pounds, and should be within 10-15% of coach weight. Trailer tongue weight can be calculated using public scales, or you can determine it at home as an aid to loading using the following method. See photo.

1. Chock all trailer wheels, in front of and behind the tires.

2. Place a lifting jack under trailer tongue rail and raise the coach. Remove the dolly wheel from the jack post.

3. Face the front of the coach and position an ordinary bathroom scale on the ground to the **left** of the trailer hitch jack post and in line with it. The center of the scale should be exactly **two feet** from the centerline of the jack post.

4. Place a block of wood (about the same thickness as the scale) on the ground to the **right** of the jack post, in direct line with the post and the scale. The center of the block should be exactly **one foot** from the centerline of the jack post.

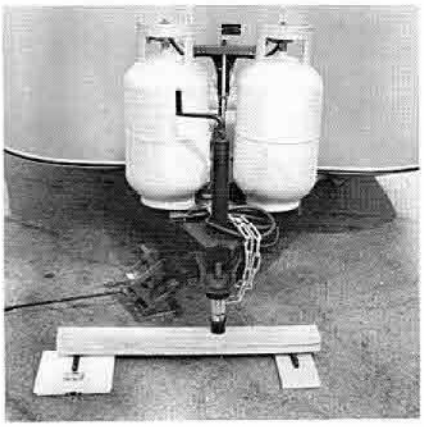
5. Position a short piece of pipe on the center of the scale and another on the center of the wood block, both at right angles to the front of the trailer.

6. Lay a 4' x 4" x 4" piece of wood across the two pieces of pipe. This cross member should be exactly under the jack post.

7. Lower the trailer tongue until the jack post rests on the cross member and is fully supported by it.

8. Level the trailer front and rear.

9. Check the scale and **multiply the weight reading by three** (the total number of feet along the cross member between the wood block and the scale). If the weight exceeds the limit of the bathroom scale, simply increase the distance between scale and jack post by one-foot increments until a reading is obtained (you will also have to use longer cross members to span the increased dimension). **Always remember to multiply the weight reading by the exact number of feet between the bathroom scale and the wood block.** The resulting figure is the **trailer tongue weight.** This method can also be used to weigh your supplies while loading, in order to develop a self-balanced pattern.



Tongue Weight

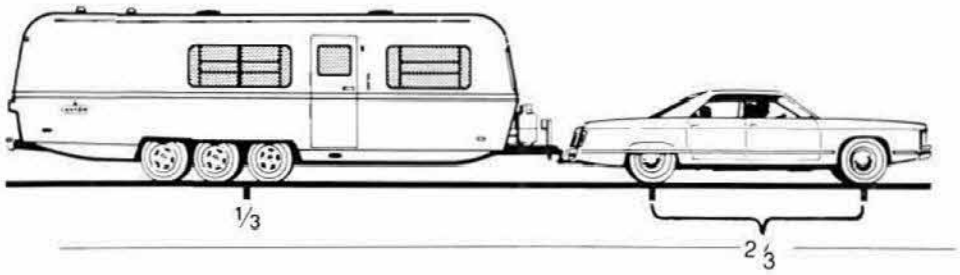
Selecting a Hitch

We recommend the use of a top-grade load-equalizing hitch similar to the types manufactured by Reese Products, Inc. and Eaz-Lift Spring Corporation. A properly coupled load-equalizing hitch divides the trailer's tongue weight into three parts and saves wear and tear caused by uneven weight distribution. Approximately one-third of the weight is supported by the trailer's axles and the other two-thirds are supported by the tow car's front and rear axles. **If any axle weight rating is exceeded, equalizer settings must be changed and/or cargo moved or eliminated, to bring all axles within prescribed limits.** Periodically reweigh your coach and tow car to guard against overloading.

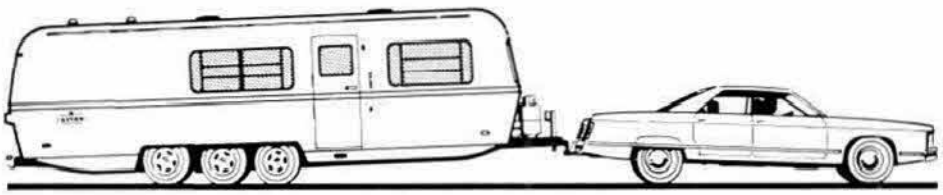
Tow Vehicle Tire Pressure

Correct loading also means correct tow car tire pressure. An equalizing hitch increases the load on each wheel of the tow vehicle, and additional tire pressure is required to compensate for the extra burden. Refer to your tow car operating manual for instructions, and in no case exceed the maximum pressures shown on the tire sidewalls. The pressure must be measured when the tires are cold. Adjusting tire pressure when the tires are warm will cause under inflation and possible tire failure.

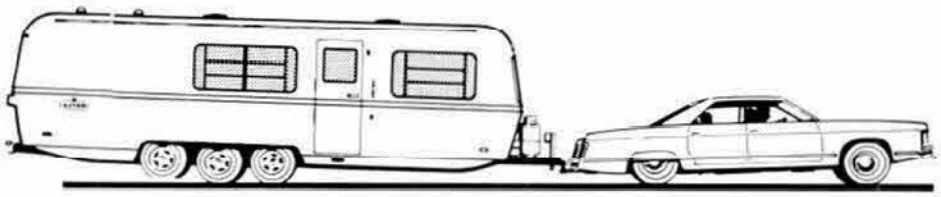
Proper Load Distribution



Improper Load Distribution



Hitch Too High



Hitch Too Low

Trailer Weights and Ratings

Model	Gross Vehicle Weight Rating (GVWR)	Gross Axle Weight Rating (GAWR)	Cargo Capacity
V	9500	2950 per axle (8850 total)	2200
P	8550	3940 per axle (7880 total)	2200
W	9500	2950 per axle (8850 total)	2200
R	8550	3940 per axle (7880 total)	2200

SPECIAL DRIVING RULES FOR TRAILER TOWING

Your car or truck tow vehicle will have very different handling and stopping characteristics when it is towing a trailer. The following rules will help you develop needed driving skills for safe trailer towing:

- If you are new to trailer towing, or if you have a new trailer or tow vehicle, travel very slowly until you have learned the handling and stopping characteristics of the tow vehicle/trailer combination.
- Do not permit a driver who is inexperienced at towing to operate your tow vehicle/trailer combination without your direct supervision. Remember - it's slow speed for beginners.
- Tow at moderate speeds allowing for adverse highway and wind conditions. Even under the best of conditions, do not exceed 55 miles per hour. As speed increases, trailer towing stability, stopping ability, and the ability to make emergency maneuvers are greatly reduced.
- Reduce speed for downgrades. Trailer towing stability is reduced while traveling downhill and stopping distance is increased.
- If it is windy, or passing vehicles are affecting the trailer, slow down until full, comfortable control can be maintained. Trailer sway can be started by crosswinds and the wind from passing vehicles, particularly trucks and buses passing from the rear. Reduced speed improves trailer stability and handling.
- Avoid quick steering movements and maneuvers that can start trailer swaying.
- If the trailer is swaying:
  a) Steer as little as possible. Holding the steering wheel steady is the best method. Quick steering movements to counter trailer sway will cause increased sway and loss of control.
  b) Slow down but avoid strong tow vehicle braking. Reduce speed gradually whenever possible. Using the hand control to apply just the trailer brakes is a preferred method. Tow vehicle braking reduces trailer stability, and sliding tow vehicle tires causes loss of control and jackknifing.
- If a reduction in trailer stability has occured, reduce speed immediately and stop as soon as possible. Check tire pressures, sway control tightness, hitch spring bar adjustment, cargo weight distribution, and look for signs of any mechanical failure. Until the problem has been corrected, travel only at reduced speeds that permit full control.
- Slow down for turns and avoid heavy braking on turns. Trailer stability is reduced on turns, and the weight of the trailer can push the back of the tow vehicle outward on the turn, causing loss of control and jackknifing.
- Maintain at least twice the normal stopping distance while towing your trailer. The increased weight of the combination of vehicles requires greater stopping distances.
- Use lower gears descending long hills. Avoid continuous or frequent brake application. The heavy weight of the combination of vehicles can cause brakes to overheat and fade.
- Allow ample time for passing. Your acceleration will be much slower and your combination of vehicles is much longer than with the tow vehicle alone.

Towing

Hitching Up

Hitching up your Avion in preparation for travel will become routine procedure with experience. You should follow the recommended step-by-step method the first time and every time you hitch up the trailer. Additional measures to observe in preparing the coach for travel after a lengthy stop are covered in the **Travel** section, page 22.

Hitch-up Procedures

1. Raise the front of the trailer with the post jack.

2. Back your tow car into position, with the hitch ball under the trailer hitch socket. If you are working alone, we suggest using a hook-up mirror to give you a view of the trailer hitch while backing up.

3. After the hitch ball has been positioned under the hitch socket, make sure the locking lever has been raised and pushed to the rear, then lower the front end of the trailer onto the hitchball. Rock the tow vehicle back and forth several times to seat the socket and ball fully, then place the ball lock into position. The lock should be secured by inserting a hitch safety pin or small lock through the hole immediately to the rear of the latch.

4. Raise the front of the coach again (the tow car will come up with it), and attach the leveling bars. When the trailer is then lowered, the tow vehicle should be slightly down at the rear. If it is high in the rear, stays level or is excessively down at the rear, adjust the leveling bars as needed.

   If the leveling bars are adjusted too loose, weight does not transfer to the tow vehicle front wheels, possibly causing poor handling and rear axle overload. Adjusting leveling bars too tight transfers excessive weight to the tow vehicle front wheels causing poor handling, loss of rear wheel traction and possible trailer jack knifing.

   When properly leveled, the hitch load is equally distributed for optimum steering control and balance, with a little less than one-third of the weight on the tow vehicle's front wheels, a little more than one-third on its rear wheels, and approximately one-third on the trailer's wheels. The hitch bars will have a noticeable arc or "bowing" effect when it has been correctly installed. You can save time on subsequent hitch-ups by marking the appropriate chain links with tape, so you will know exactly how high to raise the bar.

5. Remove the dolly wheel or any blocks that may have been used under the post jack, and retract it to the highest position. Hook up electrical connections from tow vehicle to trailer and anchor the break-away switch cable to the tow vehicle hitch frame.

6. Your Avion is equipped with two safety chains that are attached to the trailer tongue. Cross the chains under the hitch and thread them through their respective eyes on the hitch, adjacent to the side of the tow car's centerline. Each chain should then be hooked back through itself, using the special terminal links provided. Adjust each chain length so that it is as short as possible while still permitting full turns without becoming taut. Both chains should have the same amount of slack, and they should be short enough to hold the trailer tongue off the ground in the event it becomes uncoupled.

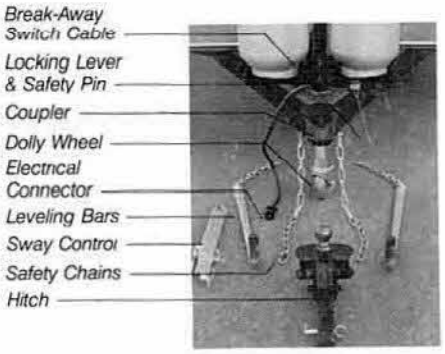
7. Install and tighten the friction type sway control.

8. Inspect tire condition on trailer and tow car, and make it a practice to check air pressure on a regular basis.

9. Recheck all previous steps, and then pull forward 20 or 30 yards to test the brakes.

Final Check List

- Wheel lug bolts tight
- Coupler latched and secured with hitch safety pin
- Safety chains secured to tow car
- Break-away switch cable attached to tow car hitch frame
- 9-way connector plugged into tow car electrical system
- Sway control installed and tightened
- Trailer batteries connected and charged
- Jacks stored and blocks removed
- Trailer running lights working
- Brake controller operating
- Mirrors adjusted

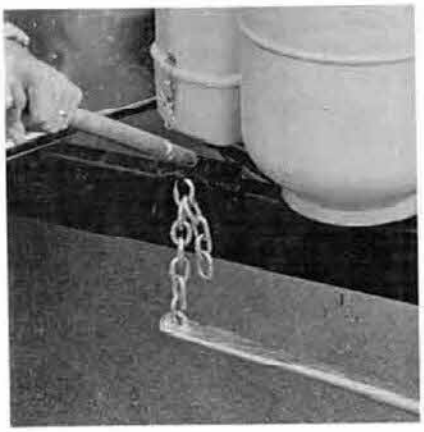


Hitching Up Equipment

1. Extend post jack, back up car.

2. Lower trailer, insert safety pin.

3. Raise trailer and car, attach bars.



4. Adjust leveling bars.

5. Remove dolly wheel.

6. Hook up electrical connector.

7. Connect safety chains.

8. Connect break-away switch cable.

Towing Tips

A thorough a knowledge of the proven driving techniques used in trailering will assure many years of safe, carefree operation of your Avion. We urge you to observe these towing tips whenever traveling.

Equipment

1. **Rear View Mirrors.** Your tow car can be outfitted with various types of outside mirrors. Most states require one mirror extending from each side of the tow car to provide the driver with a clear view when passing and when being passed. Check for specific laws in the states where you plan to travel. Mount and adjust outside mirrors to show the side of your trailer and as much of the adjacent rear and side views of the road as possible. Make it a habit to check all rear view mirrors frequently.

2. **Brake Controller.** Your Avion's electric brakes are activated by a brake controller installed in the tow car. When the car brake pedal is depressed, the controller **automatically** applies the trailer brakes at the same time as, or slightly before, the car brakes engage. Select a brake controller that can also be operated manually in emergency situations to help correct any excessive sway of the trailer. For more information about the operation of the brake controller, see **Brakes**, page 38.

3. **Lights.** Inspect all exterior lights on trailer and tow car periodically, to be certain you can see and be seen.

4. **Emergency Equipment.** Before starting any trip, always have on board wheel blocks, lifting jacks, flares, tool kit, flashlight with fresh batteries, first aid kit, and a fully-charged fire extinguisher.

Road Courtesy

1. **Practice Means Proficiency.** Save time and avoid frayed nerves for yourself and other drivers on the road. Learn the feel and handling characteristics of your new Avion by practicing **before** you head into city traffic or onto the highway. A large, empty parking lot is ideal for practicing turns, stopping, backing up, and parking, until you feel comfortable and competent.

2. **Turning.** Your Avion coach has a **tighter** turning circle than the tow car, which means you must make **wider** turns than you are accustomed to with your car alone . . . especially in city driving and when negotiating sharp turns. You can visualize exactly how the two vehicles move in relation to each other by examining their tire tracks. See illustration.

3. **Entering Traffic.** Inspect your brakes, tires and hitch before getting underway. Check traffic all directions, then signal your intention to pull away. When clear, start slowly while observing the trailer in your mirrors, then move carefully into the appropriate lane.

4. **Passing.** When passing another vehicle, remember that your tow car will accerlerate more slowly than usual because of the added weight of the trailer. Allow ample passing time and distance, and once past the other vehicle, allow for trailer length clearance before returning to the original lane. Use your outside rear view mirrors to assure safe maneuvering.

5. **Towing Speed.** Probably the greatest factor in safe, pleasant towing is maintaining reasonable vehicle speed. Lowering of speed increases trailer towing stability and reduces emergency stopping distances. If you are new to travel trailering, substantially reduce your driving speed while towing. With experience, you will be able to determine the maximum safe speeds for all towing conditions. Slower speed will also increase fuel economy.

6. **Towing Stabililty.** Speeds, cargo weight distribution, and wind conditions are the principal factors affecting trailer towing stability. Reduced trailer towing stability can be recognized by the tendency of the trailer to sway from side-to-side after quick course changes, in crosswinds, or while being passed by trucks or buses.

   If the trailer begins to sway strongly from side-to-side, make as little steering corrections as possible. Using the hand lever on the trailer brake controller, firmly apply the trailer brakes to pull the trailer straight behind the tow vehicle, and reduce speed. (NOTE: Brake pedal mounted controls may not allow for independent operation.) Do not attempt to stop the trailer swaying by making quick steering changes or by forcefully applying the tow vehicle brakes.

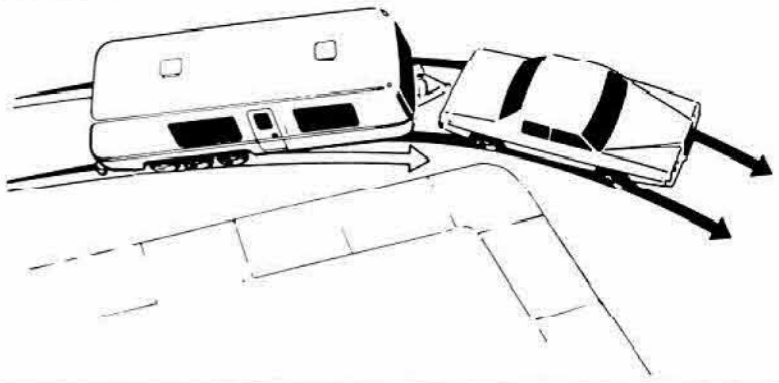
   If a reduction in trailer stability has occurred, stop as soon as possible. Correct the situation by shifting weight forward in the trailer. If it is not practical to stop immediately, reduce speed until the trailer stops swaying.

   Since cargo weight in the rear of the trailer can reduce towing stability, avoid storing heavy objects in the rear of the trailer or on the rear bumper. Empty waste holding tanks before traveling whenever possible.

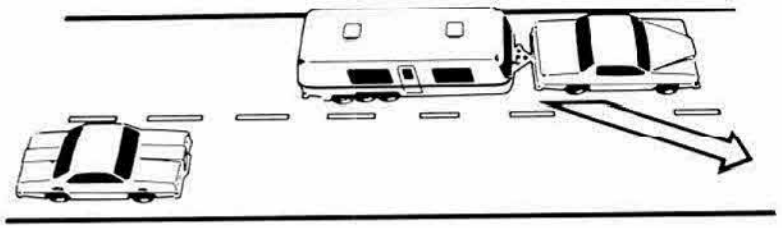
   Heavy cross winds, particularly gusts below canyons or at other exposed locations, can cause excessive trailer swaying or loss of control. Under these conditions, reduce speed until control can be maintained.

   Equalizing hitches improve towing stability and should be used on all travel trailers except 5th wheel trailers. In addition, sway control devices are offered by most hitch manufacturers that will help reduce swaying, and will improve trailer handling during emergencies or in crosswinds. Be sure to follow the hitch and sway-control manufacturer's instructions. Correct use of these devices will increase stability, but should not be considered a substitute for prudent speed, proper cargo loading, safe weather conditions, and towing experience.

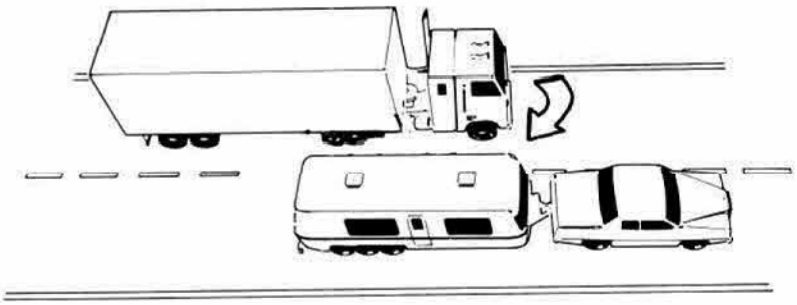
Turning



Passing



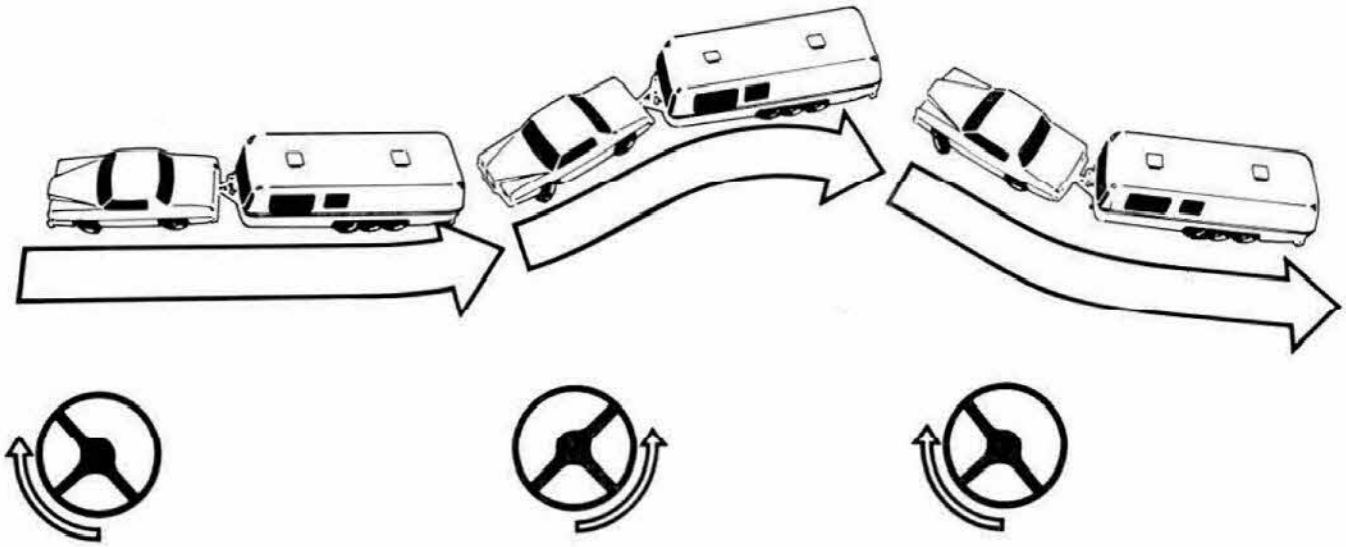
Being Passed



WARNING

Do not use a cruise control when towing a travel trailer.

Backing Up



Small but sudden course changes can occur when a vehicle towing a travel trailer is passed from the rear by a large flat-fronted vehicle such as a truck or bus. These course changes happen when the side wind from the flat front blows against the side of the trailer. As the truck front passes the rear of the trailer, the tow vehicle will tend to turn away from the truck, and as the truck front passes the trailer wheels, the tow vehicle will turn back toward the truck.

When a large flat-fronted vehicle passing from behind causes your vehicle to change course make as little steering correction as possible, rememering that the tow vehicle will be turned back toward its original course as soon as the truck front passes the trailer wheels. Avoid quick steering corrections that can inadvertently magnify these course changes and start trailer swaying.

7. **Passing.** When passing another vehicle, remember that your tow vehicle will accelerate more slowly than usual because of the added weight of the trailer. Allow for clearance of the trailer before returning to the original lane. Use your outside rear view mirrors and proper turn signals to assure safe maneuvering.

8. **Stopping.** The increased weight of the car-trailer combination requires greater stopping distances. Maintain at least twice the normal stopping distance while towing your trailer.

9. **Backing Up.** Here is an easy way for new trailerists to remember the way to turn the steering wheel when backing a trailer. Place your hand at the bottom of the steering wheel. To turn the trailer to the left, move your hand to the left (turn steering wheel clockwise). To turn the trailer to the right, move your hand to the right (turn the steering wheel counterclockwise). Your car should go the opposite way that you want the trailer to turn. In time, and with a little practice, backing will be accomplished with little effort. Always be aware that you have poor visibility to the rear. Someone standing outside at the rear of the trailer guiding your actions will assure safe backing.

Weather and Road Conditions

1. **Towing in Hot Weather.** High outside temperature alone is usually insufficient to cause overheating of your tow car. However, additional factors such as pulling up a long or steep grade, slowing after sustained high-speed driving, or idling in traffic, can cause a temporary cooling system overload. When this happens, turn off the air conditioning in your car and pull into a turnout or rest stop as soon as possible. With the transmission in "neutral" and the parking brake engaged, step on the accelerator to increase engine idling speed. Run engine at fast idle for five minutes. Also open the hood to check for cooling system leaks, broken fan belts and other possible malfunctions, such as a broken thermostat.

   Caution: Do not check radiator coolant level while engine is hot. Automobile cooling systems operate under high pressure, and the radiator cap should never be removed while engine is overheated.

   If no problems are evident, the radiator fan will reduce cooling system temperature suficiently to have you underway again in a few minutes. Drive slowly for several minutes before resuming normal speed. If overheating recurs or persists, have it corrected at the earliest opportunity.

2. **Towing in Inclement Weather.** Do not downshift to slow the trailer and tow car on wet or icy pavement. The rear wheels may skid if you do so. In the event of a skid, switch your brake controller to **manual** and gently apply the **trailer brakes only,** in order to help realign the vehicles.

   Road salts used for snow and ice removal may be injurious to the trailer finish. You can prevent such damage by waxing the surface prior to exposure and washing it immediately after exposure. See page 30 for additional information on care of exterior surfaces.

3. **Towing in Wind.** Heavy cross winds, particularly gusts below canyons or at other exposed locations. can cause excessive trailer swaying or loss of control. Under these conditions, reduce speed until control can be maintained.

   If the trailer begins to sway strongly from side-to-side, make as little steering corrections as possible. Using the hand lever on the trailer brake controller, firmly apply the trailer brakes to pull the trailer straight behind the tow behicle, and reduce speed. (NOTE: Brake pedal mounted controls may not allow for independent operation.) Do not attempt to stop the trailer swaying by making quick steering changes or by forcefully applying the tow vehicle brakes.

4. **Towing Downhill.** Shift the transmission into low gear, if possible. Engine compression will then act to slow both vehicles. If speed begins to increase again, lightly pump the brakes several times. **Do not ride the brakes or pump them forcefully.**

   Take dips and road irregularities slowly and carefully. Remember: Your Avion's wheels must clear these road hazards, too.

5. **Parking on Hills.** Chock all trailer wheels, leave the transmission in gear or "Park", and apply the hand brake on your tow car. **Do not use trailer brakes for parking.** Always turn the front wheels of the tow car into the curb to prevent possible runaway.

6. **Towing in Mud and Sand.** Use your forward momentum with as little additional power as possible. Roll into the tracks of the vehicle ahead in the highest gear you can maintain without the engine lugging. If your rig should become mired, **do not** unhitch the coach. Call for road service and have the vehicles pulled out together.

7. **Towing on Gravel or Dirt Roads.** Plan your route to avoid driving long distances over inferior roads. Stones and other debris thrown onto the front of your Avion by the tow car's rear tires can scratch or dent the aluminum surface. If you find it necessary to travel under such conditions, we suggest taping heavy sheets of plastic or cardboard to the lower front end portion of the coach.

8. **Towing in Traffic.** On two-lane roads, other vehicles will rapidly line up behind you unless normal speed is maintained. Safety and courtesy dictate that you signal, pull into a turnout, and allow others to pass. **Avoid pulling onto shoulders except in cases of emergency.** On freeways, expressways and other multi-lane roads, pick the lane you want and stay in it. You should not drive in the high-speed (inside) lane when pulling a trailer. Always check mirrors and exercise additional caution when entering or exiting freeways, or when changing lanes.

   Please see "Special Driving Rules for Trailer Towing" at the end of this section.

RULES FOR EQUIPMENT SELECTION AND PREPARATION FOR TOWING

Your towing equipment, its adjustments and loading will have a great effect on trailer towing stability and handling. The following rules will help you select, adjust and load your equipment in a manner that will help produce acceptable, consistent towing characteristics.

- Use a tow vehicle that is large enough for your trailer and has the needed power and heavy duty running gear. The tow vehicle must be rated by its manufacturer both to tow the gross weight and to carry the hitch weight of the fully loaded trailer.
- Use a weight distributing hitch. Follow the tow vehicle and hitch manufacturer's instructions. Install the hitch ball as close as practical to the rear bumper to minimize rear overhang.
- Do not over-tighten the weight distributing hitch spring bars. Follow the hitch manufacturer's instructions, and when in doubt, use the less tight spring bar setting.
- Use a friction type sway control, installed and adjusted in accordance with the sway control manufacturer's instructions.
- Use a brake controller that, in addition to automatically applying the trailer brakes, has a hand control for applying the trailer brakes only.
- Adjust the brake controller so that the brakes of the trailer come on as quickly as possible without sliding the tires of the loaded trailer during strong braking.
- Inflate the rear tires of the tow vehicle to their maximum cold pressure. See the maximum pressure rating on the rear tire sidewalls.
- Load the trailer placing heavy objects and goods as close to the trailer axle(s) as possible. Do not place heavy objects on the rear bumper or on the tongue.
- Fill the water tank, if possible, to minimize sloshing and changes in tongue weight.
- Empty the holding tanks, if possible, to minimize sloshing and changes in tongue weight.
- Carefully load the trailer to comply with the maximum and minimum tongue weights specified by the trailer manufacturer. Weigh the fully loaded trailer from time to time to verify tongue weight.
- Do not exceed the trailer Gross Axle Weight Rating(s) (GAWR) or Gross Vehicle Weight Rating (GVWR). Weigh the fully loaded trailer from time to time to verify that trailer GAWR(s) and GVWR are not exceeded, and that the loads on the right hand and left hand wheels are approximately equal.
- Do not exceed the tow vehicle Gross Axle Weight Ratings (GAWR) or Gross Vehicle Weight Rating (GVWR). Weigh the tow vehicle from time to time to verify these loadings. When weighing, the tow vehicle must be fully loaded with goods, passengers and driver, and must be hitched, with spring bars tightened, to the fully loaded trailer.

travel

When to Go

Trailering is much more than a summertime activity. The true enthusiasts enjoy traveling year-round to experience the changing seasons and take advantage of wide-open highways, uncongested campsites, uncrowded tourist attractions and, in many instances, off-season rates.

Insulation

Your Avion is truly an "all-weather" trailer, thanks to a combination of sophisticated climate control systems and effective insulation. Avion utilizes urethane foam . . . the most efficient and versatile material on the market today. The insulation capability of urethane is almost twice that of the next best product, offering both low thermal conductivity and low moisture vapor permeability.

Avion constructs its coaches with insulation as an integral part of the walls, rather than using batting or sheets of material. First, the outer skin is assembled, then foam is sprayed into all interior cavities, and finally the inner wall panels are attached. This method of construction not only provides better insulation, it also results in more rigid walls, making the aluminum skin less susceptible to dents.

Even the floor of your Avion trailer is fabricated with extra care. A full 1½ inches of rigid foam insulation is sandwiched between two layers of plywood flooring, and finished with sturdy sheet metal on the underbelly.

Cold Weather Traveling

Avion trailers have been designed to make winter trips enjoyable and comfortable, even under prolonged sub-freezing conditions. For maximum comfort, simply take the kind of steps you would to keep your home warm during cold weather.

1. **Keep your trailer heated.** Avion is equipped with a forced air furnace that operates equally well whether the coach is stopped or moving. Leave the heat on at all times to protect water systems. It is also more economical in the long run to maintain a constant "room temperature" than to warm the trailer from a cold start. All **internal** doors and folding partitions should be kept slightly ajar when the coach is occupied, to assure free air circulation throughout the interior.

2. **Carry ample LPG.** Because of increased fuel consumption during cold weather, you should always have a sufficient supply on hand when you need it.

3. **Use outside electricity.** The more external power you use, the less the drain on trailer batteries. For extended stays, especially, locate a 110-volt electrical hook-up. If none is available, you must use internal battery power, but sparingly. Avion's self-contained electrical system is designed to operate many hours on its fully-charged batteries. When recharging is necessary, find an external 110-volt power source or run your tow vehicle's engine at fast idle. One hour of recharging will give you about four hours of available power. See **Battery** section, page 78.

Caution: Carbon monoxide fumes from the car engine exhaust can be potentially dangerous. Whenever the trailer batteries are being charged by the tow vehicle, be sure the windows in the front end of the coach are closed to prevent fumes from entering. Do not run the engine in a confined area.

4. **Guard against heat loss.** Your Avion trailer has been constructed with extensive foam insulation to retain as much of the internal temperature as possible, but a few additional precautions will result in even greater heat retention. Driving during sunlight hours will take advantage of solar radiation on the trailer and avoid the heat-robbing effects of cold winds. Draw all window shades and drapes to prevent heat loss through the glass, and keep the exterior door closed whenever possible.

Caution: In sub-freezing weather, insulate the external water and solid waste lines to prevent possible damage.

Warm Weather Traveling

Trailering during the summer months will be a more pleasureable experience if you observe these travel tips.

1. **Park in shady areas whenever convenient.** This especially important during mid-day hours, when the sun's rays are strongest. Under most conditions, the same superior insulation that keeps your Avion warm in the winter will keep it comparatively cool during the summer.

2. **Keep roof vents open slightly to maintain fresh air circulation inside.** The vents have been designed to remain open even when it rains. While traveling, crank open only the **rear** portion of the vents. All windows should be kept tightly **closed** while traveling, in order to avoid creating cross ventilation air drafts that can pull in dust and dirt while the coach is in motion.

3. Watch your tow car's cooling system closely. Remember, the engine is pulling a heavier load than normal, causing it to run at higher temperatures, even with special heavy-duty components. Overheating is most likely to occur while driving in stop-and-go traffic or pulling up long or steep grades. Driving in hot weather under such conditions tends to magnify the possibility of overheating. See **Towing Tips,** page 12.

4. **Plan ahead.** Your daily itinerary should take into account the higher traffic volume during summer months. This can be offset somewhat by taking advantage of longer daylight driving hours. It is also prudent to write or phone ahead for campsite reservations during vacation seasons. If you intend to enter state and national parks, you may find it more economical to purchase season permits where available, rather than paying a fee every time you visit a controlled area. Also secure proper hunting and fishing licenses and observe the local seasons and limits.

Where to Stay

Your Avion provides you with a home environment virtually any place you travel. You can park in safety and comfort wherever you choose, as long as the site is relatively level and firm, and camping does not violate local ordinances. Once off the highway, you will encounter almost unlimited possibilities by using a little imagination and creative exploration.

Public and private campgrounds and trailer parks offer sites to satisfy many differing tastes and needs. Some have swimming pools, restaurants, general stores, playgrounds, sports areas, outdoor cooking facilities, cable television hook-ups, and just about any of the other conveniences of a modern resort hotel. Many sites offer complete facilities for power, water and waste disposal hook-up, while others have more primitive accommodations (usually national and state parks, forests and monuments). Because your Avion coach is completely self-contained, you can park in comfort regardless of the area you select.

We suggest that you pick up any of the campground guides available through automobile clubs, the National Park Service, or state and local tourist bureaus. These guides provide detailed information on locations, facilities, accommodations, activities, periods of operation, and fee schedules.

If you prefer not to stay in a campground, simply ask the local residents when you arrive in the general area where you plan to stop for the night. Also check with the police department, sheriff, ranger station or chamber of commerce. These people know the area and they are usually eager to help. If public land is not available, farmers will sometimes allow you to say on their property, and local merchants or service station operators may give you permission to use their parking lots overnight.

Write or telephone ahead, whenever possible, and you will know what is likely to be available. If you are intent on staying at trailer parks or campgrounds, we recommend that you make advance reservations, especially during vacation seasons.

Brief Stopovers

Select a parking spot and position the trailer. If the site is relatively level, it is not necessary to use blocks or stabilizing jacks. **However, you should always chock the wheels and lower the post jack.** This will ease the pressure on the tow car's suspension and give the coach greater stability. If the only available site is on an incline, park facing **down** the slope. This will make it easier to level the trailer.

It is not necessary to hook-up to outside power and water for overnight stops, since your Avion is a completely self-contained unit. The refrigerator can operate on the trailer's LPG system, as well as from available 110-volt external power. Also light the range and oven pilots if you plan to use the oven. The water heater and furnace operate by electronic ignition and thus have no pilots.

That's all there is to it! When stopping for only one or two nights, it is unlikely that you will run down the batteries, exhaust the fresh water supply, or fill the rinse water and solid waste tanks. Just relax and enjoy your stay. There is not even a need to unhitch your tow car . . . unless you want to drive into town or go sightseeing. Whatever you choose to do, it's a nice feeling to know your luxurious accomodations are prepared for the night.

Lengthy Stops

Camping for an extended period requires a more complete setup, in order to utilize the trailer's full capabilities. Observe the following procedures.

1. **Select and prepare the site.** Look for a parking area that is as level as possible, but if you do find it necessary to select an incline, make certain the vehicles face **downhill.** Always carry a shovel and some boards to assist you in preparing the site. They come in handy for lowering bumpy areas and elevating ground depressions, which can cause the coach to lean.

2. **Check trailer for level.** Use a carpenter's or spirit level to determine whether the coach is on a horizontal plane. The level should be placed on top of a counter inside or on the A-frame of the trailer tongue. if leveling is required, it should first be done from side-to-side and then from front-to-rear. See illustration, page 23.

3. **Level from side-to-side.** To bring the low side of the trailer up to level, place 4'x 6"x 2" boards (additional board length is necesary for triple axle models) on the gorund where the low-side trailer wheels will rest, then drive the coach onto this "ramp" until the wheels are centered. We suggest tapering the ends of the boards so that the tires roll onto them easily. Chock all wheels to prevent the coach from moving. Do not attempt to level the trailer by digging holes for the highside wheels.

4. **Level from front-to-rear.** Uncouple the vehicles and adjust the trailer hitch jack post up or down until the trailer is level.

5. **Position stabilizing jacks.** If blocks or stabilizing jacks are used to steady the coach, they should be placed under the frame at the front and rear. Any additional jacks that may be needed for leveling on extremely bumpy terrain must be positioned **under the main frame rails only.** Use heavy-duty lifting jacks for this purpose. If your Avion is equipped with the optional stabilizing jacks, they are permanently attached to the trailer for ease and convenience.

   Caution: Stabilizing jacks are not designed to support the weight of the trailer; that is the job of the tires. The jacks should be extended only enough to support the frame and hold it firm. Never use them for lifting the coach.

6. **Hook up the utilities.** The water intake line and 110-volt electrical cable are located in a locked compartment on the road side at the rear. Open hinged access cover and pull out the water hose and a power cable far enough to reach the hook-up couplings, then connect them. For special instructions on grounding the power cable, refer to **Electrical** section, page 72. You can close the access cover to keep out dirt by seating the water and power lines in the built-in, adjustable-length slots. Connect the sewage and rinse water outlet hose to the outside sewer hook-up. The outlet is located behind a hinged door on the road side of the coach, behind the wheels. Drain rinse water holding tank and leave valve open. Disconnect hose from sewage outlet, swivel the sewage outlet down, swing door up and latch it, and reconnect sewer hose to the outlet. See **Drainage** System, page 68.

   Important: If outside utilities are not available, regularly check the Monitor Panel for condition of batteries, fresh water supply, and solid waste and rinse water holding tanks. Service them as required.

7. **Turn on LPG.** Open the gas valve. See **Appliances** section.

8. **Raise television antenna.** Raise the roof-mounted TV antenna, and adjust for the best reception. You may prefer to use the cable television hook-up, if this service is available at your campsite. Use the terminal housed inside the 110-volt power cord compartment, and switch your TV lead-in from the "TV Antenna" jack to the "Cable TV" jack. See page 33.

9. **Recharge batteries.** Extended stays utilizing internal power place a burden on the trailer's storage batteries, so conserve electricity whenever you can. The on-board system will operate for many hours on fully-charged batteries. To recharge, run your tow car engine at fast idle. One hour of recharging will provide about four hours of electrical current. Be sure the 9-way connector is hooked up between trailer and tow car before charging.

Caution: Carbon monoxide fumes from the car engine exhaust can be potentially dangerous. Whenever the trailer batteries are being charged by the tow vehicle, be sure the windows in the front end of the coach are closed to prevent fumes from entering. Do not run the engine in a confined area.

Leaving the Campsite

Preparations for departure should follow this step-by-step procedure to assure that nothing is overlooked.

1. Disconnect power cord and water hose from the outside hook-ups and stow. Also disconnect cable TV. then close and lock compartment.

2. Drain solid waste and rinse water holding tanks and secure dump valves. Disconnect sewer hose from utility hook-up and trailer sewage outlet, flush with clear water, and stow in hinged compartment located behind the rear bumper. Swivel sewage outlet up, replace outlet cap, and latch access door. See **Drainage** section, page 68.

3. Turn off the LPG supply value and all pilot light valves on range and oven.

4. Store all gear as outlined in **Loading** section, page 4.

5. Close all windows (close roof vents or adjust for travel, if desired; page 48), lower the optional television antenna and lock the main door. Fold the step into its "traveling" position under the coach. Retract the optional front and side awnings and latch them securely.

6. Retract or remove the stabilizing jacks or blocks from underneath the trailer, hitch up the vehicles for travel, and unchock the wheels. Do not forget any leveling ramps that might have been used.

7. Clean up all litter that accumulatd during your stay. You should leave the area in as good condition as when you arrived. Campers appreciate each other's consideration.

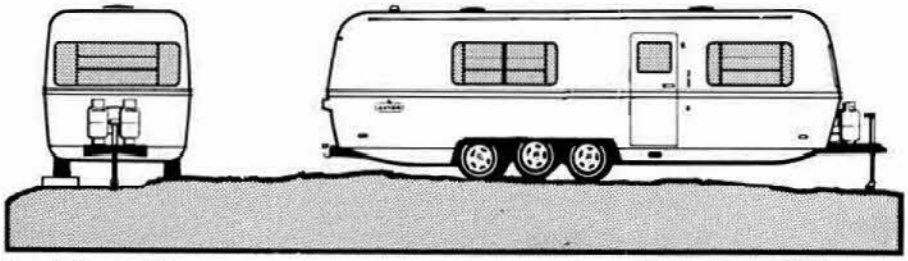
Final Check List

- 110-volt power cord disconnected
- Water hose disconnected
- Windows closed
- Roof vents closed
- TV antenna retracted
- Refrigerator doors locked
- Storage compartments closed and locked
- Interior lights off
- LPG appliances off
- Folding step retracted
- Main door locked
- Wheel lug bolts tight
- Coupler latched and secured with hitch safety pin
- Safety chains secured to tow car
- Break-away switch cable attached to tow car hitch frame
- 9-way connector plugged into tow car electrical cable
- Trailer batteries connected and charged
- Jacks stored and blocks removed
- Trailer running lights working
- Brake controller operating
- Mirrors adjusted
- Side and front window awnings up and latched

Waste Disposal

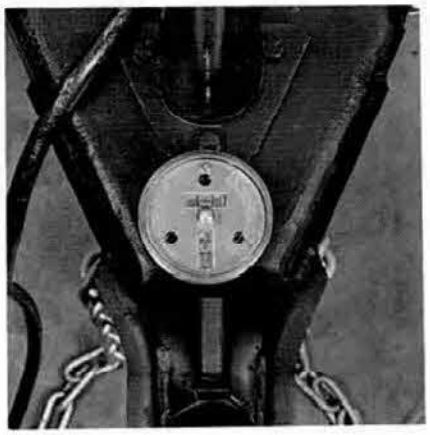
Stop at a sanitary dumping facility if you have used the internal water or waste holding systems for an extended period without being connected to a sewer line. Many service stations and roadside rest stops provide public facilities designed for discharging rinse water and solid waste holding tanks and taking on fresh water. Acquire a booklet listing available stations in the areas where you will be traveling. For detailed information on emptying the rinse water and solid waste holding tanks, see **Drainage** section, page 68.

Trailer Leveling

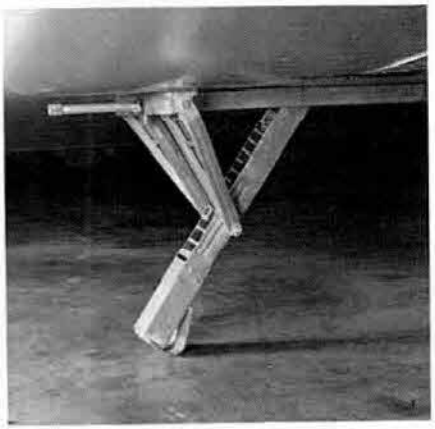


Step 1. Side to Side

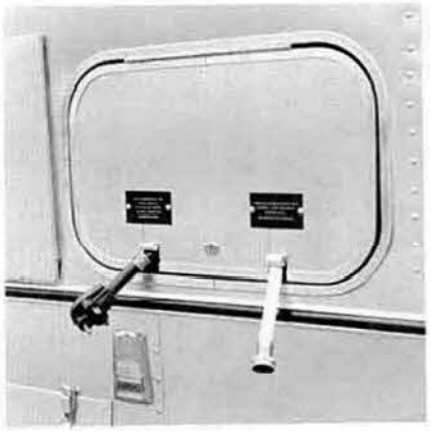
Step 2. Front to Rear



Spirit Level



Stabilizing Jacks



Utility Connections

Sewage Hose Connection

Avion Travelcade Club

New travel horizons will be open to you through the Avion Travelcade Club . . . a private, non-profit organization with a membership limited to Avion owners.

The club brings together families of different ages and diverse backgrounds who share interests common to all trailering enthusiasts: Love of the outdoors, the urge to travel, and a spirit of adventure.

Club gatherings foster goodwill and provide companionship, enjoyment, recreation, and the opportunity to make new and lasting friendships.

Organization

More than 3000 families belong to the Avion Travelcade Club worldwide. There are 35 separate units in the United States alone, each representing a state or larger area. These units are grouped geographically into larger entities to allow for efficient coordination of activities.

Avion owners who belong to their state units automatically receive membership status in the Internaitonal Avion Travelcade Club as well, and are welcome to participate in the rallies of any other unit.

Activities

Club programs include unit rallies, travelcades and international rendezvous assemblies.

1. **Unit Rallies.** Each unit holds at least two rallies per year, usually in the spring and fall. They generally take place over long weekends and in locations easily reached by unit members. Other units hold monthly rallies. Unit officers are elected by the membership at the annual fall gathering.
2. **Travelcades.** A travelcade is an organized trip over predetermined route, for sightseeing and leisurely travel. Local units sometimes stage occasional travelcades lasting from a few days to two weeks, while regional, national and international travelcades may run several weeks and include trips to neighboring states, Mexico or Canada. Each is under the leadership of a travelcade director to assure a safe and enjoyable experience.
3. **International Rendezvous.** At least three of these large-scale rallies are held each year, in the north during the summer and south during the winter. They run 4-5 days. International officers and regional district governors are elected by the membership at these events.

Avion travelcades are the ideal means of traveling for those who are hesitant about making long trips alone. Travelcades offer security in addition to the fun and fellowship of traveling together and participating in group activities.

International Rendezvous

Club Insignia

Membership Information

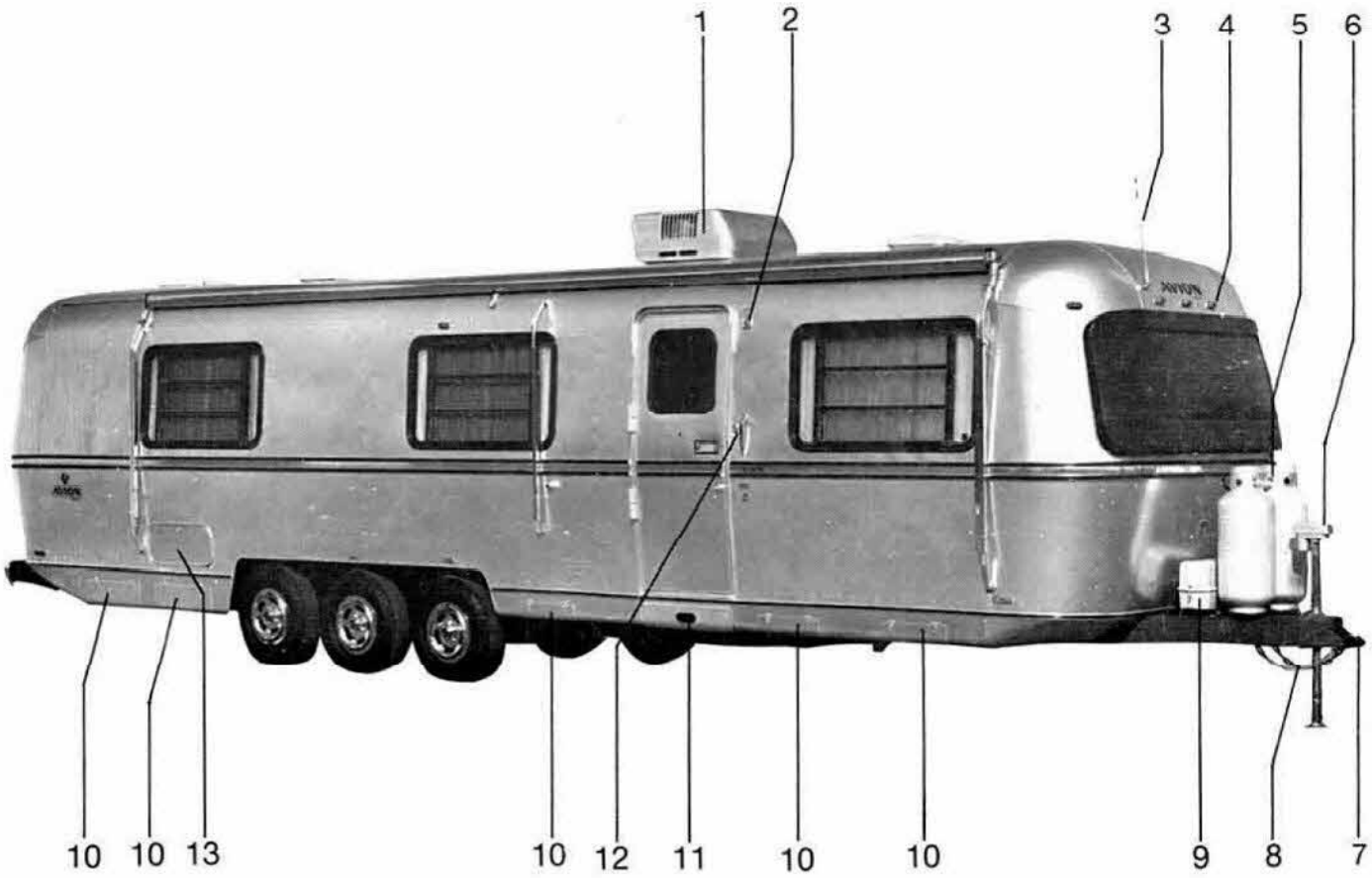
Members of the Avion Travelcade Club receive their own individual registration number decal for the coach, as well as Travelcade Club insignia and unit name crescent decals for the coach and car windshield. Decals are also furnished showing participation in each international travelcade.

Every member also receives a subscription to the monthly Avion Travel News and a yearly directory of membership, club bylaws, and other information.

For details on membership and dues, ask your Avion dealer for the descriptive brochure and the name and address of your local unit secretary.

Exterior

Exterior Identification



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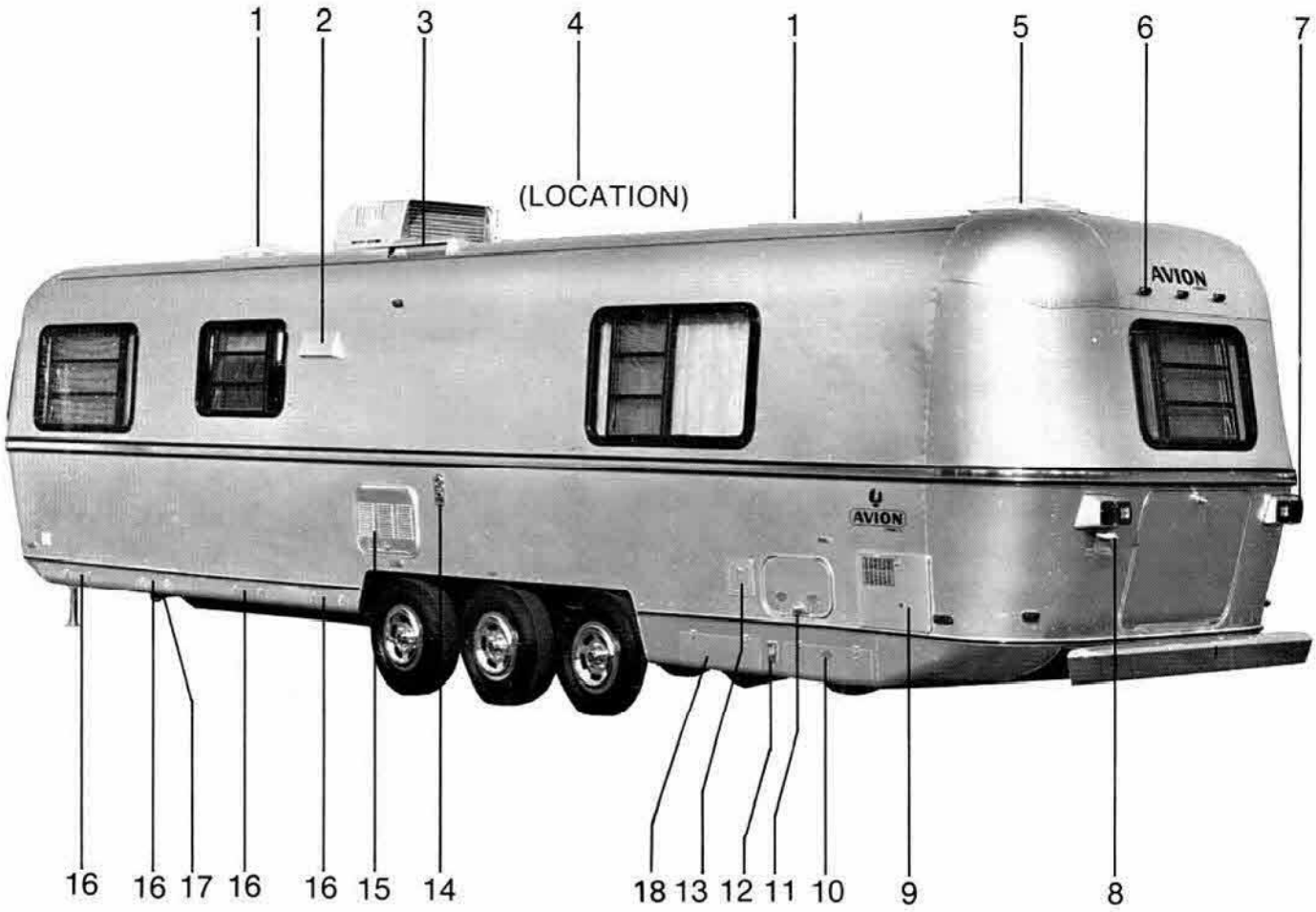

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Care of Exterior Surfaces

The exterior skin of your Avion is fabricated of anodized aluminum for long-lasting beauty and resistance to corrosion or discoloration. You can keep it looking like new by giving it the same care as a fine automobile.

The trailer should be washed periodically with a warm solution of mild detergent or soap. **Avoid strong detergents, solvents or any abrasive cleaners.** The aluminum skin should be cool when you wash it. Pick a shady area or wait for an overcast day, but never wash it in direct sunlight.

Make sure all vents, windows, storage compartments, access panels and the main door are closed tightly, then apply the cleaning solution with a large sponge or soft cloth. Starting with the roof, wash one section at a time and rinse immediately to prevent the cleaning solution from drying on the surface. Road tars, sap, resin and other such materials should be removed as soon as you notice them, before they can harden. Use kerosene, turpentine or naphtha with a soft cloth, taking care not to scratch the surface. Rinse thoroughly with clear water and rewax the affected areas to protect the finish. **Never use abrasive powders or strong chemicals to remove caked-on foreign matter.**

The aluminum skin should be waxed every three to six months, depending on exposure to the elements. We recommend an aircraft polish, but you may also use any good automotive paste or liquid cleaner/wax. Periodic waxing will increase the life of the finish by protecting it from salt air in coastal regions, as well as from air pollution and minor scratches. It will also make subsequent cleaning easier.

The trailer hitch A-frame and back frame can be kept looking as new as the aluminum skin by painting them as needed, using a brush-on or spray lacquer.

Occasionally inspect all exterior seams for holes and cracks, which can sometimes develop from shrinkage of the sealer after prolonged exposure. A good sealant is available from recreational vehicle dealers and automotive supply stores.

Features

Main Door and Screen Door

The main door is located on the curb side of the coach and opens outward. It can be opened 180° and secured flush against the side of the trailer. Swing door open fully, then push on it until the doorstop pin engages the doorstop receptacle on the outside of the coach. The inside door handle is operated by pivoting it either up or down from its horizontal position. The outside recessed lever is operated by pulling it outward from the door.

A key-actuated lock is built into the main door for maximum safety and security when locking the trailer from the outside. To operate, insert the key and turn it **clockwise**, locking the bolt in the extended position. The bolt must be fully engaged for the door to lock, and once in that position, it cannot be accidentally retracted or vibrate back into its recessed location inside the door.

Note: Do not turn the key while door is still open; the extended bolt will then hit the door frame and prevent closure.

To unlock, turn key **counterclockwise** one-half turn and use handle to open.

The main door lock is operated from inside the coach by a lever at the lower left corner of the door handle panel. Lift upward on the lever to lock the door and push downward to unlock it. Moving the inside handle either up or down will automatically release the lock.

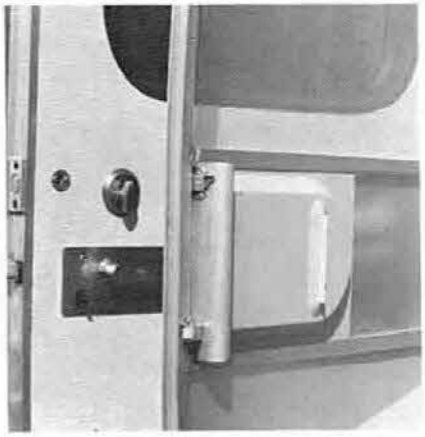
For added security, a dead bolt lock has been installed in the entrance door. It is operated by a key from outside, and by a turn button inside.

Each dead bolt lock is individuallly keyed. Be sure to keep spare keys outside the trailer for emergency use.

Your Avion is also equipped with a screen door, which can be opened and closed independently of the main door or coupled with it to operate as a unit. To link them together, simply push the screen door against the main door to uncouple, press down on the release latch next to screen door handle. When joined together, access to the main door's inside handle is through a sliding aluminum panel on the screen door.

The main door is closed properly when there is no play in the handle. If you have difficulty locking the door, push or pull it gently to allow full travel of the bolt.

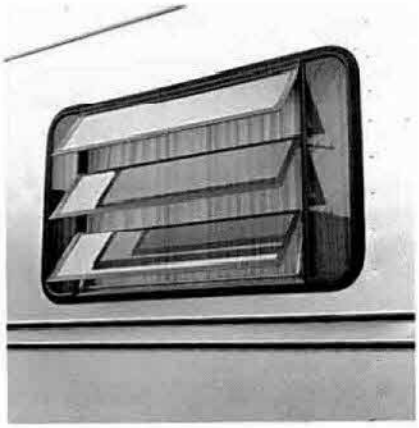
Important: Always close and lock the main door with dead bolt before towing. Road vibration may cause an unlocked door to unlatch and swing open while the trailer is in motion, resulting in possible damage.



Main Door Handle and Lock

Screen Door

Handle Access, Doors Latched Together



Window Opening

Windows and Screens

All windows are made of tinted high-strength safety glass. The louvered vent panes are operated by a knob located at the bottom corner of the window frame. Turn the crank clockwise to open and counterclockwise to close. **The emergency escape window is not louvered and should never be opened except in emergencies or during practice drills.** For operation of this window, see **Interior** section, page 50.

Windows may be washed with the same solution used on the exterior skin, or with any type of household window cleaner. Never clean heavily soiled window glass with a **dry** cloth, which can cause scratches, and do not use strong solvents that can damage the rubber window seals. You can keep these seals flexible and weather-tight with an application of silicone lubricant after windows have been washed and dried.

The window screens are made of fiberglass for durability and easy care. They can be taken out for cleaning by first removing the vent pane crank handle, then lifting the screen straight up until it clears the lip on the bottom channel. Swing the bottom of the screen outward and pull down to remove.

Lightly soiled screens may be hosed off or cleaned with a damp cloth or sponge. If they have heavy accumulations of dirt or other foreign matter, wash or soak them in a warm solution of detergent and water, then rinse and dry. Do not bear down on the screening material, to avoid stretching it out of shape or possible warping the aluminum frame. **Never subject it to high heat, such as a lighted cigarette, which will cause the fiberglass to melt at point of contact.**

Water Leaks

Water can sometimes collect inside the lower portion of window frames, usually as the result of driving in heavy rainstroms. Two or more "weep slots" in the bottom of the frame provide drainage to the outside. Keep them free of dirt, leaves and other obstructions.

If water collects and overflows the bottom channel while driving, even when the weep slots are clean, it is possible that a vacuum has been created inside the coach, drawing water through the window and preventing normal drainage.

In the event water enters around a non-opening window, remove the glazing bead and check condition of the sealing tape. Replace the tape, or caulk with a liquid sealer, if necessary.

It is also possible for leaks to occur at places other than window frames, such as through seams in the exterior skin or around outside light fixtures. You may be able to detect and seal possible areas of leakage by inspecting the seams as recommended earlier in this section, under **Care of Exterior Surfaces,** page 30.

Folding Step

A double folding step is housed directly below the doorway to facilitate entry and exit from the coach. To extend the step, unlatch the step cover at both ends, and let the cover swing down. Grasp the step assembly and pull it out as far as it will go. Unfold the lower step completely. Reverse the procedure to store the folding step for travel.

For your safety, the step comes with a non-skid surface. An assist grip is located to the right of the doorway for added convenience in entering and leaving the trailer.

Storage Compartments

Your Avion features numerous storage compartments conveniently located all around the coach exterior. Some are positioned along the bottom edge of the trailer on the curb and road sides. They are hinged at the bottom and are secured with two latches at the top. A large locking trunk at the rear end of the coach can be used to store a spare tire, various jacks, lug wrench and other gear. The trunk is bottom-hinged and swings down for easy access. Another storage compartment is located directly behind the rear bumper. It may be used to stow the sewer hose and other miscellaneous equipment.

Power Jack

Raising and lowering the trailer will be easier and faster with the optional power jack, which is operated by a spring return switch with center "off" position. Familiarize yourself with the direction of travel of the jack post and the corresponding switch direction. Raise or lower the coach by removing the switch cover and activating the switch in the appropriate direction. Internal limit switches automatically shut off the motor when the post is either fully extended or retracted. The power jack is protected by a 20 amp fuse located in the battery box on the trailer tongue.

The power jack can also be operated manually in the event of electrical failure. Remove the power head from the jack post by loosening the two allen set screws with the wrench provided, then insert the emergency handle into the coupling on top of the jack post.

Important: It is essential to carry out the following procedure **before** replacing power head on the jack post. Ground the power head to the trailer A-frame with 12 volts connected, then operate the switch in **post retracting** direction until the motor stops automatically. Using the emergency handle, crank jack post **clockwise** until fully retracted, then rotate handle one turn **counterclockwise.** Replace power head on post, making sure drive pin is engaged with the post coupler, then tighten allen set scews.

Minimum regular maintenance will keep the power jack operating up to design specifications.

1. **Once each year:** Remove the power head and apply a high-melting-point grease to the post coupler. **Do not** pour oil on top of the post. When replacing the power head, always carry out the synchronizing procedure outlined above.

2. **Once every two years:** Remove the housing cover and inspect gears for proper lubrication. Spread a high-melting-point grease on gear teeth. Grease is not required on the nylon timing gears. Before replacing cover, be certain the plate and limit switch unit are located correctly. Apply a small amount of sealing compound around the mating surface of the cover before engaging the screws. Check synchronization if power head has been removed from jack post for maintenance.

Stabilizing Jacks

Stabilizing jacks are permanently installed on the frame under the coach and are deployed only after the trailer has been leveled side-to-side and front-to-rear. To operate, position the end of the crank handle over the stabilizer nut and turn until the jack is resting firmly on the ground. Start with the low or "downhill" side, then repeat the procedure on the opposite side, putting slightly less pressure on the "uphill" side jacks after they make contact with the ground. To raise the stabilizing jacks for travel, crank them up as far as they will go, to assure maximum ground clearance.

Caution: Never use stabilizing jacks to level or raise the trailer or to change a tire.

Sway Control Device

Some types of trailer sway can be moderated by taking preventive measures, such as maintaining proper tire pressure and sound suspension systems, and distributing weight loads in accordance with design specifications.

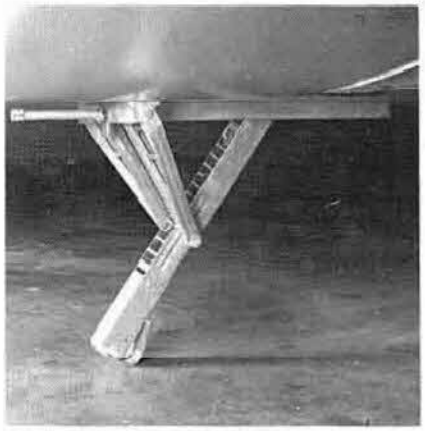
The primary causes of sway, however, are strong wind gusts and the compression and displacement of air by large passing vehicles. These effects can be reduced by the installation of a friction-type sway control device. It attaches easily to most weight-distributing trailer hitches and can be activated or disengaged at will. Sway controls are available from most recreational vehcile supply stores and trailer hitch installers.

Important: Anti-sway hitches are required by law in some states. Make certain you comply when applicable.

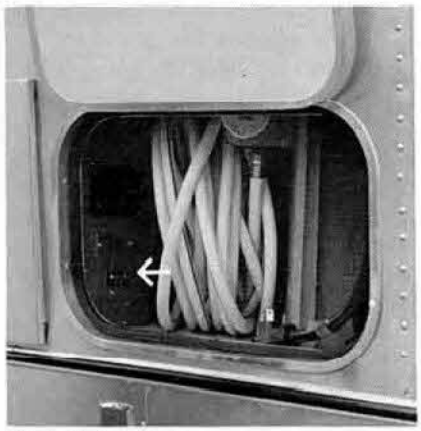
Folding Step Extended

Main Door Assist Grip

Rear Trunk, Spare Tire Storage



Attached Stabilizing Jacks



Cable TV Terminals

Television Reception System

Your Avion has been pre-wired to receive television signals over-the-air and by cable. Two hookups are located conveniently inside the coach. They feature a combination TV antenna jack/12-volt electrical outlet, and a separate cable TV jack. Your trailer is also equipped with the roof-mounted, all channel Braund television antenna, made by the Braund Manufacturing Company. The main hookup location will include an amplifier switch and "power on" red light.

While staying at trailer parks or other facilities that offer cable television, you can take advantage of this service by hooking up to their coaxial line. A two-connection cable TV terminal block is located in the 110-volt power cord compartment outside the trailer. Use a coaxial adaptor to connect the cable to the terminal screws, then unplug TV set lead-in wire from the TV antenna jack and plug into the adjacent cable TV jack.

TV Antenna Operation

Before extending the antenna, check for overhead obstructions such as tree limbs. Raise the antenna by pulling the ceiling crank downward and rotating the knob **counterclockwise** until the "stop" is reached, then back off the crank handle approximately one-half revolution. Push the crank body upward and with a slight **clockwise** turn, to engage the rotation pin. The antenna can now be rotated in either direction with the crank body for best reception.

Important: The antenna is prevented from rotating 360° in either direction by "stops". Do not attempt to rotate it beyond these points. Instead, turn in **opposite** direction.

Whenever practical, you should select a parking place that allows line-of-sight from the television transmitter. If you are located in a canyon or mountainous terrain, TV picture quality will be adversely affected. Poor pictures or sound can be caused by other factors, as well. Check all wiring for loose or dirty connections and possible short circuits. Also make sure the TV antenna's power amplifier switch is turned on.

When you are ready to lower the antenna for traveling, first rotate it clockwise to a "stop" position, thus placing it in line to be retracted into the travel support. Pull down the crank handle to disengage the rotation pin and then turn the crank handle knob **clockwise** until it reaches the lower "stop". The sound of the antenna making contact with the travel support will be audible when this happens.

Important: Force is not required to operate the antenna. If it does not extend, rotate and retract easily, check the installation manual.

The antenna has been fully lubricated, but it is recommended that you use a silicone spray occasionally and add a good grade of grease to the gears once a year, if needed. Consult your Braund antenna installation manual for detailed instructions.

Important: Never travel with the television antenna in the raised position. Any contact with overhead obstructions can damage the gears and the antenna itself.

Radio Antenna

Standard equipment includes an AM/FM radio antenna mounted outside the coach at the front end. While the AM band is relatively unaffected by terrain, for optimum FM reception you should look for the same kind of line-of-sight location as television requires.

Note: The metal construction of your Avion acts as a shield against all radio and television signals. For satisfactory reception, therefore, you must always use an outside antenna or plug into a cable television source, where available.

TV Antenna Controls

Radio Antenna