

1983 OWNER'S MANUAL

AIRSTREAM TRAVEL TRAILER

*1000 MILE CHECK OR 60 DAY CHECK-OUT

AUTHORIZATION CARD

This card entitles you, under the exclusive Airstream
Certified Performance Check-Out Program, to a 1000 mile
(or 60 day.....whichever comes sooner) Performance Check
of your Airstream trailer.

** After delivery of your trailer*

INTRODUCTION

The Owner's Manual for your new Airstream Product is designed to explain the operation, function and care of the many systems that make modern trailering a joy. The operation of appliances such as refrigerator, furnace, water heater and others are explained by the manufacturer in the packet included with this manual. All information, illustrations and specifications contained in this literature is based on the latest product information available at time of publication approval.

Throughout this manual CAUTION and WARNING notations are used. Failure to observe "Caution" can damage equipment. "Warning" notes the possibility of personal injury if not observed.

NOTE: If and when new materials and production techniques are developed which can improve the quality of its product or material substitutions are necessary due to availability, Airstream reserves the right to make such changes.

CONTENTS

Warranty.....	A
Service.....	B
Explanation of Warranty.....	C
Wally Byam Stores.....	D
Tow Car Equipment.....	E
Electric Brakes.....	F
Hydraulic Brakes.....	G
Tires.....	H
Hitching Up.....	I
Towing Tips.....	J
Overnight Stop.....	K
Extended Stay.....	L
Winter Trailering.....	M
Storage and Winterizing.....	N
Exterior.....	O
Interior.....	P
L.P.G. System.....	Q
Water System.....	R
Drain and Waste System.....	S
Battery.....	T
Electrical System.....	U
Electrical Trouble Shooting..	V
Specifications.....	W
Lubrication & Maintenance....	X
Pre-Travel Check List.....	Y

LIMITED WARRANTY 1983 AIRSTREAM TRAVEL TRAILERS

WARRANTY COVERAGE

When you buy a new Airstream Travel Trailer from an authorized dealer, Airstream warrants the trailer to you as follows:

WARRANTY PERIOD

This warranty extends for a period of one year from the date of original purchase.

ITEMS COVERED

Any part of the trailer or any component equipment installed by the factory is covered by the warranty.

ITEMS NOT COVERED

- * Tires
- * Battery
- * Fuses
- * Interior and Exterior Light Bulbs

The tire and battery warranties will be handled by their respective service points and according to their written policy. This limited warranty does not include failure caused by accident, abuse, normal wear, overload, or any cause not attributable to a defect in original material or workmanship of the trailer or component equipment as installed by the factory.

LIMITATION OF IMPLIED WARRANTIES

All warranties of merchantability and fitness for a particular purpose, whether written or oral, express or implied, shall extend only for a period of one year from the date of original purchase. There are no other warranties, which extend beyond those described on the face hereof and expressly

excludes conditions resulting from normal wear, accident, abuse, exposure or overload. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

AIRSTREAM'S RESPONSIBILITY

The Airstream Limited Warranty applies for a period of one year from the date of original purchase, and the applicable date of all warranties is that indicated on the owner's ID card. (Owner's Identification). Warranty defects (except tires and battery) will be corrected without cost upon the return at the owner's expense of the trailer or defective part to an Authorized Airstream Dealer Service Center.

CARE AND MAINTENANCE

Inasmuch as this warranty covers defective material and/or workmanship, adjustments and checking are excluded. All adjustments are made at the factory prior to shipment, and rechecked by the dealer prior to delivery to the customer. An additional check up, including adjustments, is given at the 1,000 mile or 60 day inspection. Adjustments thereafter become a customer responsibility.

Each Airstream exterior (not including the underside) is sprayed with enamel or plastic-coating material to prevent oxidation. This application is covered by the one year warranty against peeling.

Prolonged exposure to salt air or industrial fall-out will permit penetration through the coating material, causing damage to the exterior metal. Since Airstream has no control over these conditions, it is necessary for the owner to wash and maintain his trailer as instructed in the Owner's Manual.

INSTALLATIONS NOT COVERED

Airstream cannot, however, and does not accept any responsibility in connection with any of its travel trailers for additional equipment or accessories installed at any dealership or other place of business, or by any other party other than Airstream. Such installation of equipment or accessories by any other party will not be covered by the terms of this warranty.

IF REPAIRS ARE NEEDED

If your trailer needs repairs under the terms of the Airstream Limited Warranty, you should:

1. Take your trailer to your selling dealer or other Authorized Airstream Dealer Certified Service Center for repair.
2. If the dealer is incapable of making the repair, request that he contact the Service Administration Department at Airstream for technical assistance.
3. If repairs are still not made, the customer should contact Airstream, 419 W. Pike Street, Jackson Center, Ohio 45334, attention - Owner Relations Department and furnish the following information:

- * The complete serial number of the trailer.
- * Date of original purchase.
- * Selling Dealer.
- * Nature of service problem and steps or service which have been performed. The customer may be directed to another dealer because Airstream feels they are better equipped to make the repairs.

4. If, after taking the above steps, repairs are still not complete, the Airstream owner may request the trailer be allowed to be brought to the Factory Service Center at the owner's expense.

DEALER REPRESENTATION EXCLUDED

The full extent of Airstream's warranty is set forth in the "Airstream Limited Warranty", detailed in this folder, and in the Explanation of Airstream Limited Warranty covered in the Airstream Trailer Owner's Manual. Airstream will not be responsible for additional representations or implied warranties made by any of its dealers to the extent those representations are not a part of, or are contrary to, the terms and conditions of the Airstream Limited Warranty.

CONSEQUENTIAL AND INCIDENTAL DAMAGES

Airstream will not be responsible for any consequential or incidental expenses or damages resulting from a defect. Incidental expenses include,

but are not limited to, travel expenses, gasoline, oil, lodging, meals, telephone tolls, loss of work and loss of use of the trailer. Some examples of consequential damages would be: stained curtains due to rain leaks, delaminated floor caused by a plumbing leak or oxidized aluminum due to coating failure. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

WARRANTY TRANSFER

The limited warranty is transferable to subsequent owners for the duration of the warranty period. Warranty transfer application forms are available from your dealer or the Airstream Factory Service Administration Department.

CHANGES IN DESIGN

Airstream reserves the right to make changes in design and improvements upon its product without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SERVICE

THE AIRSTREAM CERTIFIED PERFORMANCE CHECKOUT, or C.P.C. is an exclusive Airstream program. Before leaving the factory, each and every vital part of the trailer is tested for performance. Each test is signed and certified by an inspector. After the trailer arrives on your dealer's lot, all of these vital parts and systems are again tested. When you take delivery of your new trailer, you will receive a complete check-out.

C.P.C. does not stop here. After you have traveled with your trailer for 1000 miles or 60 days, (whichever comes first) you can make an appointment with any one of the Airstream dealers for still another check-out of your trailer. At that time, a specified list of performance checks on your trailer equipment will be conducted and any deficiencies you have experienced since taking delivery will be corrected.

Please contact your dealer if you need service. Major service under your Airstream Limited Warranty is available through out nationwide network of Airstream Dealer Service Centers. An up to date list of Dealer Service Centers has been provided with your new trailer. This list is current as of the date of publication.

Occasionally dealerships change or new dealers are added who may not appear on this list. For this reason, it is suggested that you contact your local dealer from time to time and bring your list up to date. He can also provide you with additional copies if you need them. ALL CENTERS OPERATE ON AN APPOINTMENT BASIS FOR THE UTMOST EFFICIENCY.

When you require service from the Airstream Factory Service Center or a Certified Dealer Service Center, please contact the service manager for an appointment, and kindly inform him if you are unable to keep the appointment date or wish to change it.

Service may be arranged at the Factory Service Center by contacting the service manager at:

Airstream Factory
Service Center
419 W. Pike Street
Jackson Center, Ohio 45334
513-596-6111

EXPLANATION OF AIRSTREAM LIMITED WARRANTY

The Airstream Limited Warranty is detailed in a separate folder. A plastic WARRANTY IDENTIFICATION CARD is sent to you after Airstream receives notification from your dealer of the sale. Since this I.D. card is necessary to obtain warranty, it should be kept in the trailer or on your person during the warranty period.

EXCLUSIONS:

NORMAL WEAR

Items such as tires, water purifier packs, curtains, upholstery, floor coverings, window, door and vent seals will show wear or may even wear out within the one year warranty period depending upon the amount of usage, weather, and atmospheric conditions.

ACCIDENT

We strongly urge our dealers and customers to inspect the trailer upon receipt of delivery for any damage caused by accident while being delivered to the dealer, or while it is on the dealer's lot. Damage of this nature become the dealer's or customer's responsibility upon acceptance of delivery, unless Airstream is notified and the damage is verified by the person making the delivery. Glass breakage, whether obviously struck or mysterious, is always accidental and covered by most insurance policies.

ABUSE

Lack of customer care and/or improper maintenance will result in early failure for which Airstream cannot be held responsible.

EXPOSURE

Not unlike a car, the steel parts of a trailer can and will rust if subjected to prolonged exposure to moisture, salt air, or corrosive airborne pollutants without repainting. Aluminum oxidizes when unprotected under similar conditions, and refinery chemicals of a sulfurous nature are harmful to finishes if not washed off periodically. Extremely hot or direct sunlight will deteriorate rubber and fade curtains and upholstery. Conditions of this nature, although they may be normal for the area, are beyond Airstream's control and become the responsibility of the owner.

Although it is our obligation to correct a rain or plumbing leak within the terms of the limited warranty, it is the owner's responsibility to use reasonable, prudent care to minimize foreseeable secondary damage, such as a delaminated floor, stained upholstery, carpeting, drapes etc.

OVERLOAD

Damage due to loading, either beyond capacity or to cause improper towing because of improper balance, is beyond Airstream's responsibility. The Airstream trailer is engineered to properly handle the gross vehicle load rating on the certification label. Load distribution has a definite effect upon the towing characteristics and attitudes of the trailer. Level hitch installations are a necessity, and very important on a tandem axle trailer. There are limits to the amount of load that can be safely transported depending upon speed and road conditions, and reasonable cause

to believe these factors have been exceeded could void the Airstream warranty. For additional information on the loading of your trailer, consult your Owner's Manual or gross vehicle weight rating plate.

The Airstream axle is manufactured to a tolerance of 1° camber and 1/8" toe-in. These tolerances will only change if the trailer is subjected to abuse, such as dropping off a sharp berm, striking a curb, or hitting a deep hole in the road. Such damage would be considered as resulting from an accident which risks are not covered under the warranty. Abnormal tire wear and/or wheel alignment resulting from such damage is not covered under the terms of the warranty.

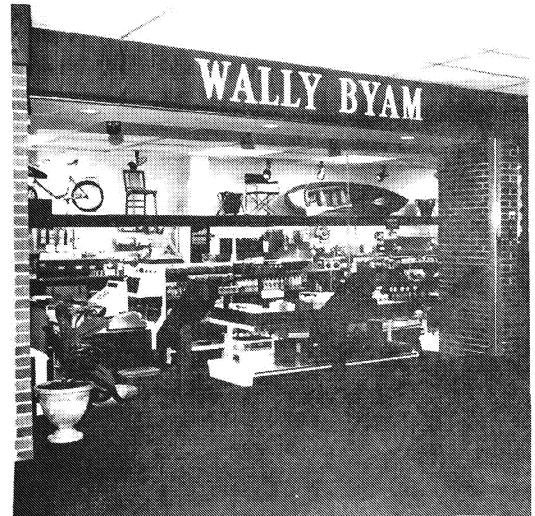
CAUTION: YOUR AIRSTREAM MAY BE EQUIPPED WITH THE OPTIONAL EXCELLA-VAC BRAKE SYSTEM WHICH BRINGS ALL OF THE ADVANTAGES OF FULL DISC BRAKING TO TRAVEL TRAILERS. IT IS EXTREMELY IMPORTANT TO NOTE, HOWEVER, THAT EXCELLA-VAC USES AN ENTIRELY DIFFERENT SYSTEM FOR CONTROLLING BRAKE OPERATION. IT IS NOT COMPATIBLE IN ANY WAY WITH THE OLD ELECTRIC BRAKE CONTROL SYSTEM. IF YOU DO NOT USE THE CONTROL SYSTEM DESIGNED FOR USE WITH THE EXCELLA-VAC DISC BRAKES, THE TERMS OF YOUR AIRSTREAM LIMITED WARRANTY WILL BE VOID WITH RESPECT TO ANY DAMAGES INCURRED AS A RESULT OF THE USE OF A NONCOMPATIBLE SYSTEM. IN ADDITION, MANY ADVANTAGES OF THE EXCLUSIVE AIRSTREAM DISC BRAKES WILL BE LOST IF THE EXCELLA-VAC CONTROL SYSTEM IS NOT USED.

WALLY BYAM STORES

To make trailering more enjoyable, there are Wally Byam Stores established at the majority of Airstream dealers. All Airstream dealers have the opportunity of purchasing for you the necessary equipment which would enable you to enjoy your new trailer to the utmost. The Wally Byam Stores authorized dealerships stretch from coast to coast, and these dealers stock hundreds of items which are tested and approved by travel experts. Be sure and get an accessories catalog from your dealer.

The following is a list of equipment we recommend:

1. First Aid Kit
2. Flashlight
3. Emergency Road Warning Triangle
4. Crosstye Lug Wrench for Trailer Wheels
5. Pop Rivets (3 sizes)
6. Pop Rivet Gun
7. Battery Booster Cables
8. Tire Gauge (up to 100 pounds P.S.I.)
9. Hitch Ball Lube
10. Small Bi-Directional Spirit Level
11. Heavy-Duty Turn Signal Flasher
12. Four Stablizing Jacks
13. Leveling Ramps
14. Wheel Chocks
15. Spare Tire and Wheel
16. One 50 ft. and one 25 ft. length of 5/8" High Pressure Water Hose.
17. Y-Connection with Cap
18. 5 Gal. Water Jug
19. Quick Disconnect Garden Hose Coupling
20. One 10 ft. or 20 ft. Sewer Hose.
21. One Thetford Sewer Hose Adapter - Straight or Elbow
22. One Elbow Sewer Hose Outlet
23. Two 2 1/2" to 3 3/4" Adjustable Hose Clamps
24. One Thetford Plastic Cap with Hose Drain
25. One 1/2 Gal. Holding Tank Cleaner and Deodorizer
26. 50 ft. Electric Cord #12-3 Wire
27. 20 ft. Electric Cord #10-3 wire, 30 amp capacity
28. One Service Cord Adapter 30 - 15 amp
29. Assortment 12 Volt Fuses
30. Spare Light Bulbs
31. Electrical Contact Cleaner (Spra-Kleen or equivalent)



TOW CAR EQUIPMENT

IF YOU PLAN TO BUY A NEW VEHICLE TO TOW YOUR TRAILER, WE SUGGEST THAT YOU INCLUDE IN YOUR PURCHASE THE TRAILER TOWING OPTIONS OFFERED BY MOST AUTOMOBILE MANUFACTURERS. These include such things as heavy duty alternator and radiator, heavy duty springs* and shock absorbers, automatic transmission cooler, heavy duty fan and flasher unit and others, depending on the make of the vehicle.

Transmissions may be manual or automatic, but an automatic transmission may prolong your car's engine life and generally does a better job of controlling engine loads than the average driver using a manual shift.

Having adequate power is very important when considering the purchase of a new car or the trailer towing capability of your present one. Emission controls that are required by the Federal Government have reduced overall engine power. To determine generally what the tow capability of your car is, divide the total weight of your trailer by the cubic inch displacement of your automobile engine. This ratio should be between 10 and 20 pounds of trailer weight per cubic inch of engine displacement. For example: with a 31' Airstream weighing 6500 pounds totally loaded for travel, and a vehicle with 350 cubic inch displacement engine, divide 6500 by 350, giving a value of 18.5 pounds of trailer weight per cubic inch engine displacement. This vehicle should have adequate power for towing the trailer. Obviously,

total car performance such as maximum speed up grades and acceleration is lessened when towing a trailer.

Remember that engine power is only one indication of the car's towing capabilities; the axle ratio and cooling capabilities certainly must be considered. We suggest you review the Owner's Manual of your present car and discuss your automobile towing capabilities with your Airstream dealer and your automobile dealer.

Inspect your vehicle's hitch regularly for loose bolts or nuts, cracked welds, loose ball mounts, worn parts, etc.

New trailerists often carry more food and other supplies than really needed. Remember that every item you take along is one more thing to stow and adds weight to the total load you must pull. Consolidate items in shelves, lockers, and in the refrigerator. It is better to have one full and one empty locker than two half empty ones. Special care must be taken not to overload the front and rear ends of the trailer.

** Be realistic when ordering heavy duty springs. Only springs heavy enough to support your loaded vehicle (not including trailer) are necessary. Too harsh of spring rate will only shorten the life of the tow vehicle, trailer and make your journeys less enjoyable.*

ELECTRIC BRAKES

WARNING

The brakes are operated by 12 volt current from your car and **MUST BE HOOKED UP SO THAT YOU HAVE AN INTEGRAL SYSTEM WITH YOUR CAR BRAKES.** To prevent problems and insure satisfactory braking action, install a Kelsey Hayes Controller (or equivalent) and selective resistor in line with the controller in your car.

A KELSEY HAYES CONTROLLER (or equivalent) installed in your car will synchronize the trailer brakes with your car brakes. It is designed to apply the trailer brakes with your car brakes.

The controller handle adjustment affects the rate of application of the trailer brakes. This adjustment has no bearing on the maximum braking capacity of the trailer brakes. Because of the wide variety of towing vehicles and trailers it is necessary to balance the trailer brakes with the towing vehicle brakes to provide for a safe, comfortable stop. This adjustment should be made to provide for a slight lead of the trailer brakes over the tow vehicle brakes. Turning the handle clockwise will decrease the rate of application of the trailer brakes, while counterclockwise will increase the rate of application. When the desired setting is reached, the controller will hold the adjustment, but may be varied at any time by rotating the handle as described above. After this adjustment there should be no sensation of the trailer pushing the car during a stop, nor should there be an excessive sensation of the trailer pulling the car during a stop.

A SELECTIVE RESISTOR to match the weight of your trailer to the controller should be installed on the fire wall of your engine compartment. It should be correctly adjusted during installation.

In THE EVENT OF AN ACCIDENTAL SEPARATION OF the tow car and trailer, THE BREAKAWAY SWITCH will set and lock the trailer brakes for a sufficient length of time to stop the trailer. The switch is activated when the small pin in the front of the unit is pulled out by the wire attached to it and to the car. **THIS PIN SHOULD BE PULLED OUT, LUBRICATED WITH LIGHT HOUSEHOLD OIL AND REPLACED EVERY 90 DAYS.**

To prevent corrosion within the breakaway switch, pull the switch's pin straight forward and spray the inside of the switch through the hole with an electric contact cleaner (such as Spra-Kleen) and reinsert pin. A drop of light household oil on the groove near the base of the pin will allow the pin to operate freely. **WHEN THE TRAILER IS CONNECTED TO THE TOW CAR, THE BREAK-AWAY SWITCH LOOP SHOULD BE ATTACHED TO THE PERMANENT FRAME OF YOUR HITCH.** When disconnecting trailer from tow car, remove wire loop from the frame. **DO NOT REMOVE PIN FROM SWITCH, BECAUSE THIS WILL APPLY THE TRAILER BRAKES.**

CAUTION

DO NOT USE BREAK-AWAY SWITCH FOR PARKING BRAKE.

HYDRAULIC DISC BRAKES

The optional DISC BRAKE SYSTEM is operated by 12 volt negative ground current and engine vacuum from your tow vehicle. The brake controller and trailer disc brakes improve brake balance, braking control, reliability, and reduce brake fade from high speed stops or frequent brake application.

Disc brake components consist of a controller, power brake booster, brake release valve, disc brake calipers, and hub and rotor. Tow vehicle's and trailer's vacuum lines, brake hoses and brake lines should be checked periodically for abrasion and signs of leakage at fittings.

WARNING

The BRAKE CONTROLLER (Fig 1), designed for use with your Excella-Vac disc brake system, must be installed in your tow vehicle for proper brake operation. IT IS EXTREMELY IMPORTANT TO NOTE THAT EXCELLA-VAC USES AND ENTIRELY DIFFERENT SYSTEM FOR CONTROLLING BRAKE OPERATION. IT IS NOT COMPATIBLE IN ANY WAY WITH THE OLD ELECTRIC BRAKE CONTROL SYSTEM. IF YOU DO NOT USE THE CONTROL SYSTEM DESIGNED FOR USE WITH THE EXCELLA-VAC DISC BRAKES, THE TERMS OF YOUR AIRSTREAM LIMITED WARRANTY WILL BE VOIDED WITH RESPECT TO ANY DAMAGES INCURRED AS A RESULT OF THE USE OF A NONCOMPATIBLE SYSTEM.

IN ADDITION, MANY ADVANTAGES OF THE EXCLUSIVE AIRSTREAM DISC BRAKES WILL BE LOST IF THE EXCELLA-VAC CONTROL SYSTEM IS NOT USED. The brake controller is activated automatically when you apply the brakes of the tow vehicle. Trailer brakes may be applied manually, independent from your tow vehicle brake system, by moving the controller's lever to the right.



Fig. 1 - Brake Controller

WARNING

Vacuum pumps on diesel powered tow vehicles may not provide an adequate volume of vacuum for repeated brake application in rapid succession.

A TRAILER BRAKE SENSITIVITY LEVER located on the top of the controller (See Photo) provides adjustments to balance the trailer brakes with your tow vehicle's brakes without the need for a selective resistor. It is designed to balance the trailer brakes with your car brakes. Balanced brakes provide smooth braking action without premature skidding of tires on either trailer or tow vehicle during heavy braking.

Move the sensitivity lever away from you to increase or toward you to decrease the effectiveness of your trailer brakes. When first installed set the adjustment to the maximum setting, then reduce setting as required to obtain smooth braking.

There are TWO INDICATOR LIGHTS on your controller. During brake application, the green light glows indicating normal system operation. The intensity of the green light increases as braking effort increases. A red light will glow if the brake electrical wiring is faulty. Loss of electrical input to your controller will be indicated by neither light glowing when brakes are applied.

WARNING

DO NOT USE A SELECTIVE RESISTOR.

A VACUUM LINE ASSEMBLY furnished in your disc brake tow vehicle kit must be installed in your tow vehicle, which provides vacuum to the power brake booster assembly located on your trailer. (See Fig. 2) Vacuum is supplied to the trailer by coupling the trailer vacuum hose to the tow vehicle

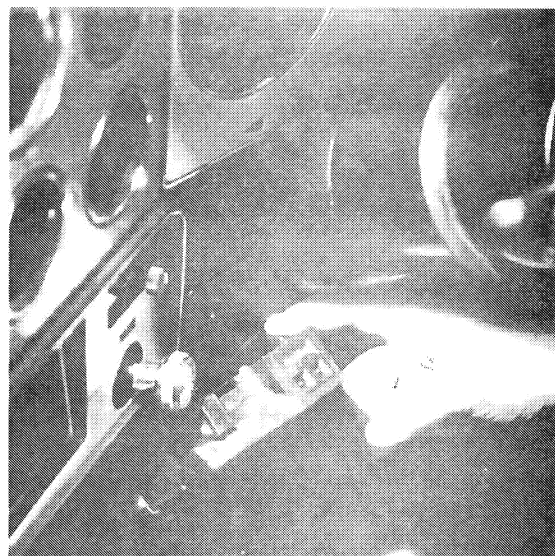


Fig. 1 - Brake Controller

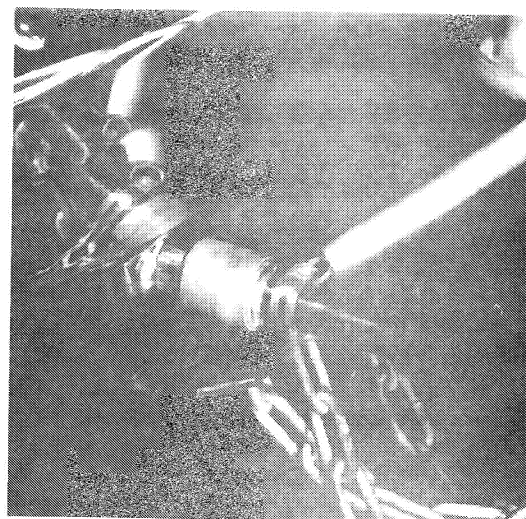


Fig. 2 - Trailer Vacuum Hose Connection

vacuum connector. To couple, push knurled coupling sleeve forward, firmly insert trailer's vacuum hose fitting and pull sleeve back. Check for proper locking by firmly pulling trailer's hose fitting.

To disconnect, push knurled coupling forward and pull hose fitting free. Store the hose by sliding the fitting down over the storage pin located on the front of the tongue.

CAUTION

NEVER ALLOW THE HOSE TO REST ON THE GROUND. THIS CAN CAUSE CONTAMINANTS TO GET ON THE FITTING AND BE DRAWN INTO THE ACTUATOR MECHANISM.

A COUPLING PLUG MUST BE INSERTED IN THE TOW VEHICLE'S VACUUM CONNECTOR WHEN THE TRAILER IS DISCONNECTED. OPERATING YOUR ENGINE WITHOUT THE PLUG WILL RESULT IN A VACUUM LEAK. THIS MAY RESULT IN ENGINE MISFIRING, OR INOPERATIVE VACUUM BOOSTED ACCESSORIES (BRAKES, EMISSIONS, ETC.) EXTENDED OPERATION MAY CAUSE ENGINE DAMAGE. AN EXTRA PLUG IS SUPPLIED IN THE KIT.

The POWER BRAKE BOOSTER (Fig.3) located in the trailer tongue supplies hydraulic pressure to the disc brake calipers. The fluid level in the booster's master cylinder reservoir should be checked twice a year. If necessary, add fluid to bring level to within 1/4 inch of the top of the reservoir. With disc brakes fluid level can be expected to fall as the brake pads wear. Only brake fluid conforming to DOT 3 should be used.

Use only fresh brake fluid that has been in a tightly closed container to avoid contamination from foreign matter or moisture. Periodically check actuator breather. Replace element if dirty.



Fig. 3 - Power Brake Actuator and Breather

When the TRAILER VACUUM HOSE (Fig. 4) is disconnected from the tow vehicle, the trailer brakes are automatically applied. This provides break-away protection should the trailer break away from the tow vehicle. Brakes engaged by a disconnected supply line can be disengaged by pushing and holding knob. (Fig. 5) on brake release valve for 10 seconds. Blocking or chocking wheels is necessary when parking your trailer. DO NOT USE TRAILER BRAKES AS PARKING BRAKES by disconnecting the trailer vacuum line.

CAUTION

The self-adjusting DISC BRAKE CALIPERS (Fig. 6) should be inspected for wear any time the wheels are removed for tire rotation, wheel bearing maintenance, etc. IN NO INSTANCES SHOULD MILEAGE BE ALLOWED TO EXCEED 2,500 BETWEEN INSPECTIONS. The lining will need replacement if there is evidence of brake fluid leakage or if there is less than 1/16" between the liner and the liner's steel backing plate. See your Airstream dealer for all trailer braking service.

Additional information on the Brake System is available in the Service Manual.

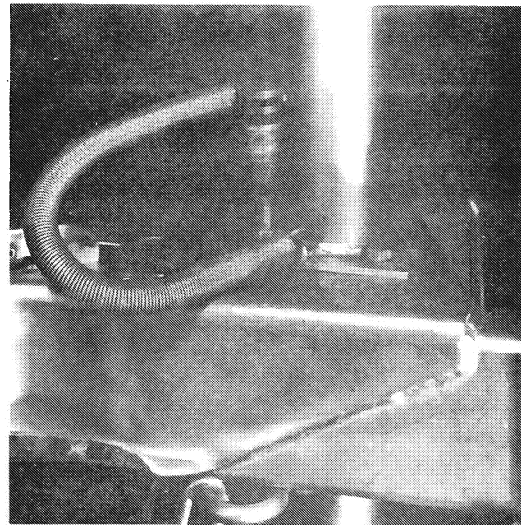


Fig. 4—Trailer Vacuum Hose Storage

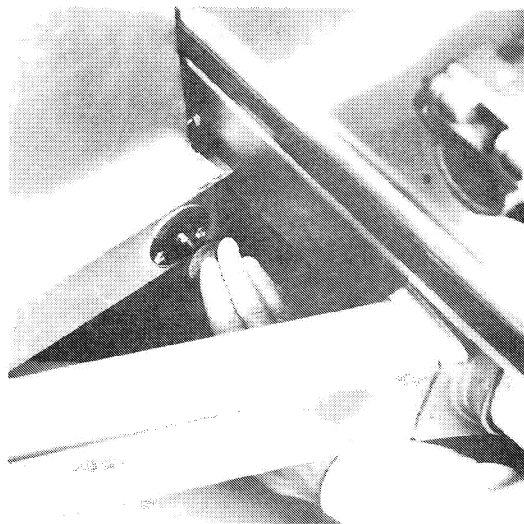


Fig. 5—Brake Release Knob

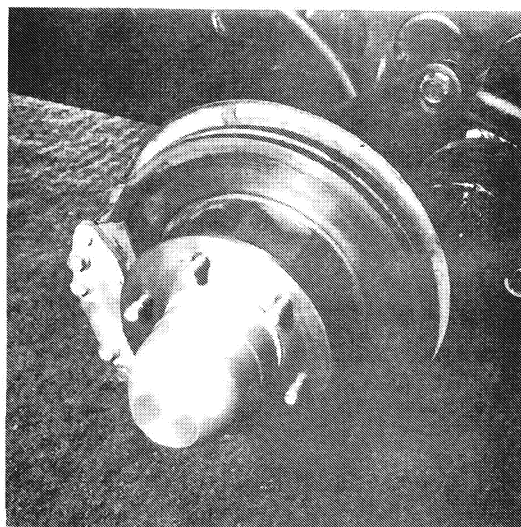


Fig. 6—Disc Brake Calipers, Hub and Rotor

TIRES

Your trailer is equipped at the factory with name brand trailer tires. Airstream dealers cannot make adjustments to tires. This must be done by a dealer who handles that particular brand. If you ever have tire problems check the local telephone directory for the nearest dealer.

To get the maximum performance from your tires check the air pressure often, but only when the tires are cool. Never bleed out air immediately after driving. Recommended tire pressures vary with tire type and size. For pressures refer to the Specifications Table.

WARNING

IT IS ALSO IMPORTANT TO PERIODICALLY CHECK ON THE TIGHTNESS OF LUG NUTS. THEY SHOULD BE TIGHTENED TO A TORQUE OF 90-95 FT. POUNDS ON BOTH THE STEEL AND FORGED ALUMINUM WHEELS. CARE SHOULD BE TAKEN AT ALL TIMES WHEN HANDLING THE FORGED ALUMINUM WHEEL BECAUSE OF POSSIBLE DAMAGE TO ITS APPEARANCE.

In a warm climate park out of the sun whenever possible. In desert regions use the tire covers to prevent ultra-violet deterioration to tires.

To change a tire with a jack see the label affixed to the underbelly just to the rear of the wheels. This indicates the proper jack placement. On tandem or triple axle models a flat tire may be changed without the aid of a jack. Drive the unit up a ramp 8" wide, 6" high and about 3 feet long at the base (see photo).



Tire Changing

All tire, wheel, hub and drum assemblies are dynamically balanced at the factory. Be sure to rebalance the tire, wheel, hub and drum assemblies each time a tire is changed or rotated.

WARNING

WHEN REMOVING ALUMINUM FORGED WHEELS FROM SPINDLE, IT IS VERY IMPORTANT TO MARK THEM TO ASSURE THE WHEEL IS PLACED IN THE SAME POSITION OF THE DRUM WHEN REINSTALLING. IF THE ALUMINUM FORGED WHEEL IS TO BE MOUNTED ON A DIFFERENT DRUM IT IS IMPORTANT TO SAND ALL LOOSE CORROSION FROM THE MATING SURFACES.

In an emergency remove the flat tire. The independent suspension of the Duro-Torque Axle allows four or six wheel units to be safely towed on three or five wheels for a short distance (100 miles maximum) and only at a low speed (30 MPH).

Be especially cautious in crossing holes or dips in the road. Under these circumstances it is good practice to set your rear view mirrors so that you can observe your tires at all times.

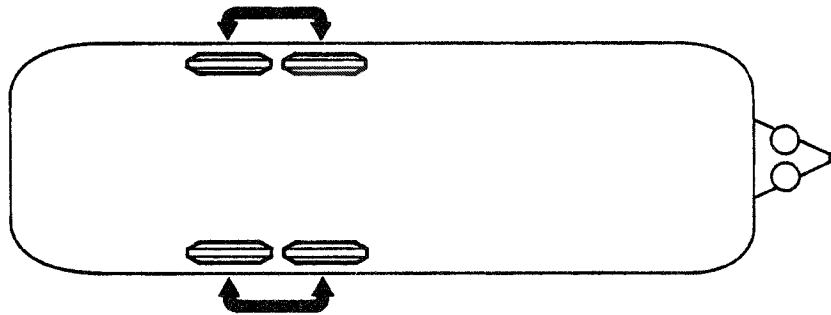
FLAT TIRE DETECTOR. On trailers with the optional flat tire detector it is necessary to connect the electrical jack between the trailer tire sensors and the tow vehicle indicator light. The tire indicator light on the tow vehicle dash (dealer installed) will start to glow if the pressure between two tires on the same side of the trailer varies more than 10 p.s.i.

To check the system simply pull each trailer tire over a 3" block of wood. As each tire reaches the peak the dash mounted tire indicator light should glow. On a smooth road the tire indicator lamp should be off with no flickering.

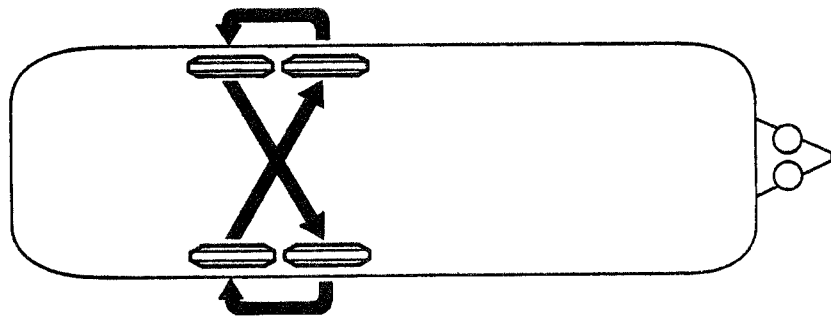
TIPS ON TIRE CARE. Any tire, no matter how well constructed, may fail in use as a result of punctures, impact damage, improper inflation or other conditions resulting from use. Tire failures may create a risk of property damage or personal injury. To reduce the risk of tire failure we strongly recommend the following:

1. **CHECK** the pressure in your tires, including your spare, at least monthly when the tires are cool (after the vehicle has been stopped three hours and then driven less than one mile). Do not reduce pressure when tires are hot; use a tire gauge to check pressure and maintain it at the recommended level.
2. **NEVER** overload your tires. The maximum load carrying capability of your tires is molded on the sidewall of the tire.
3. **CHECK** your tires frequently for scrapes, bulges, separations, cuts or snags resulting from use. See your tire dealer immediately if any such condition is discovered.
4. **NEVER** operate your vehicle in excess of lawful speeds or the maximum speeds justified by driving conditions, or in excess of speeds recommended for the tire you are using.
5. **MAKE** every effort to avoid running over objects that may damage the tire through impact or cutting, such as chuckholes, glass, metal, etc.
6. **NEVER** drive on smooth tires. Tires should be removed when 2/32nds inch of tread depth remains. In most states it is illegal to drive with less than 2/32nds inch remaining tread depth.

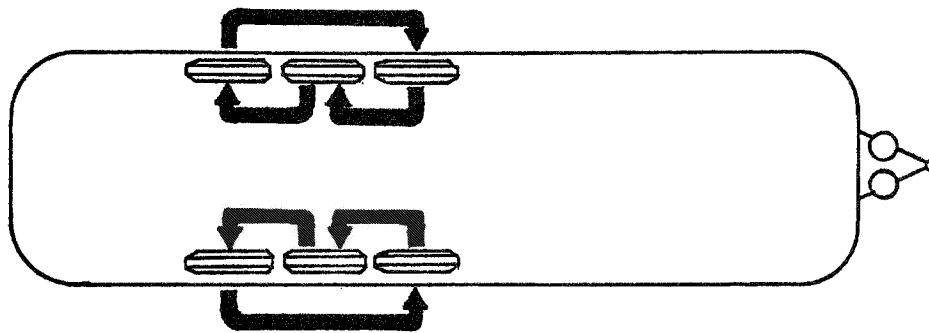
TIRE ROTATION
(10,000 mile intervals)



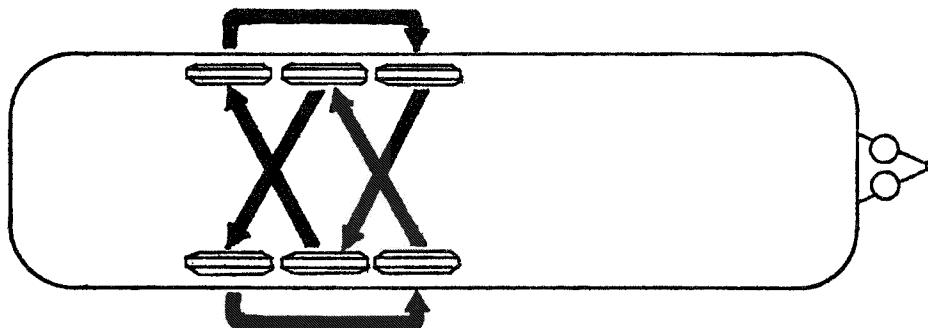
Radial



Bias Belted



Radial



Bias Belted

HITCHING UP

Hitching up your trailer is something that will become almost second nature with practice. The following section includes proper hitch load distribution and a procedure for hitching up.

The electric jack is strongly recommended for anyone who, for any reason, should not physically exert himself. Available as an option, the electric jack makes hitching and unhitching a much easier operation.

EQUALIZING HITCH LOAD DISTRIBUTION. When a trailer is hitched up properly to a tow vehicle with a load equalizing hitch, approximately 1/3 of the trailer's tongue weight will be on the trailer's axles and 2/3 will be transferred to the tow vehicle. 1/3 of this

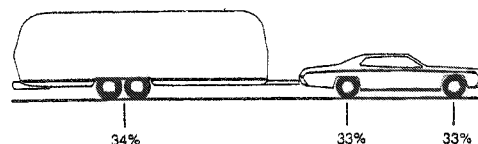
weight transfer will be carried by the front wheels and 1/3 by the rear wheels of the tow vehicle (see diagram). Thus the tire loading of each wheel on the tow vehicle will be increased by 1/6 of the trailer's tongue weight. The tire air pressure of the tow vehicle should be increased to compensate for this additional weight. Refer to the vehicle's owners manual for this information.

CAUTION

The tongue weight should be approximately 10% to 15% of the trailer's total weight but **MUST NOT EXCEED 1000 LBS.** and under no condition exceed the hitch rating. Your hitch rating information should be provided to you by your hitch installer.

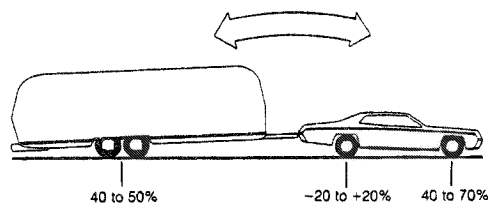
Equalizing Hitch Load Distribution

Proper Installation

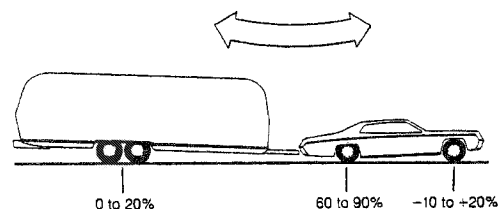


Percentage of Tongue Load distributed to car and/or trailer wheels.

Hitch High



Hitch Low



STEPS FOR HITCHING UP. Jack up the trailer hitch until there is clearance for the HITCH BALL to slide under, remove safety pin and raise the LOCKING LEVER. Back the car straight back to the hitch. (See Fig.2) This can best be accomplished through the use of prearranged hand signals with the help of another person, but if you are hitching up by yourself we recommend the use of a HOOK-UP VIEW MIRROR.

Lower the trailer hitch onto the hitch ball; then close the locking lever and insert safety pin. (See Fig.3)

Now raise the trailer and car to the full height of the hitch jack (See Fig.7) and then attach the LEVELING BARS. (See Fig. 4,5&6) Lower the car and trailer (See Fig.7). The hitch ball should be level to slightly higher. Readjust leveling bars until this condition is correct, by increasing or decreasing length of chain engaged in "A" frame saddle bracket. Shorter chain raises hitch ball, longer chain lowers it. A level condition will result in the best balance for towing and steering control as the weight equalizing hitch distributes the hitch load. A low hitch ball increases tail-wagging tendencies by lowering the nose of the trailer thus changing the center of support for the trailer and reducing the weight on the front wheels of the car. With proper hitch installation and hitching up, the bar should have a noticeable amount of deflection or bending. (See Fig.8) A little practice with your rig will teach you how far to pull up the bar, and

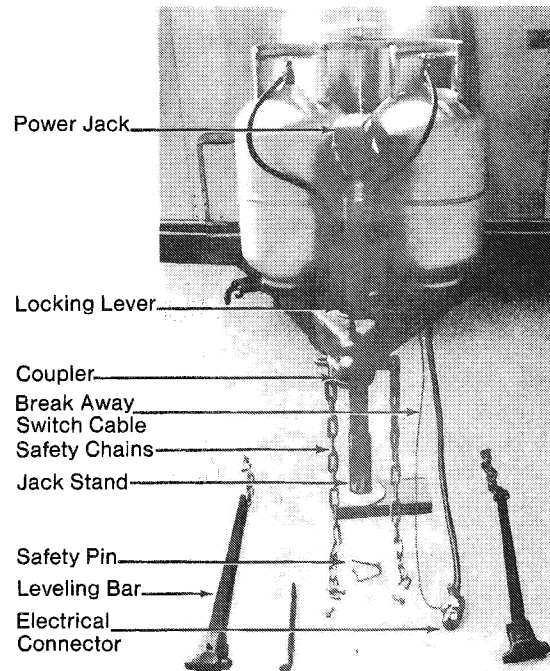


Fig. 1 - Hitching Up Equipment

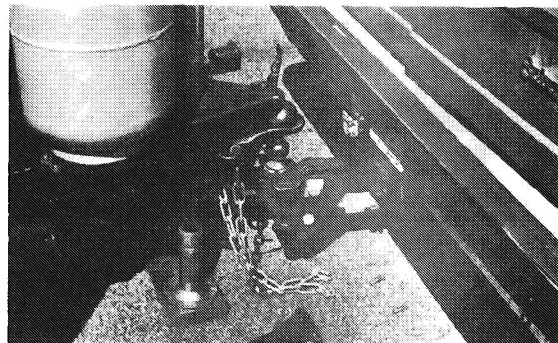


Fig. 2 - Hitching Up

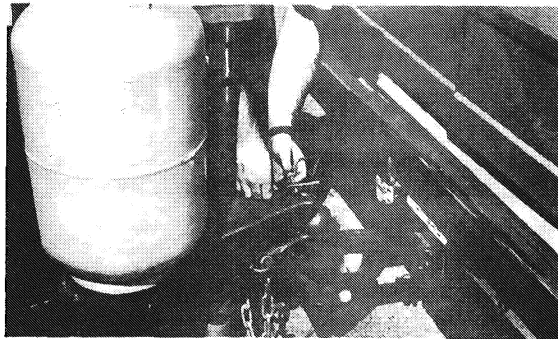


Fig. 3

you may wish to mark the chain links that match your rig. Always choose level ground for checking correct hook-up. For further information see hitch manufacturer's literature.

NOTE: If your car is equipped with adjustable load leveling air shocks, you must load the car first with typical luggage and passengers and bring it back to level. Then attach the trailer and adjust the load leveling bars. Otherwise the air shocks on your car will overload the rear wheels. Do not use air shocks to level car and trailer after hitching up.

The hitch ball on your car should be installed 1 inch higher than the trailer coupler to allow for the car to settle under the additional weight. Coupler height on the trailer is determined by leveling the trailer end to end then measuring from the ground to the top of the ball socket.

If your trailer is equipped with electric brakes, attach the break-away switch cable to welded portion of hitch, or car's frame (See Fig. 11). If it has hydraulic disc brakes, remove plug from tow vehicle's vacuum coupling and insert trailer's vacuum line (See Fig. 12). To couple, push knurled coupling sleeve forward, firmly insert trailer's vacuum hose fitting and pull sleeve back. Check for proper locking by firmly pulling trailer's hose fitting.

Attach the safety chains (See Fig. 10) to the welded portion of the hitch or the car's frame, but never to the removable ball mount. Cross the safety chains under the hitch.

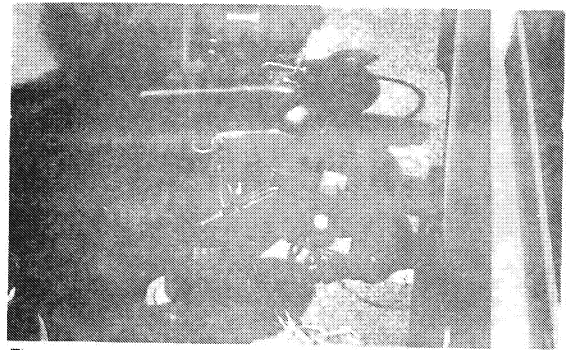


Fig. 4

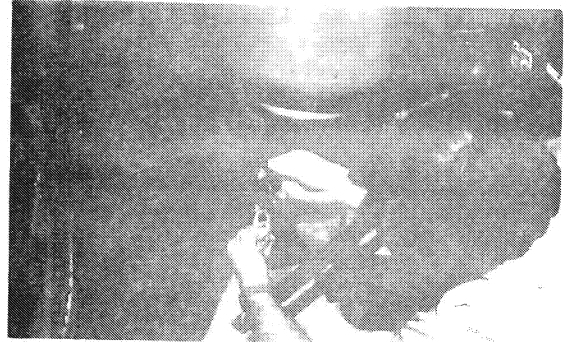


Fig. 5

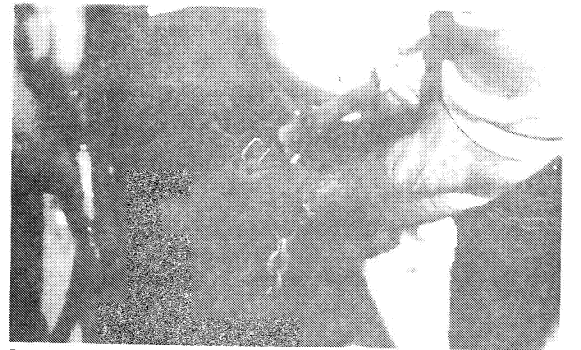


Fig. 6

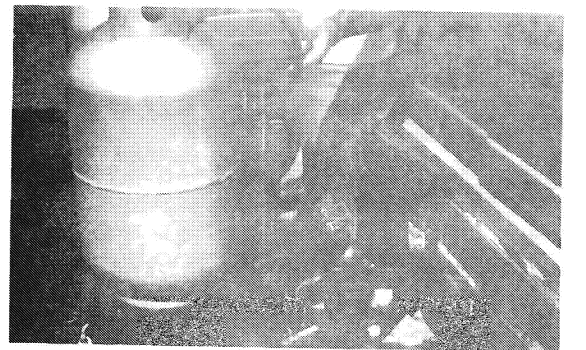


Fig. 7

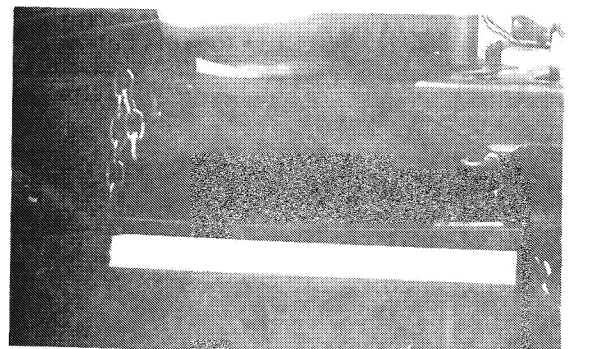


Fig. 8

CAUTION

Retract the hitch jack completely for maximum ground clearance. Remove the jack pad (See Fig.13), and stow in the car's trunk along with leveling jack and other gear used when stopped. NEVER TOW YOUR TRAILER WITH THE JACK DOWN. Check that the fold-away step is up and that the main door is completely closed and LOCKED for towing. If it is not locked the constant vibration of travel may cause it to open with possible damage.

Move the rig ahead about 50 feet and test the trailer brakes, then check the ground for forgotten objects. Regularly check the condition of your tires, air pressure, and the tightness of the lug bolts.

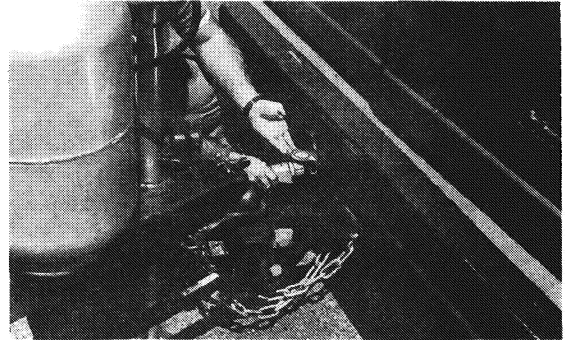


Fig. 9

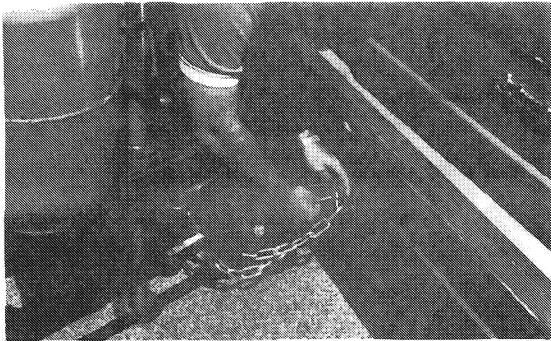


Fig. 10

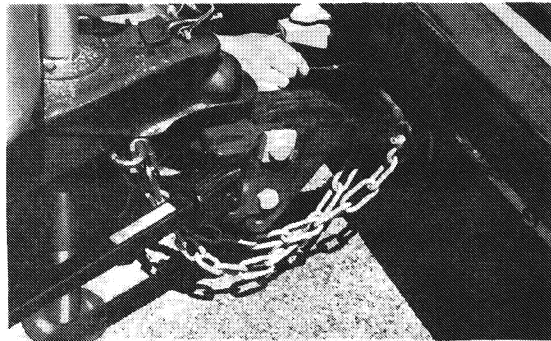


Fig. 11

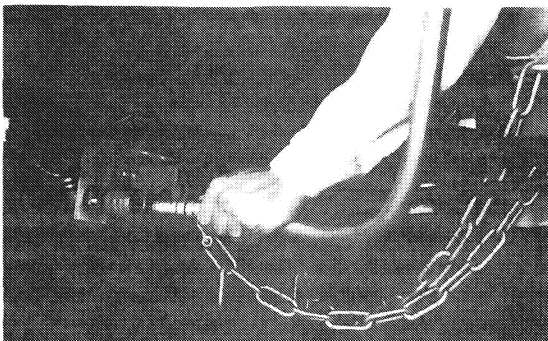


Fig. 12

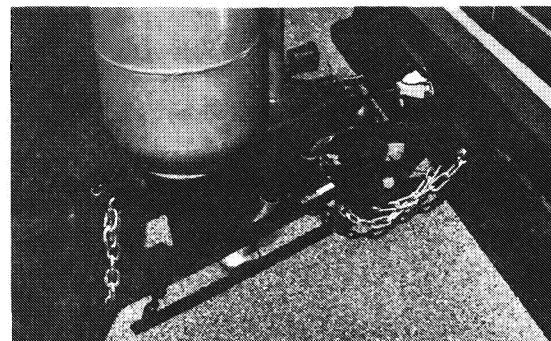


Fig. 13

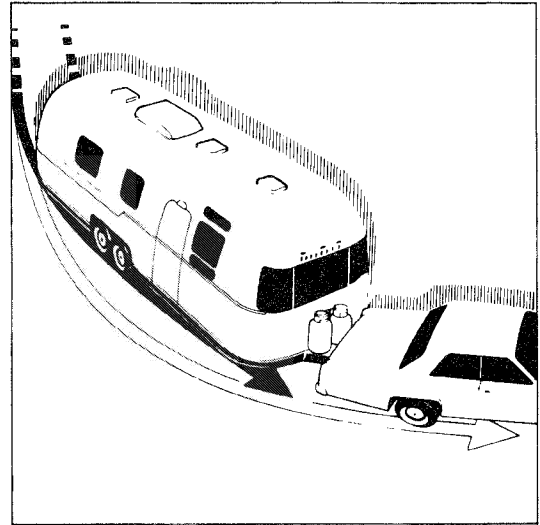
TOWING TIPS

We want every owner to be a safe and courteous driver.

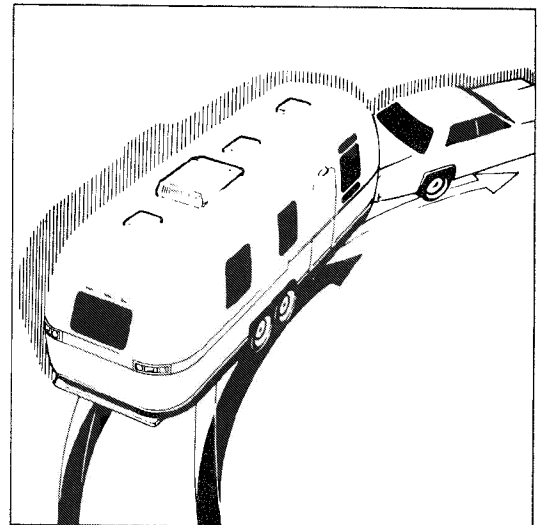
A few hours of towing practice in a large empty supermarket lot will make pulling your trailer over the road much easier. Line out two corners for left and right turns. You may also use these corners to practice backing and parking. **OBSERVE THAT THE TRACKS MADE BY THE TRAILER WHEELS ARE DISTINCTLY DIFFERENT FROM THOSE MADE BY THE CAR.** Studying this will make it easier for you to correct mistakes. Truck or trailer type fender or door grip rear view mirrors are a must for maximum visibility and in most states they are required by law.

After thoroughly inspecting your hitch, brakes and tires you should be ready to tow. Check traffic, signal that you are about to pull away, and start slowly. Look often in your mirrors, and observe the action of the trailer, then carefully move into the proper lane of traffic. Remember that the trailer wheels will not follow the path of the car's wheels, therefore, **WIDER TURNS ARE NECESSARY WHEN TURNING TO THE LEFT OR TO THE RIGHT.**

ON FREEWAYS OR EXPRESSWAYS try to pick the lane you want, and stay in it. Always maintain plenty of space between you and the car ahead, at least the length of the car plus trailer, for every ten miles per hour. Remember that in order to pass another vehicle, you will need longer to accelerate. You must also allow for the length of the trailer when



Tracking

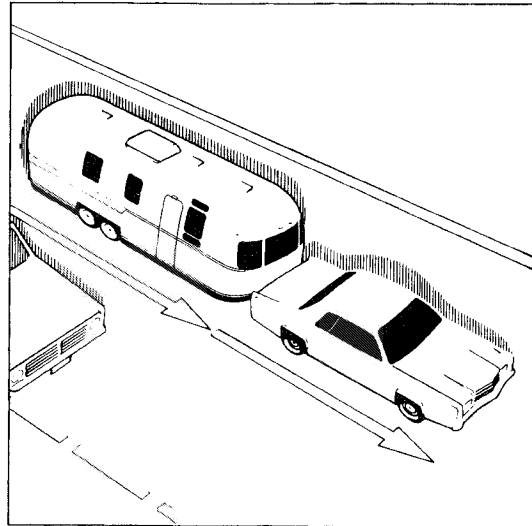


returning to the right hand lane.

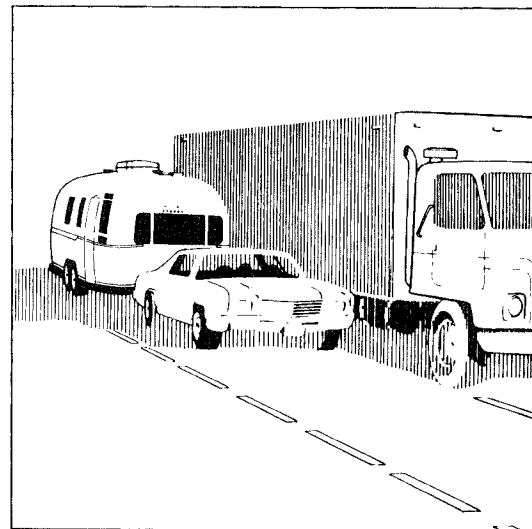
On a two lane road, cars will be lining up behind you because you travel at a lower speed. It is both courteous and sensible to signal, pull onto the shoulder, and let them pass. Your trailer is designed to be towed easily at any legal speed, so if you are not careful you may be inclined to forget it is there.

The BRAKE CONTROLLER is activated when you apply the brakes of the tow vehicle. Your car brakes will automatically apply the trailer brakes first when properly adjusted. This will help keep your car and trailer in a straight line and make you stop as if you were driving the car alone.

CAUTION: The tow vehicle's engine must be warm (near operating temperature) to insure maximum braking with vacuum operated hydraulic brakes. When trailering you might encounter a temporary cooling system overload during severe conditions - such as hot days when pulling on a long grade, when slowing down after higher-speed driving, or driving long idle periods in traffic jams. If the hot indicator light comes on or the temperature gauge indicates overheat and you have your air conditioning turned on, turn it off. Pull over in a safe place and put on your emergency brake. Don't turn off the engine. Increase the engine idle speed. Lift the engine hood and check for fluid leaks at the radiator hoses, radiator or radiator overflow outlet. Check to see that all drive belts are intact and the fan is turning. If you have a problem, have it fixed at the



Passing



next opportunity. If there is no problem, the light should go off or temperature should come down within one minute. Proceed on the highway a little slower. Ten minutes later resume normal driving.

WARNING: NEVER OPEN A RADIATOR CAP WHEN THE CAR IS HOT. CHECK THE CAR COOLANT LEVEL WHEN THE CAR IS COOL.

WHEN GOING DOWNHILL IN DRY WEATHER, down shift so that engine compression will slow the whole rig down. Take dips and depressions in the road slowly and do not resume normal driving speeds until you are sure that the trailer wheels are clear of the dip.

WARNING

ON SLIPPERY PAVEMENT do not use engine drag to help slow down as this may cause the rear wheels of the car to skid. On icy pavement drive slowly and if you feel the car is skidding gently apply the trailer brakes only. This will bring the car and trailer back into a single line. Chains do not help trailer wheels.

WHEN DRIVING IN MUD AND SAND let the momentum carry the rig through. Apply power gently and use as little as possible. Stay in the tracks of the vehicle ahead and keep the car in the highest possible gear. If you get stuck it is best to tow out both car and trailer together without unhitching.

If you have to tow long distance over bad roads, the stones and gravel thrown back by your tires will dent and scratch the aluminum finish

of your trailer. To prevent this use masking tape to secure heavy sheets of cardboard to the lower front end of the trailer. Remove tape from trailer as soon as possible to avoid damage to the coating.

Despite the best hitch you will notice that whenever a large bus or truck overtakes your rig the displaced air first pushes the trailer rear slightly to the right and then affects the front. It may be necessary to steer very slightly, momentarily, toward the bus or truck to help compensate for the sway induced by the passing vehicle. Do not apply the vehicle brakes as this can tend to exaggerate the situation. You may find, however, that briefly applying the trailer brakes with your manual control will help eliminate sway.

CAUTION:

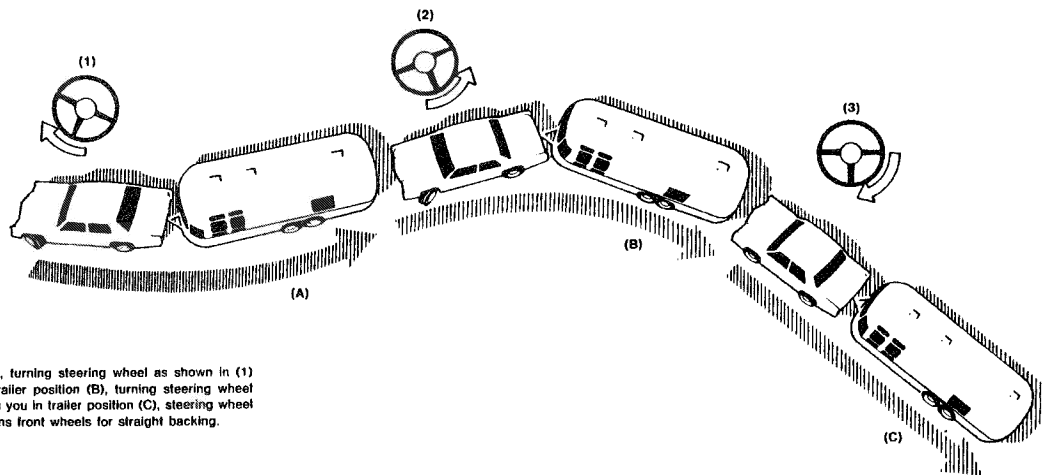
When stopping on a hill or slope, leaving your car in gear is not enough for standstill safety. CHOCK THE TRAILER WHEELS to be double sure. Do not use trailer brakes as parking brakes.

IN BACKING UP the important thing to remember is to DO EVERYTHING SLOWLY and to correct immediately if you see the trailer turning the wrong way. Concentrate on the rear of the trailer. With your car and trailer in a straight line, back up slowly and turn the bottom of the steering wheel in the direction you want the trailer to go. Watch out the window or in the mirror until the rear of the trailer is pointing in the desired direction. Your car will be following the trailer in an arc. Straighten the car and trailer by turning the steering wheel more sharply, then when they are in line, straighten the steering wheel.

ALWAYS TRY TO BACK TO YOUR LEFT BECAUSE THE VISIBILITY IS MUCH BETTER (See illustration) When you don't make it on the first try it is usually much easier to pull forward to your original position and start over.

If your spouse or traveling companion normally directs you when backing they should position themselves forward of the tow vehicle so they can easily be seen by the driver. Their directions should always indicate to the driver the direction the rear of the trailer should go. A little practice in a parking lot with the person giving directions can save a lot of frustration when backing into a campsite.

Backing Up



Position (A) start, turning steering wheel as shown in (1) will put you in trailer position (B), turning steering wheel shown in (2) puts you in trailer position (C), steering wheel position (3) returns front wheels for straight backing.



Indicates steering directions

OVERNIGHT STOP

Airstream owners have parked virtually every place imaginable from filling stations to farm lands. In time you will develop a knack for spotting wonderful little roadside locations by turning off the main highway and exploring.

There are many modern trailer parks including State, County and Federal parks with good facilities, where you may obtain hookups of electrical, water and sewer connections. Directories are published which describe in detail these parks and tell what is available in the way of services and hookups.

ON OVERNIGHT OR WEEKEND TRIPS, chances are you will not use up the capacity of the sewage holding tank, deplete the water supply or run down the battery which supplies the 12 volt current.

ON A LONGER TRIP, when you have stayed where sewer connections and utility hook-ups, were not available, it will be necessary for you to stop from time to time to dispose of the waste in the holding tank and replenish the water supply. Many gas stations (chain and individually owned) have installed SANITARY DUMPING STATIONS for just this purpose. Booklets are available which list these dumping stations.

When stopping for the night your Airstream is built to be safely parked in any spot that is

relatively level and where the ground is firm. YOUR FACILITIES ARE WITH YOU. YOU ARE SELF-CONTAINED. Unless the car is needed for transportation, it is not necessary to unhitch. Try to pick as level a parking spot as possible. STABILIZING JACKS or BLOCKS probably won't be required for an overnight stay; however, if you put the jack pad on the hitch jack and run the hitch jack down to take the weight off the car's springs this will provide some stability. If you must park on a slope, PARK FACING DOWNHILL. It is easier to level the trailer this way.

All you need to do to enjoy the self-contained luxury of your Airstream is to:

1. Light the water heater and refrigerator pilots if required.
2. Turn on the range gas supply and light the pilot.

Before moving on, check your campsite, both for cleanliness and also to be sure you haven't left anything behind, turn off the gas supply and make sure everything is properly stowed. Use your PRE-TRAVEL CHECK LIST and you are ready for more travel adventure.

EXTENDED STAY

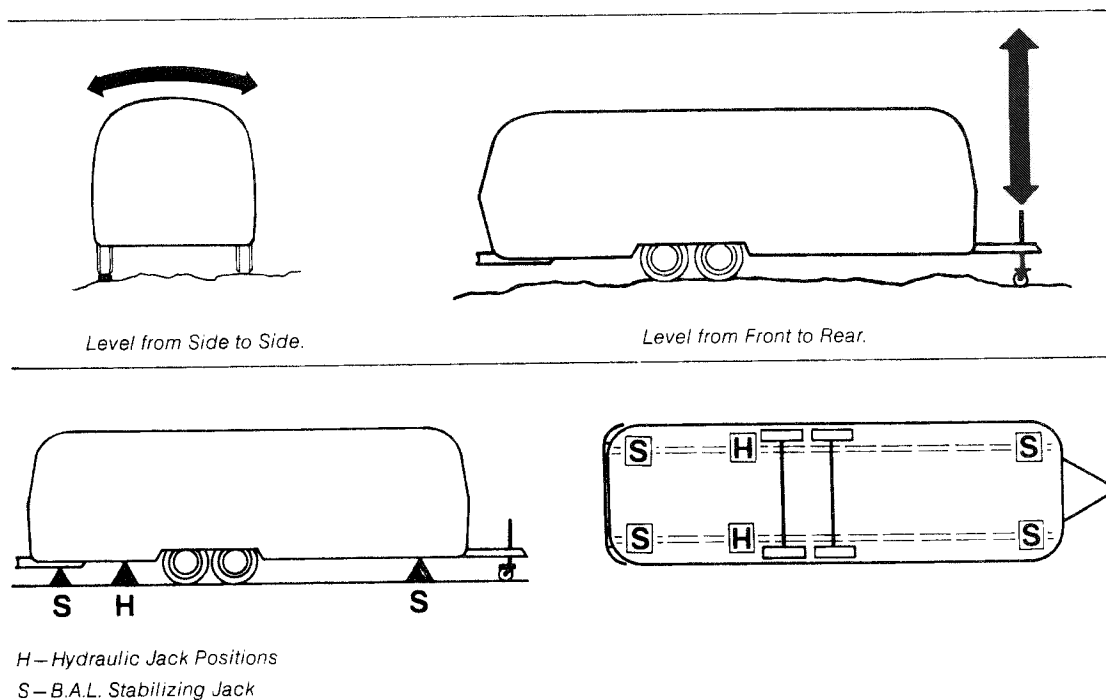
Making a long trip in your Airstream is not very different from making a weekend excursion. Since everything you need is right at hand you are at home wherever you go. When packing for an extended trip take everything you need, but only what you need.

When you plan to stay in the same place for several days, weeks, or months, you will want your trailer to be as level and steady as possible. Check the attitude with a small spirit level set on the inside work counter or the trailer hitch "A-Frame". (See Fig.1) If a correction is necessary then YOU MUST LEVEL FROM SIDE TO SIDE FIRST. This can be done easily by backing the trailer up one or more 2" x 6" boards. (See Fig.2) We do not recommend placing tires in a hole for leveling.

LEVEL FROM FRONT TO REAR by disconnecting the hitch from the car, putting the jack pad under the hitch jack and adjusting the jack up or down until you are level. Block or chock the wheels to keep the trailer from rolling. Use STABILIZING JACKS at all four corners as shown in the diagram to eliminate the natural spring action of the axles. If you have optional B.A.L. STABILIZING JACKS (See Fig.3) use the wrench provided to lower the units.

WARNING:

Whenever the trailer must be lifted with a jack as when changing a tire or leveling on very rough terrain, ALWAYS PLACE THE LIFTING JACK UNDER THE MAIN FRAME RAIL. A label is provided to indicate the proper position for the jack. NEVER USE STABILIZING JACKS TO LIFT THE TRAILER.



HOOK UP TO WATER (See Fig. 4)
by attaching a 1/2" minimum high
pressure water hose to the city
water service.

Plug the ELECTRICAL CABLE (See
Fig.5) which is stored in the
bumper storage compartment into
the CITY POWER SERVICE.

Hook your WASTE DRAIN HOSE (See
Fig.6) into the SEWER DISPOSAL
FACILITY and attach to the drain
outlet in your trailer.

Turn on gas supply; light the
range and oven pilots, light
the water heater, refrigerator
and furnace pilots.

When you stay for extended
periods where electric or water
hook-ups are not available, you
must make regular checks on the
condition of your 12 volt
battery by hooking up the car/
trailer electrical connector
and running the car engine at
a fast idle. 45 minutes per
day should provide about 3-4
hours of power. Carry drinking
water in a clean bucket to re-
fill your tank. When your
waste tank nears capacity, move
to a dumping location.

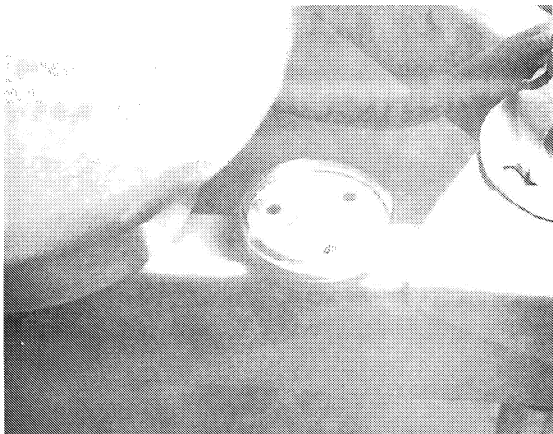


Fig. 1 - Spirit Level

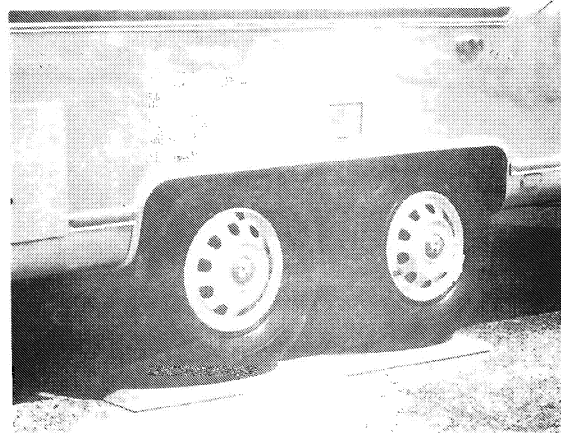


Fig. 2 - Trailer Leveling

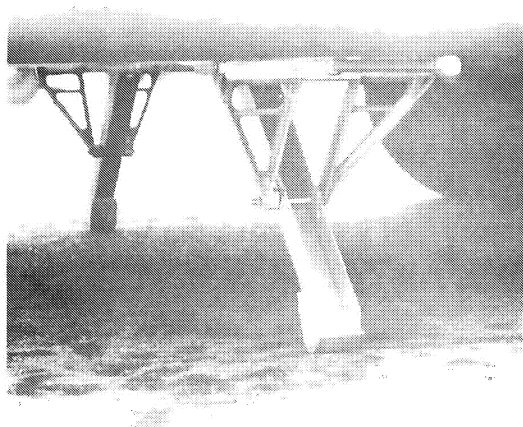


Fig. 3 - B.A.L. Stabilizing Jack

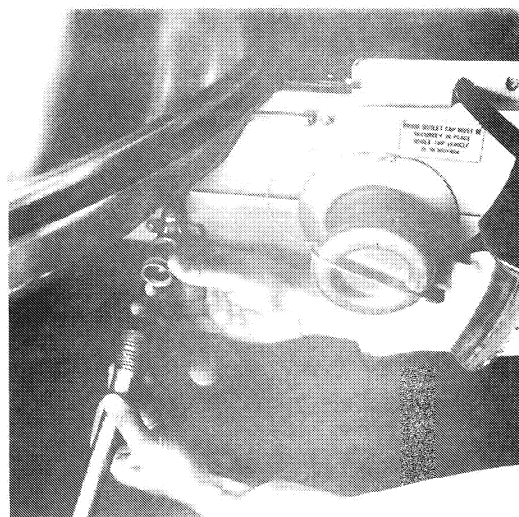


Fig. 4 - City Water Hook-Up



Fig. 5 - 120 Volt Electrical Cable

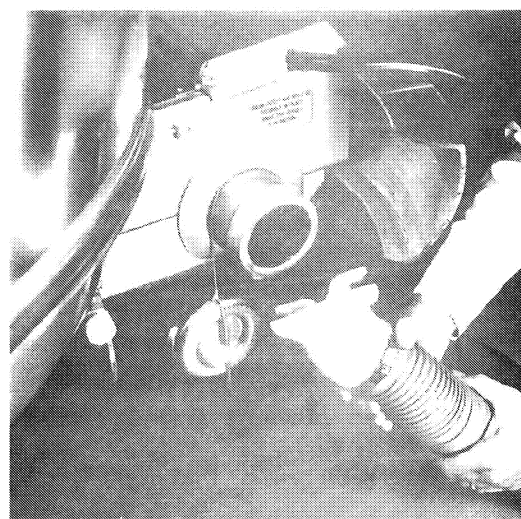


Fig. 6 - Waste Drain Hose Hook-Up

WINTER TRAILERING

Traveling in an Airstream during the cold winter months can be one of the most exhilarating experiences in all trailering. When we speak of cold, we are talking about temperatures of zero to -10 degrees. Trailers properly outfitted with dual pane windows have been cold-soaked at -20 degrees with no adverse effects and with no real discomfort. Optional dual pane windows improve the efficiency of the heating system.

There are, of course, certain precautions which must be taken as you would in your own home in low temperatures.

1. There should be heat in the trailer at all times.*
2. You must have a plentiful supply of propane gas.
3. If your stay is longer than overnight, then you should endeavor to have 110 Volt electricity available. The battery (fully charged) will not last more than about 10 hours in zero weather.
4. Leave cabinet doors, bed doors and wardrobe doors slightly open at night to allow circulation of air around all furniture components.
5. For extended stays in cold weather insulate the water line outside the trailer.

** Some states do not allow LPG to be turned on while moving. While traveling in these states it will be necessary to take other precautions to prevent freezing of the water and waste drain systems. (See "Storage and Winterizing"). Additionally,*

LPG should always be shut off as a safety precaution when gasoline is added to the tow vehicle.

You should remember that low temperatures in combination with high winds cause an equivalent chill temperature much below what your thermometer is reading. For instance: With an outside temperature of zero degrees and the wind velocity of 10 miles per hour, the equivalent chill temperature is -20 degrees F. Whenever possible, experienced winter campers try to park their trailer so it heads into prevailing winds. Use trees and other natural barriers as wind breaks. Be sure to check all tires before setting out. There should be plenty of tread left on each one for safety and maximum traction.

It is also important to guard against excessive humidity inside your trailer during winter camp-outs. When windows and window frames fog up or "sweat", it means that there is too much moisture in the air. Moisture comes from water vapor, and water vapor is the direct result of water evaporating. Many things such as baths and showers, boiling foods, washing dishes, mopping the floor, washing clothes, even breathing, contribute to evaporation. The inside air can only absorb so much of this moisture before it becomes saturated. At this point, it can hold no more, and any additional water vapor condenses back to liquid water in the form of droplets on any available cool solid surface. Temperature has a direct effect on the air's saturation point. Cold air holds less moisture than warm air. For

this reason, the air immediately adjacent to cold outside walls and windows cools down and causes water vapor to condense and form moisture droplets even though warmer inside surfaces are still dry.

The best way to keep condensation under control is to reduce moisture producing activities. It is also important to provide adequate ventilation and keep the air circulating as much as possible. Use your exhaust fans to remove moisture before water vapor mixes with the air. Open windows slightly once in awhile, while operating fans to bring in drier outside air and aid in overall air circulation. In extremely cold weather, when outside ventilation is not practical, it may be necessary to use a small de-humidifier to aid in reducing condensation.

STORAGE AND WINTERIZING

WHEN STORING YOUR TRAILER for short or long periods use the same precautions as you would in your own home in regard to perishables, ventilation and rain protection. In addition, for prolonged storage periods, flush out all the drain lines and the holding tanks. Also, drain the entire water system including the water heater and the water storage tank. Instructions for draining the water system are explained in the following paragraphs on winterizing.

Twice a year or after a long storage period, we suggest you take your unit in for a check-up and cleaning of the gas operated appliances.

THE MAIN CONSIDERATION IN WINTERIZING IS TO GUARD AGAINST FREEZING DAMAGE TO THE HOT AND COLD WATER SYSTEMS, THE WASTE DRAIN SYSTEM (INCLUDING THE TRAPS), THE WATER HOLDING TANKS, THE WATER HEATER AND THE BATTERY. To completely winterize your trailer, follow this procedure:

1. Level the trailer from side to side and front to rear. Open all faucets.
2. Turn the water pump switch to the ON position to expel water from the storage tank.
3. Open all drain valves.
4. While the water is draining from the system, open and flush the toilet flushing valve. Depress hand spray lever while holding the spray head down inside the bowl. Depress hand spray thumb button on the telephone shower

head while holding down inside the tub and drain all water from the flexible hose. Unscrew the heads on both spray units and store.

5. After all water has been removed from the storage tank, turn the pump switch OFF.
6. Remove exhaust hose from water pump.
7. Disconnect the water pump inlet connection, and with check valve removed, turn the pump by hand until all the water is expelled (belt driven pumps only).
8. Lower the front of the trailer as far as the jack will allow until water ceases to drain, then crank the jack up as high as it will go and let any remaining water drain out the rear drain valves on models so equipped.
9. Pour a cup of approved* non-toxic antifreeze into the lavatory, sink, and tub drains to prevent trap freeze-up.
10. Be sure to open the waste-holding tank drain valves and drain and flush the tanks thoroughly (THIS IS VERY IMPORTANT AS THE SEWAGE IN THE TANKS, IF FROZEN, COULD SERIOUSLY DAMAGE THE TANKS.)
11. Remove the cartridge of the water purifier and leave the purifier valve in the open position.
12. Remove water heater drain plug.
13. Remove the batteries from your trailer and store in a cool dry place where there is no danger of freezing. It is very important for optimum life of a battery to check it periodically and to keep it fully charged.

* Approved and listed by a recognized testing authority such as UL (Underwriter Lab).

14. Remove any items (food, cosmetics, etc.) from trailer interior that might be damaged by freezing - or might damage the trailer if containers break.

NOTE: If you wish to bypass your water heater in order to cut down on the amount of antifreeze necessary, you may purchase a kit for this purpose from a Wally Byam Store.

For additional winterizing protection add a nontoxic antifreeze (approved for drinking water systems) to the water lines using the following procedure:

1. Reconnect all lines except the hose to the pump inlet port. Close all drain valves (see step No.'s 3 & 12).
2. Attach a length of hose to the pump inlet port. This piece of hose should be long enough for the free end to be inserted into and reach the bottom of the antifreeze container.
3. Dilute the antifreeze solution in accordance with the manufacturer's instructions.
4. Open all water faucets.
5. Insert hose length into the antifreeze container, turn the pump switch on, and run the water pump until the antifreeze solution fills all water lines and the water heater. Flush toilet, work hand spray while holding down in bowl. Work hand shower spray while holding down in tub.
6. Shut off the pump and close all faucets.
7. Disconnect the hose length from pump inlet fitting and reconnect water system inlet line.

EXTERIOR

The clear Plasticoat finish applied to the outer surfaces has been specifically formulated by Airstream to provide maximum protection for the shiny aluminum surface. The Plasticoat formula includes special plasticizers used to keep the coating flexible so that it can cope with aluminum's high coefficient of expansion. This flexibility, however, results in a surface coat which is of necessity somewhat softer than automotive acrylic lacquer finishes.

CAUTION

For this reason, ABRASIVE POLISHES OR CLEANING SOLVENTS SUCH AS AUTOMATIC DISHWASHER DETERGENTS OR ACID ETCH CLEANERS ARE TOO STRONG AND SHOULD NEVER BE USED.

ALWAYS CLEAN YOUR TRAILER IN THE SHADE OR ON A CLOUDY DAY WHEN THE ALUMINUM SKIN IS COOL. Oil, grease, dust and dirt may be removed by washing with any mild nonabrasive soap or detergent. Cleaning should be followed by a thorough clean water rinse. Spots and streaks may be prevented by drying the unit with a chamois or a soft cloth. WHEN WASHING OR POLISHING YOUR TRAILER, ALWAYS WIPE "WITH" THE GRAIN OF THE METAL.

After cleaning and drying, a good grade of nonabrasive automotive paste or liquid wax will increase the life of the finish, especially in coastal areas where the finish is exposed to salt air or in polluted industrial areas. It will also protect the shell from minor scratches and make subsequent cleaning easier. Wax should normally be applied every three to six months.

The first application should not be sooner than 90 days after purchase to allow acrylic finish to cure.

It is important to remove sap, gum, resin, asphalt, etc., as soon as possible after they appear by washing and rewaxing. Sunlight and time will bake-harden these materials making them almost impossible to remove without heavy buffing. If asphalt remains on the trailer after washing, use a small amount of kerosene on a rag and wipe the spots individually, being careful not to scratch the finish.

For small areas of damage to the plasticoat finish, or where oxidation is beginning to occur, remove all traces of the coating with a good grade of lacquer solvent. Respray the area with clear plasticoat lacquer. ALL ITEMS NEEDED FOR THESE MINOR REPAIRS TO THE EXTERIOR SHELL ARE AVAILABLE AT WALLY BYAM STORES. For extensive refinishing we recommend that you contact an Airstream Service Center or the Factory Service Center.

To keep your trailer looking new, paint the "A" frame, LPG tanks, and rear frame periodically.

It is recommended that the caulking and sealant used in external seams and joints such as end shell segments and around window frames, light bezels, beltline and rub-rail molding, etc., be checked regularly. If this material has dried out and becomes cracked or checked, or if a portion has fallen out, it should be replaced with fresh material to prevent possible rain leaks. Caulking and sealing material is available from your Airstream dealer.

Each time you connect the 7-WAY ELECTRICAL CONNECTOR check for dirt and corrosion. Keep the contacts clean with "Spra-Kleen" or similar aerosol contact cleaner.

CAUTION

IT IS IMPORTANT THAT THE MAIN DOOR BE COMPLETELY CLOSED AND LOCKED DURING TOWING. If it is not locked, the constant vibration of travel may cause it to open with possible damage.

FOR YOUR SECURITY THE LOCK HAS BEEN DESIGNED AS A DEAD BOLT. For this reason never try to shut the door when the striker is in the locked position. The door is properly closed when the handle is firm. If the door is difficult to open, push in to release the latch. When the door swings fully open it will automatically latch against the side of the trailer.

An additional keyed dead bolt is an option on the trailers. To unlock, insert key, turn clockwise as far as possible, then return key to vertical position allowing it to be withdrawn. To unlock, repeat procedure only turn in the opposite direction.

The screen door secures to the main door by means of a slide bolt type latch. It can be operated independently by releasing the slide bolt and swinging the screen door away from the main door. A roller catch is provided to secure the screen door to the frame when closed.

To operate the fold-away step just press down on either side of the latch bar and the step will automatically drop into position.

To stow the step simply lift the front edge and then push it up under the trailer to its stowed position.

The optional extension step available with fold-away step (See Fig 1) is permanently attached to the main step and when needed it is simply flipped out.

CAUTION

NEVER TRAVEL WITH STEP LOWERED OR EXTENDED.

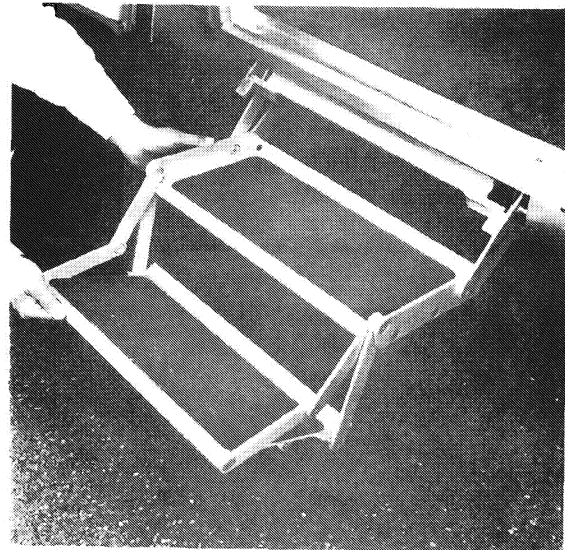


Fig. 1 - Fold-Away Step

The EXTERIOR WINDOWS in your trailer are of heat strengthened safety plate glass. The standard windows are single pane clear glass. DUAL PANE WINDOWS AND THOSE TINTED A SOLAR GRAY ARE OPTIONAL ON SOME MODELS. To open swing out windows, release the two lever locks at the bottom, pull the two side operator handles toward the center and pull down until the window is in the desired position (See Fig 2) then place the operators into one of the five positioning recesses in the frame. To close: pull the two side operator handles toward the center and slowly lift until window is closed. To secure, turn the two lock handles until the lock pawls are in the vertical position, then press the handles downward as far as they will go. Clean your trailer windows the same way you clean the windows in your house. Clean the seals with a damp cloth or mild detergent every three to six months taking care not to use strong solvents as they will damage the seals. A coat of natural silicone lubricant applied after the seal has dried will keep it flexible. Spread the lubricant evenly with a brush or finger, working it into the surface.



Fig. 2—Window Operation

This is a good practice for all rubber seals in your trailer. For replacement of a damaged window contact an Airstream Service Center.

Your plastic SCREENS are easy to maintain. Just clean occasionally with a damp cloth. NOTE: THEY WILL MELT AT THE POINT OF CONTACT IF TOUCHED BY A CIGARETTE.

VISTA VIEW WINDOWS, optional on some models, allow for interior lighting while maintaining privacy. They are equipped with integral shades.

The aluminum construction of your trailer creates a radio-shield and you will need outside antennas for good reception. This can be accomplished by a whip radio antenna or TV antenna with an auto coupler.

The auto coupler (optional) enables you to utilize your TV antenna for AM-FM radio reception.

A telescoping whip radio antenna (optional) is available for the optional 12 volt AM-FM radio and should be professionally installed next to the front window roadside of your trailer on a swivel mount.

The controls for the optional TV antenna are in the ceiling directly below the antenna. To raise the antenna, turn hand crank clockwise until it stops. Then turn on TV set and select channel. While watching picture, reverse the handle approximately one half turn, push handle up toward the ceiling, hold in that position and rotate antenna. If you hit a stop in rotation before the picture is clear, reverse rotation. You may have to readjust when changing channels. To close,

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reverse the direction of cranking. Before traveling, check outside that the antenna is folded and pointed straight forward.

The motorized TV antenna has a control panel located on the curbside wall forward of main door opening. A two position rocker type switch is used to control the antenna. When the upper portion of the switch is pushed, the antenna raises to the full "up" position then starts to turn in a clockwise direction. When the strongest signal point is reached, antenna rotation is stopped by pushing the bottom portion of the switch rocker to bring it to the center or "off" position. Counterclockwise rotation and antenna lowering are accomplished by pushing the rocker bottom portion all the way in. A green light on the switch panel indicates when antenna is being raised or lowered. Both red and green lights will be illuminated when the antenna is rotating. The antenna must be fully stowed for travel.

INTERIOR

The interior of all Airstream trailers has been designed for comfort, convenience, durability and appearance. How you use it and how you take care of it naturally depends on you. However, if you learn to operate the interior components and take care of them and the trailer properly, this knowledge will add to your pleasure as well as the long life of your trailer.

All materials should be professionally dry cleaned to remove any overall soiled condition. These materials may be spot cleaned, however, using the cleanability code instructions as listed. Sample swatches for 1983 models are furnished to our dealers. The dealer will be able to give you the name of the fabrics used in your particular trailer.



UPHOLSTERY

Note: Cleanability codes appear in brackets

<u>Color Scheme</u>	<u>Main Color</u>	<u>First Accent Color</u>	<u>Second Accent Color</u>
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LIMITED MODELS

Hazy Blue	Tulip Garden (S)	Velano-Stone Blue (WS)	Velano-Azure (S)
Pistachio	Dew Drop (W)	Velano Sage (S)	Velano Oyster (W)
Chocolate	Morning Mist (W)	Velano Tan (W)	

EXCELLA MODELS

Indigo	Juliette (S)	Lacy (S)	
Cocoa	Sandbar (S)	Velano-Java (WS)	Velano Tan (W)
Dusty Blue	Kyra-Blue Haze (WS)	Saratoga (WS)	Velano Oyster (W)
Mink	St. Paul Mink (W)	Tangier Mocha (W)	

INTERNATIONAL MODELS

Coral	Coral (W)	Nova Cinnamon (S)	
Sea Mist	Pasedena Seamist (W)	Chevelle Seamist (W)	
Stone	Pasedena Mocha (W)	Chevelle Thrush (W)	

The following are the cleanability code instructions for the various fabrics used in the Airstream trailers:

CLEANABILITY CODES

CODE W-S

Fabric Care. Spot clean this fabric either with a mild solvent or a water-based cleaning agent. When using a solvent or dry cleaning product follow instructions carefully and clean only in a well ventilated room. Avoid any product which contains highly toxic carbon tetrachloride. You may also use an upholstery shampoo product or the foam from a mild detergent. With either method, pretest a small area before proceeding. Use a professional furniture cleaner when an overall soiled condition is reached.

CODE S

Fabric Care. Spot clean, using a mild, water-free solvent or dry cleaning product. Carefully follow instructions on such product. Clean only in a well ventilated room. Avoid any product containing carbon tetrachloride which is highly toxic. Pretest small area before proceeding. Use a professional furniture cleaner when an overall soiled condition is reached.

CODE W

Fabric Care. Spot clean, using the foam only from a water based cleaning agent, such as mild detergent or non-solvent upholstery shampoo product. Apply foam with a soft brush in a circular motion. Vacuum when dry. Pretest small area before proceeding. Use a professional furniture cleaner when an overall soiled condition is reached. The above code was designed by the manufacturer of the fabric.

CAUTION

NEVER REMOVE CUSHION COVER FOR SEPARATE DRY CLEANING OR WASHING. ANY TUMBLE CLEANING METHOD CAN DESTROY THE BACKING, SHRINK OR OTHERWISE DAMAGE UPHOLSTERY FABRIC.

SMOKING WARNING

KEEP YOUR FURNITURE AND FAMILY SAFE FROM FIRES CAUSED BY CARELESS SMOKING. DO NOT SMOKE WHEN DROWSY. REMOVE IMMEDIATELY ANY FLOWING ASH OR A LIGHTED CIGARETTE WHICH FALLS ON FURNITURE.

SMOLDERING SMOKING MATERIAL CAN CAUSE UPHOLSTERED FURNITURE FIRES.

ALL DRAPERY MATERIALS AND MATTRESS COVERS MUST BE PROFESSIONALLY DRY CLEANED.

Draperies are removed by unsnapping from the wall, removing a screw from the end of the curtain track, and sliding them out.

The CARPET can be cleaned with any good commercial carpet cleaner, or with a detergent and water. BE CAREFUL NOT TO SOAK THE CARPET WITH WATER.

The COUNTER AREAS around the sink are of a high-pressure laminate and can be cleaned with soap and water, or you can use a common cleaning solvent on tough spots. Be sure no abrasive cleaner is used as there is the possibility it could scratch the surface. A protective pad should always be placed under hot utensils.

The WALLS can be cleaned with any vinyl cleaner or with any mild household detergent and water. But, again, no abrasives.

The PANELING of the wardrobes and cabinets may be waxed, if desired, or may be cleaned simply with a damp cloth.

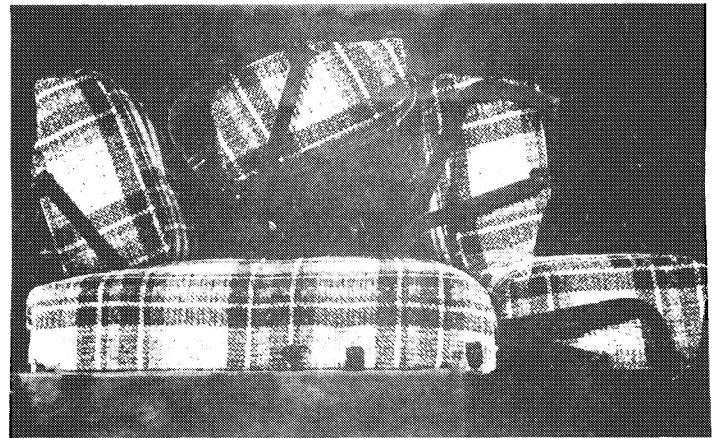
SEE THE BATHROOM SECTION for cleaning and maintenance suggestions for the ABS plastic surfaces.

LOUNGES

To convert the DELUXE SOFA used in some models into a bed, it is only necessary to grasp the top of the back rest and pull it toward the aisle of the trailer. The back rest will raise and pivot out over the seat becoming the front section of the bed.

The FIFTH AVENUE LOUNGES are converted into a bed by sliding the seat out toward the aisle of the trailer. As the seat slides out the back rest portion lowers to the bed position. To return to the lounge position the seat is pushed back toward the wall. As the seat slides in, the back rest automatically returns to its upright position. (See Illus.)

The DINETTE is made into bed by raising up on the front of the table and folding the table leg up against the bottom of the leaf. As the table is raised it will unhook from the wall brackets. Once it is unhooked it can be pulled out and the wall hinge will let it be lowered on the supports of the dinette seats. The back rest of the seats are placed over the table to complete the conversion.



DELUXE SOFA



FIFTH AVENUE LOUNGE

TABLES

To open the folding table, lift into a horizontal (Fig. 1) position and pull the table leg down toward the vertical (Fig. 2) position until it snaps into place. The leg is hinged at the front edge of the table and is held against the bottom of the table with Velcro.

To extend into the double leaf position, lift the table slightly so the leg clears the carpet, and slide the leg and center support out toward the center of the trailer. Pull out on the small "U" clip holding the leaves together and rotate it out of the way. The top leaf is then free to lift up (Fig. 3) and lay out over the center support. When replacing the table to the stowed position it is necessary to release the latch on the upper end of the table leg before it can be folded up against the bottom of the table leaves.

CENTRAL CONTROL PANEL

The Solid State Central Control (optional in some models) has two different configurations. The Deluxe Panels include a digital clock, LP tank monitor and refrigerator alarm not included in the Base model.

To check tank capacities the panel switch is turned on, then depress the tank switch you desire to check. The A/C or power-on light will automatically glow whenever you are connected to 110V power.

The BATTERY CONDITION TESTER LIGHTS indicate whether the trailer batteries are in good, fair, weak



Fig. 1—Table Opening



Fig. 2



Fig. 3

or bad condition. When they show weak or bad condition, you should take every reasonable step to conserve power by using as few lights as possible and switching off appliances. The battery should be charged as soon as practical with the tow vehicle charging system or by connection to 120 volt power.

The REFRIGERATOR ALARM on the control panel has two different warning systems that will be activated if the refrigerator burner goes out. The light warning on the panel is put into effect anytime the main control panel switch is turned on. The audible warning is put into operation by turning the refrigerator alarm switch on. The warning system only works with the gas burner, so the audible alarm should be shut off when using the refrigerator on electric.

The optional ELECTRONIC DIGITAL CLOCK operates at all times whether you are on self contained battery power or hooked up to 120 volt city power.

To operate the clock, push display switch to ON. To set correct time, push set switch to SET MINUTES and then to SET HOURS.

To conserve electricity, the display switch may be turned OFF. The correct time is held in memory until the display is turned back on. If, when the display is turned back on, the time shown is incorrect, there has likely been a power interruption.

After some time you may experience what appears to be a malfunction in the set switch; that is, the displays may not turn on at all, or they may "rapid fire". This is caused by dust on the switch contacts and is easily corrected by moving the switch back and forth 10-20 times.

STAINLESS STEEL SINKS cannot be harmed by boiling water. However, salt, mustard, mayonnaise and ketchup can cause pitting. Stubborn stains will yield to paste made of water and slightly abrasive household cleaner. Be sure to work in the direction of the polish lines on the steel to keep the original finish. Fingerprints are sometimes a problem. They can be minimized by applying a cleaner that leaves a film of thin wax: Simply wipe it on and remove the excess with a dry cloth. After this, fingerprints can be wiped off with a soft dry cloth, or one moistened with a little wax cleaner. The surface should always be washed before wax is applied. Regular cleaning will prevent build-up of scale and film. Ordinary soaps or detergents are best for routine cleaning of the stainless steel sinks. Rinse thoroughly with warm water and wipe dry with a cloth to avoid streaks and spots.

ELECTRONIC IGNITION WATER HEATER (OPTIONAL) The ignitor switch for the water heaters on the center bath model is located on the wall underneath the medicine cabinet. On rear bath models the switch is inside the lavatory cabinet on the left side. Further information is provided in the Water Heater Operation Manual.

MICRO-WAVE/AIR CONDITIONER SWITCH The trailers built with both microwave ovens and air conditioners have a switch located under the galley rooflocker designed to prevent operation of both high amperage draw appliances at the same time. The switch provides current to the air conditioner in one position and micro-wave oven in the other.

CEILING LIGHT FIXTURES are incorporated with the ceiling fresh air vents in some models. To operate the lights turn the control knob clockwise; first position 2 lights, second position 4 lights, third position 6 lights, fourth position off. Other ceiling lights (Fig. 2) will have a high-low switch located on the end of the fixture.

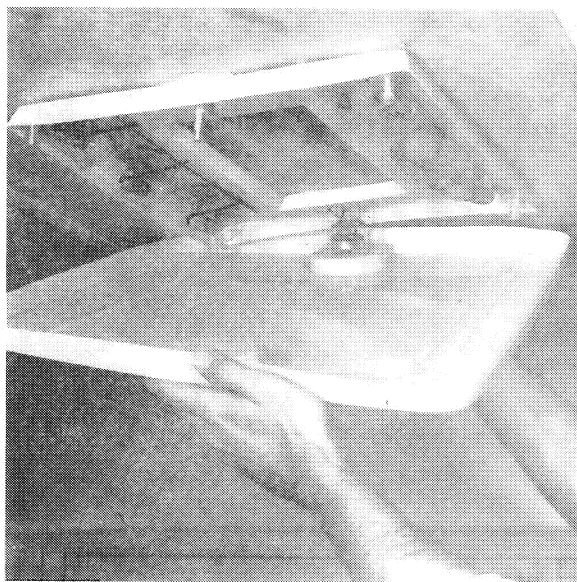
To remove the lens and replace the bulbs or florescent tubes, pull knob from light switch shaft and remove nut (bulbs only). Remove the screw from the vent control handle and remove handle. (Knob on light assemblies without vent.) Remove 4 screws attaching lens to vent frame, this will release the lens. To replace, reverse removal procedure.

The FRESH AIR VENTS are operated by a control handle. Turning clockwise will raise the vent and at the maximum extension, vents with fans will automatically turn on. For maximum air without fan, open until fan starts and back up just enough to turn fan off. Turning counterclockwise will close the vent. Screens should be removed for periodic cleaning.

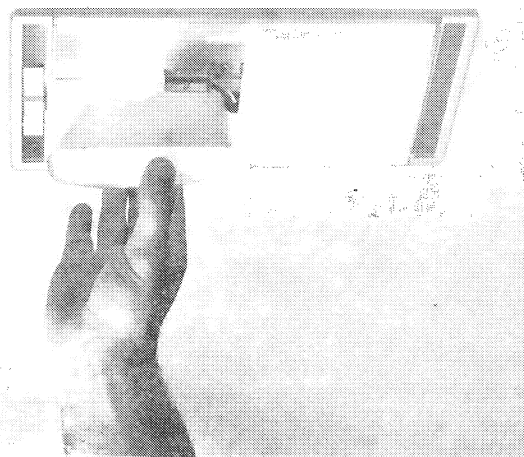
On those models with double lens lights the lens may be removed by gently squeezing in the middle and pulling down. During cold weather it is a good idea to leave the light on a few minutes prior to removing the lens. These lights are operated by a sliding switch on the end of the light.

FLORESCENT LIGHT BULBS are removed by rotating one quarter turn and bringing the bulb straight out of the fixture. This would be

straight out on bed lights, straight down on ceiling lights, and straight up on the indirect lights located behind the curtain valance. The switch for the indirect lighting is located forward of the roadside living room window.



Ceiling Light Fixture



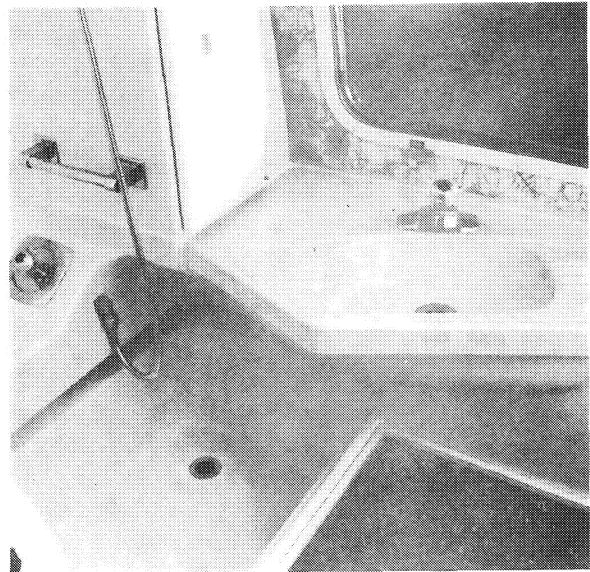
Galley, Vanity, Bath, Bed-Light

The BATHROOM EXHAUST FAN is in the bathroom ceiling and is operated by pushing up on the handle running across the fan opening and turning on the switch located at the fan or on the rear wall above the sink. To shut the fan off, shut off switch and pull the handle back down.

The TELEPHONE SHOWER HEAD is designed to give maximum flexibility in usage and provides for water saving techniques when using your trailer on self-containment. It can be held in the hand and moved about the body. Normally the best water conservation procedure is to wet the entire body and then turn the water off with the valve at the shower head. Apply soap, lather thoroughly, then rinse the soap off. The telephone shower head is also used to fill the tub for taking a bath. When you have finished using the shower be sure to shut the water off at the faucet. The shower head valve is intended as a shower convenience only and should not be used as a water shut off.

CAUTION

THE LAVATORY BOWL, COUNTER TOP, TUB OR SHOWER PAN in your bathroom are made of a special ABS long-wearing, light weight, high strength plastic material. WHEN CLEANING, USE SOAP OR DETERGENT ONLY-NEVER USE SCOURING POWDER. Always rewax the ABS plastic surfaces after each heavy cleaning with a good grade paste wax (without solvents or cleaners). The wax will protect the surfaces from discoloration and stains. When you first purchase your trailer Airstream recommends that you give all ABS plastic surfaces a heavy coating of paste wax. This will assure easier cleaning and lasting beauty.



Bathroom



Bathroom Exhaust Fan

L.P.G. SYSTEM

Your trailer is equipped with two tanks for LPG (Liquid Petroleum Gas). LPG burns with a clean blue flame. There are two basic type of LPG in common usage: BUTANE AND PROPANE. Butane is widely used where temperatures are normally above freezing the year round, and Propane is used when subfreezing temperatures are common, since Butane freezes at 32 degrees as compared to -40 degrees for Propane. ALL OF THE ORIFICES IN YOUR LPG APPLIANCES ARE OF THE UNIVERSAL TYPE WHICH WILL BURN EITHER FUEL.

How long a full tank of gas will last is dependent on usage. In cold weather when you are using the furnace, large amounts of hot water, and are doing extensive cooking, you will naturally use more than you will in warm weather when you may do limited cooking. On the average, with normal cooking and other appliance use, you can probably count on two to three weeks service from each tank.

All models are equipped with an AUTOMATIC GAS REGULATOR. Both tanks are connected to this regulator. When the gas is turned on it is drawn from only one tank at a time. When the tank being used is depleted the regulator automatically switches to the full tank. An indicator on the regulator knob points toward the tank which was being used to give you a visual reminder when one tank is empty. *NOTE: The tank in use is not completely empty until the red warning flag is fully visible in the indicator window. The empty tank can be removed for*

refilling without disturbing the tank being used. Simply close the tank valve, disconnect the empty tank and have it refilled. The vent at the bottom of the regulator must be kept free of any obstruction. Inspect the vent opening regularly.

CAUTION

The LPG gas bottles are securely mounted on the front "A" frame of your trailer. IF THESE BOTTLES MUST BE REMOVED FOR SERVICE OR REPLACEMENT, it is important that they be reinstalled correctly in order to prevent any possibility of their falling off or becoming dislodged during travel. The following step by step procedure gives you the proper method of removing and installing these bottles:

1. Turn the knob on your automatic regulator so the arrow points to the tank opposite the one to be removed. Shut off the gas valve on the bottle to be removed. If your trailer does not have an automatic regulator, shut off the gas valve at both bottles.
2. Disconnect the rubber gas line at the bottle to be removed. (This fitting has a left hand thread and turns in the opposite direction to most threaded fittings).
3. Turn the large clamping "T" handle counterclockwise until the hold down bracket is loose enough to remove the bottle. If your trailer is equipped with an optional gas bottle protective shroud, the "T" handle must be removed and then remove the shroud before removing the bottle.

DO NOT REMOVE THE CENTER HOLD
DOWN ROD.

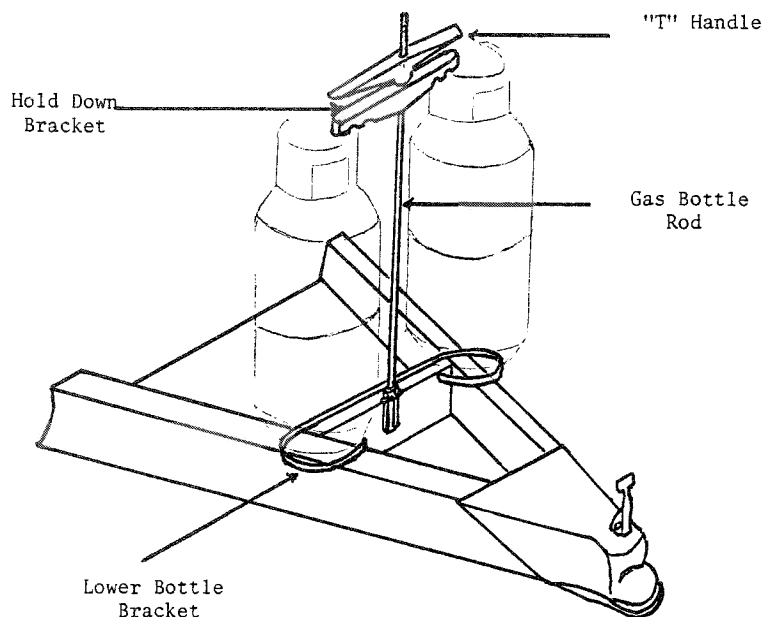
TO INSTALL:

1. Place the bottle in position on the "A" frame and bottle crossmember so that the lower collar fits inside the circular bracket welded to the "A" frame. The open gap in the upper collar faces forward. Reattach rubber gas lines.
2. Place the cast aluminum hold down bracket in a position so that it rests on the upper collar of both bottles with the collar rims engaged in the grooves on the underside of the bracket. If your trailer is equipped with an optional Gas Bottle Protective Shroud, it should be positioned over the bottles next. Make sure the Hold Down Rod projects up through the hole in shroud center bracket.
3. Replace the "T" handle and tighten down until the bottles are held firmly in place.
4. Turn on gas shut-off valves and test all fittings with a soap suds or detergent solution and watch for bubbles.

If you have allowed both tanks to run out, air may have gotten into the lines. In this event, the air must be forced out through the lines by gas pressure before you will be able to light the pilots. Hold a match to the pilot of the appliance closest to the tanks until it lights and stays lit. Then move to the next closest, etc.

WARNING

CLOSE THE SHUTOFF VALVES ON THE GAS TANKS IF YOU SMELL LP GAS, OR IF APPLIANCE PILOT LIGHT FAILS TO STAY ON. Contact an LP gas company service man to correct the problem.



WATER SYSTEM

THE TRAILER WATER SYSTEM PROVIDES FULL SERVICE BOTH WHEN THE TRAILER IS SELF-CONTAINED OR WHEN CITY WATER IS AVAILABLE. Water heater capacity is 6 gallons. The water tank stores clean fresh water for all your needs.

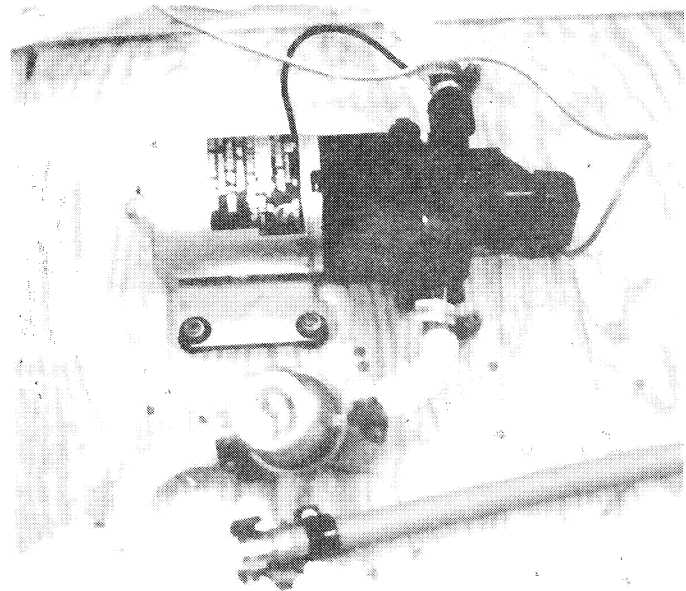
WHEN SELF-CONTAINED, the water pump should be turned on. The switch is located on the Central Control Panel above the refrigerator. Some models will also include an optional second switch in the bathroom lavatory. With the water pump switch on, the water pump will run whenever a faucet is opened, and will shut off when the faucet is closed.

CAUTION

THE WATER PUMP MUST BE TURNED OFF WHEN HOOKED UP TO CITY WATER SUPPLY AND WHEN YOU LEAVE YOUR AIRSTREAM UNATTENDED.

The WATER PUMP AND FILTER are adjacent to the water heater in the bathroom cabinet on rear bath models, and in the roadside double wardrobe on center bath models. The filter screen should be cleaned periodically to prevent accumulation of dirt and sand. To remove the screen disconnect the rubber hoses from both ends, separate the screen housing, remove the screen, clean and replace.

For city water supply connect a 1/2" minimum high pressure hose to city water supply and to the water



inlet fitting. (See Fig. 2 & 3)
Turn the water on and slowly open
an inside faucet until the water
flows free of air. The system
will now be ready for use. If you
are staying for some time where
city water is available you may
want to drain the water storage
tank. To drain the tank, open
faucets and turn the water pump
switch on until the tank is
empty. Be sure to refill the
tank with fresh water before de-
parting. The system has check
valves in the water lines to
protect the water tank while you
are connected to the city water
hook-up.

TO CLEAN THE TANK, pour some
bicarbonate of soda into the
filler spout with several gallons
of water and allow to stand for
a minimum of four hours. Then
flush the tank out by opening a
faucet, allowing the water pump
to drain the system. Then re-
fill with fresh drinking water.
If the water tank must be clean-
ed further the following procedure
is recommended.

1. Prepare a sodium hypochlorite
solution using potable water
and household bleach (5 1/4
to 6%) in the ratio of 1/4 cup
of bleach to 1 gallon of water.
(Common household bleaches are
Purex and Clorox.)
2. Pour 1 gallon of hypochlorite
solution for each 15 gallons of
capacity into the empty water
tank.
3. Add enough potable water to
completely fill the water system.
4. Allow closed system to stand
for three hours.
5. Drain the hyochlorite solution
from the system and refill with
potable water.



Fig. 2 City Water Hook-up



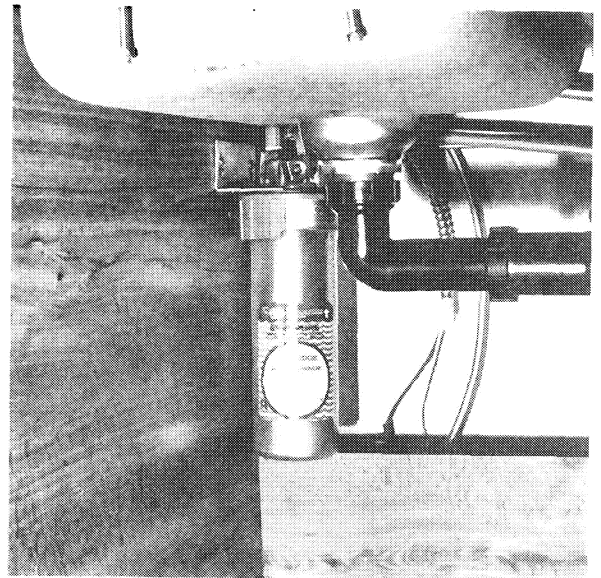
Fig. 3 Water Tank Fill

6. Excessive hypochlorite taste or odor remaining in the water system is removed by rinsing the system with a vinegar solution mixed in the ratio of 1 quart of vinegar to 5 gallons of water.
7. Drain the system and flush with fresh drinking water.
8. Drain the system and refill with fresh drinking water.

The OPTIONAL EVERPURE QC-2 WATER FILTER is located under the galley sink. It will remove even very fine dirt and colloidal matter, and eliminates most chlorine, phenol and similar distasteful odors and tastes, while delivering sparkling taste-free water for drinking and cooking. The filter is connected to the cold water galley drinking faucet only. The filter will also remove iron and sulphur provided the water supply is chlorinated. Super-chlorination will precipitate the iron and sulphur which will then be removed by the QC-2 Filter. To purify any questionable water, fill the Everpure Chlorine Disinfectant Dispenser with liquid bleach and add 1/6 ounce (one teaspoonful) per 10 gallons of water in the tank. The water will remain sparkling clear even to the end of the filter pack life, however as the minute pores slowly fill up with impurities the flow rate will be gradually reduced. When it becomes too slow for convenience, the cartridge can be very simply changed. Follow the instructions on the cartridge. We advise keeping a spare cartridge at all times.

TO REMOVE USED CARTRIDGE:

1. Shut off water by lifting valve handle counterclockwise as far as possible.



Everpure Water Filter

2. Turn colored ring all the way to the left. Ring will drop about 5/8".
3. Lift cartridge slightly and turn it further to the left until it can be disengaged.
4. Lower cartridge to disengage it from ring. Discard used cartridge.

TO INSTALL NEW CARTRIDGE:

1. With colored ring in lowered position (turned all the way to the left) orient lug on cartridge with cutout under label on ring.
2. Insert cartridge straight up into ring as far as it will go. Holding colored ring steady, turn cartridge as far to the right as possible without forcing.
3. Then turn colored ring far to right to drive cartridge up into head.
4. To lock ring in place and turn water on, move valve handle down. Be sure handle leg engages ring locking lug.

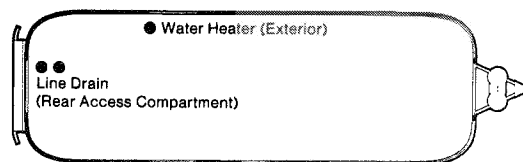
The **WATER PRESSURE REGULATOR** protects the plumbing inside your trailer. Regardless of the variation in city water pressure, the pressure at the faucet is kept constant.

DRAIN VALVE

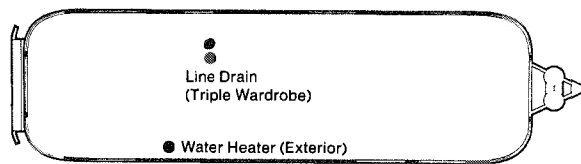
The fresh water tank is emptied by pumping the water out with the self contained water pump. Simply turn on the pump switch and open a couple of faucets until the water will no longer come out.

The rear bath models have two drain valves for the water lines in the rear compartment, plus the drain plug on the water heater.

Side bath models have the cold waterline drain valve located in the triple wardrobe down in the water tank well. This valve is below the floor level and is difficult to see without a flashlight. Hot water lines are drained out through the water heater plug on the side bath models.



Rear Bath Models



Center Bath Models

● Drain Valve Locations

DRAIN AND WASTE SYSTEM

Your trailer has a drain and waste system that includes waste holding tanks made from molded plastic, free from corrosion problems, with trouble free dump valves. The MAIN HOLDING TANK enables you to use the toilet for several days away from disposal facilities. The waste water from the sink, shower, bath and lavatory, drains in the AUXILIARY HOLDING TANK. Each tank has its own dump valve, however, both tanks drain through a common outlet. Therefore, you need to make only one connection when hooking up in a trailer park with sewer facilities.

WHEN THE TOILET WILL NO LONGER DRAIN, THE MAIN HOLDING TANK IS FULL AND MUST BE EMPTIED. Watch this closely, because WHEN THE TANK IS FULL, SEWAGE CANNOT BE EMPTIED FROM THE TOILET BOWL. In models with a central control panel check the main holding tank gauge. The auxilliary holding tank must be emptied when the gauge on the central control panel indicates full.

To empty one or both tanks attach the sewer hose by pressing the bayonet fitting onto the dump valve outlet and rotate clockwise until it feels solid and secure. (See Fig. 1) Attach the outlet end of the hose to the sewage outlet, making sure that the hose is placed so it will drain completely. The dump valves have two wire loops that lock the handle in the closed position. To unlock push outward on the wire loops and they will snap loose, permitting you to open the valve.

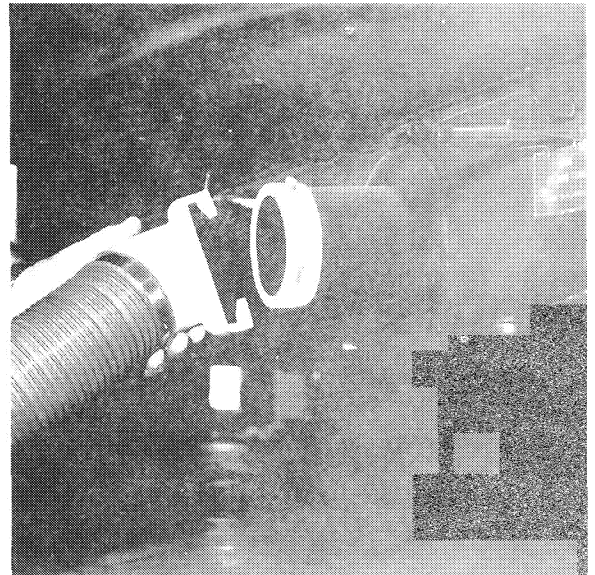


Fig. 1 - Waste Drain Hose Hook Up

Pull the dump valve handle as far as it will go and wait until the tank is drained. When dumping, the main holding tank should be dumped first; then the auxiliary holding tank. This will help to rinse out the sewer line with auxiliary holding tank water.

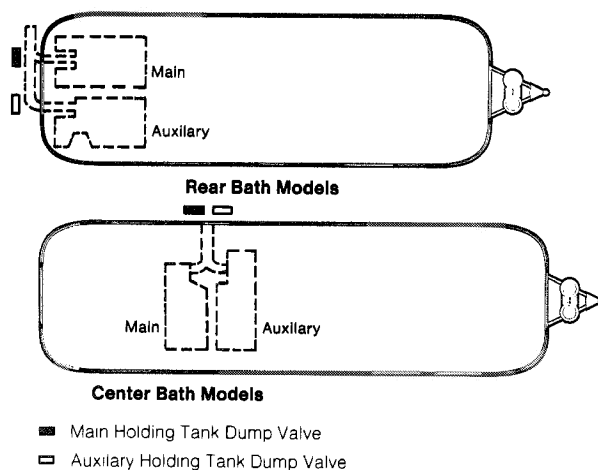
The main holding tank must be flushed out until all paper and waste material is removed. Close the dump valve and refill the tank with clean water and repeat until clean.

On rear bath models a convenient fitting for flushing the holding tank is in the center of the rear trunk compartment.

Replace the plug after using the fitting. The sewer hose is stored in the rear bumper compartment. Rinse out the sewer line before storing.

WHEN IN A PARK AND CONNECTED TO A SEWER OUTLET, keep the main holding tank dump valve closed and empty the tank every few days or whenever it becomes almost full. ONLY BY SENDING A LARGE VOLUME OF LIQUID THROUGH THE MAIN HOLDING TANK AT A TIME WILL TOILET PAPER AND OTHER SOLIDS COMPLETELY WASH AWAY.

This practice will avoid the accumulation of solids in the main holding tank which could lead to an unpleasant cleaning job. Should solids accumulate, close the dump valve, fill the tank about half full with water; then tow the trailer for a few miles. The turbulence and surging of the water will usually dissolve the solids into suspension so the tank can be drained. If your trailer is equipped with the auxiliary holding tank, keep the auxiliary tank valve open when connected to a sewer outlet.



Holding Tank Dump Valve Locations

BATTERY

CAUTION

A normal battery can discharge by itself in 30 to 45 days when not in use, therefore, IT IS NECESSARY TO PERIODICALLY CHECK THE BATTERY AND CHARGE IT AS IS NECESSARY. We suggest checking the battery at least every two weeks in freezing weather. The temperature at which a battery will freeze depends on the condition of its charge. As an example: a fully charged battery with a specific gravity of 1.265 will not freeze until the electrolyte temperature drops to -71.3°F, while a discharged battery will freeze at +19°F. The following table shows the freezing points of batteries at various specific gravity readings, temperature corrected 80°F.

1.265-71.3°F
1.250-62°F
1.200-16°F
1.150+5°F
1.100+19°F

Do not add water to a battery in freezing temperatures unless the vehicle will be put to use at once, otherwise, the added water may freeze. Neglect is expensive. Care costs little. Check your batteries regularly.

MAINTAIN A CLEAN BATTERY TOP AND CHECK TERMINALS AND CABLES FOR TIGHTNESS AND CLEANLINESS. A dirty battery will dissipate its charge through surface contamination. Clean battery top with a damp cloth and dry thoroughly.

The terminals should be tight and free of corrosion. To clean terminals, neutralize with a solution of baking soda, rinse in clear water, and dry.

NOTE: Care must be used to make sure soda is not allowed to enter battery cells.

To insure maximum battery capacity on both charge and discharge, the battery terminals and the inside portion of the cable connector should be scraped or brushed until both of these surfaces are shiny bright. The cable connectors should then be reconnected to the battery and tightened. The complete assembly, battery post and cable connector should be coated with a heavy bodied mineral grease, petroleum grease or a petroleum jelly.

CAUTION

RECONNECT THE BATTERY CABLES TO THE CORRECT BATTERY POSTS. The black cable should be connected to the negative (-) post and the red cable to the (+) post. The polarity of your tow vehicle must also be negative (-) ground since it must always match the trailer. Most tow vehicles are negative grounded, but always check your vehicle owner's manual to be sure.

ADD WATER TO CELLS AS NECESSARY. Check the electrolyte level at least once a month. When you are traveling steadily and for an extended period of time, or you are in climates above 90°F, check

the electrolyte level about every two weeks. Do not fill battery above the split ring in filler opening. DO NOT MEASURE SPECIFIC GRAVITY IMMEDIATELY after adding water. The water must mix with the electrolyte by charging or by driving a few miles.

WARNING

THE GASES GENERATED WITHIN A STORAGE BATTERY CELL MAY BE IGNITED BY AN OPEN FLAME OR SPARK IN THE VICINITY OF THE BATTERY. DO NOT USE A MATCH OR FLAME TO PROVIDE LIGHT FOR CHECKING THE LEVEL OF THE WATER.

During the winter the battery should be removed from the trailer and stored in a cool, dry place, where there is no danger of freezing. It should be kept full of water, cleaned and charged monthly. A battery which is allowed to completely lose its charge will never regain its original power, or a full charge.

Slide the battery out onto the opened compartment door for service and removal.

For battery service or replacement, go to any service station or dealer who sells and services the make battery installed in your trailer.

ELECTRICAL SYSTEM

The AIRSTREAM UNIVOLT SYSTEM enables you to use the lights and appliances whether operating on self-contained battery power or hooked up to 120 volt city power. The 12 volt light bulbs give off the same light as regular household bulbs, so that when operating on self-contained battery power, everything works normally except the 120 volt convenience outlets and 120 volt appliances.

OPTIONAL EXTERIOR OUTLETS for 120 volts are located on the curbside exterior wall between the wheels and above the wheel well. (See Fig. 1)

CAUTION

WHEN OPERATING WITH CITY POWER make very certain that the service is 120 volt and not 220 volt. Open the bumper storage compartment lid, uncoil only the needed amount of cord and plug it into the city power source. Before closing the lid, carefully place the cord in the opening provided for it.

The univolt system is a transformer designed to maintain constant output voltages regardless of the variances that occur in city power systems. The transformer design eliminates the need for complex electronic sensing systems to charge the battery, minimizing the possibility of failures and greatly increasing its overall reliability.

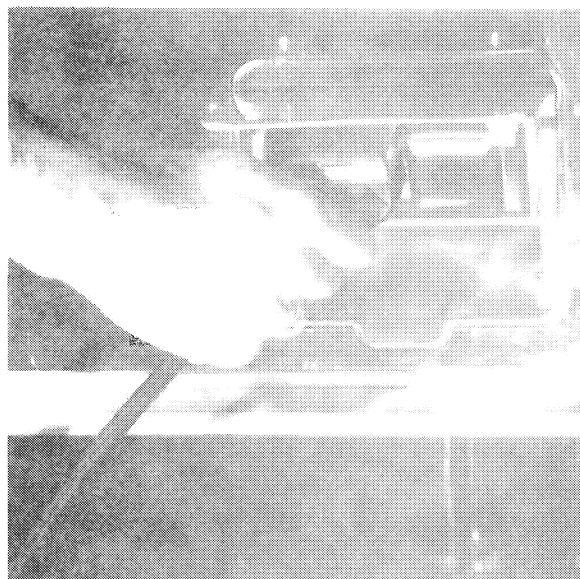


Fig. 1 - 120 volt Exterior Outlet

WARNING

WHEN THE THREE PRONGED PLUG CAN BE USED THERE WILL BE NO PROBLEMS WITH PROPER POLARITY OR GROUNDING. In some older parks and other locations where three pronged outlets are not available, certain precautions to insure proper grounding and polarity must be taken. These precautions are listed below:

1. Attach the three pronged plug to a two pronged adapter. The third conductor line of this adapter has a short wire lead which must be grounded.
2. For proper grounding connect the short ground lead to a grounded outlet box or to a cold water pipe. When no water pipe is available drive a metal rod two feet into the ground and attach the ground lug to it, thus providing the unit with proper grounding.

TO OPERATE SELF-CONTAINED, simply disconnect the power supply cable.

The STOP AND TURN SIGNAL MONITOR, optional on some models, is mounted on the front roadside of the trailer. It monitors the functions of the rear taillight, stop, and turn signal lamps. The uppermost window is for curbside and lower roadside. They light up if vehicle lights are on, get brighter if the stop light is operated, and flash if turn signal is working.

The monitor is not electrically operated. It is connected to the respective lamp by means of fiber optics.

When your trailer is hooked up to 120 volt A.C. the UNIVOLT SYSTEM

AUTOMATICALLY CHARGES THE TRAILER BATTERIES and, if it is hooked up, your automobile battery as well. The speed and degree of charge depends on how much power is used for lights and appliances, as only the surplus goes to charging the battery. If you are making an extended stay, then you should (if it is available) KEEP YOUR TRAILER HOOKED UP TO 120 VOLT CURRENT.

Whenever possible use the automatic built in charger of the univolt system for charging. The charging circuit automatically controls the current, reducing it as the battery increases in charge. At service stations make certain they give your battery a slow charge because quick charges will drastically shorten the life of the battery, as will allowing repeated complete discharges.

The LOW VOLTAGE FUSE PANEL is located on the interior front panel below the center window, and in some cases is covered by a wall pad that unsnaps to remove.

CIRCUIT BREAKERS for the 120 volt system are located in the triple wardrobe on side bath models, and in the lavatory cabinet on rear bath models.

While you are connected to the 120 V receptacle the wiring is protected by circuit breakers in the breaker panel. IN THE EVENT OF FAILURE OF A 120 V CIRCUIT CHECK YOUR CIRCUIT BREAKERS FIRST. If a breaker continues to trip after you have reset it several times, your circuit may be overloaded with appliances or there may be a short in the circuit. If lessening the load does not

solve the problem consult an Airstream Service Center.

The 12V UNIVOLT SYSTEM is protected by a series of fuses. Trouble with the electrical system is extremely unlikely, but if it should occur we recommend that you contact your nearest Service Center for repairs. We have included a troubleshooting chart to be used in emergencies only.

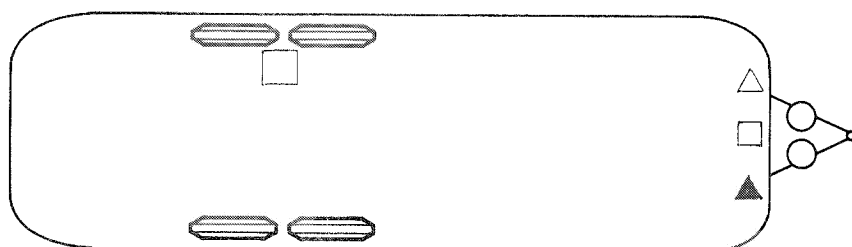
When being towed the 12 volt battery in your trailer is receiving a constant charge from the car's generator or alternator through the SEVEN WAY CONNECTOR.

The charge rate is controlled by your automobile's voltage regulator. It is important to keep the seven way connector clean: One method is to use "Spra-Kleen".

Additional information on the Electrical System is available in the Service Manual.



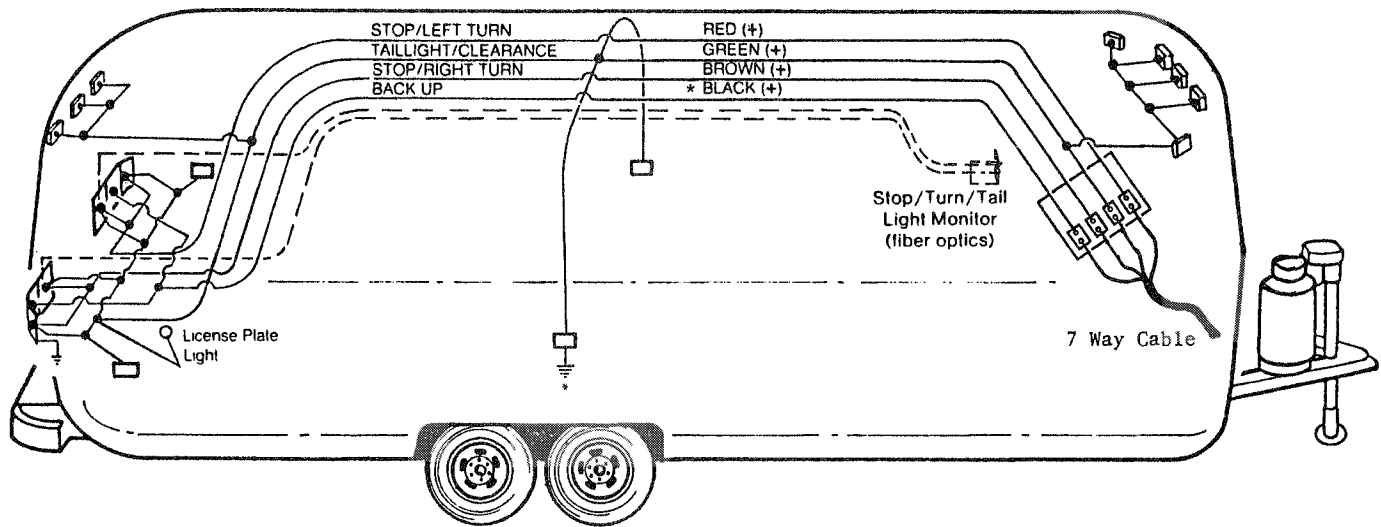
Rear Bath



Side Bath

- Low voltage fuse panel
- 120V Circuit Breaker
- ▲ 12V Battery
- △ 12V Battery (Optional)

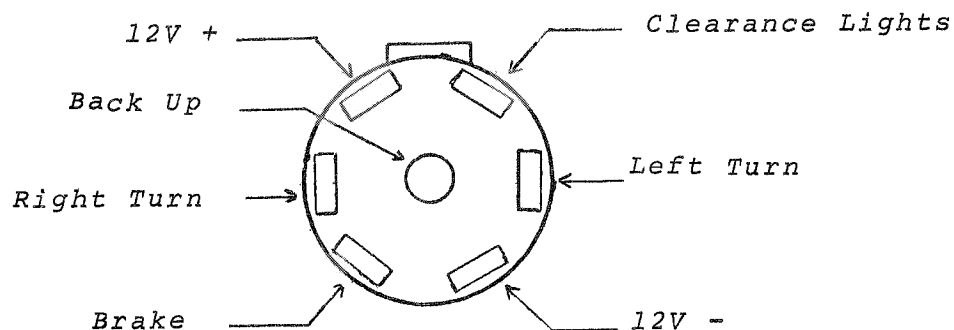
TYPICAL 12 VOLT EXTERIOR



* The back-up light wire in the trailer is black. A yellow wire is used in the 7-Way cable.

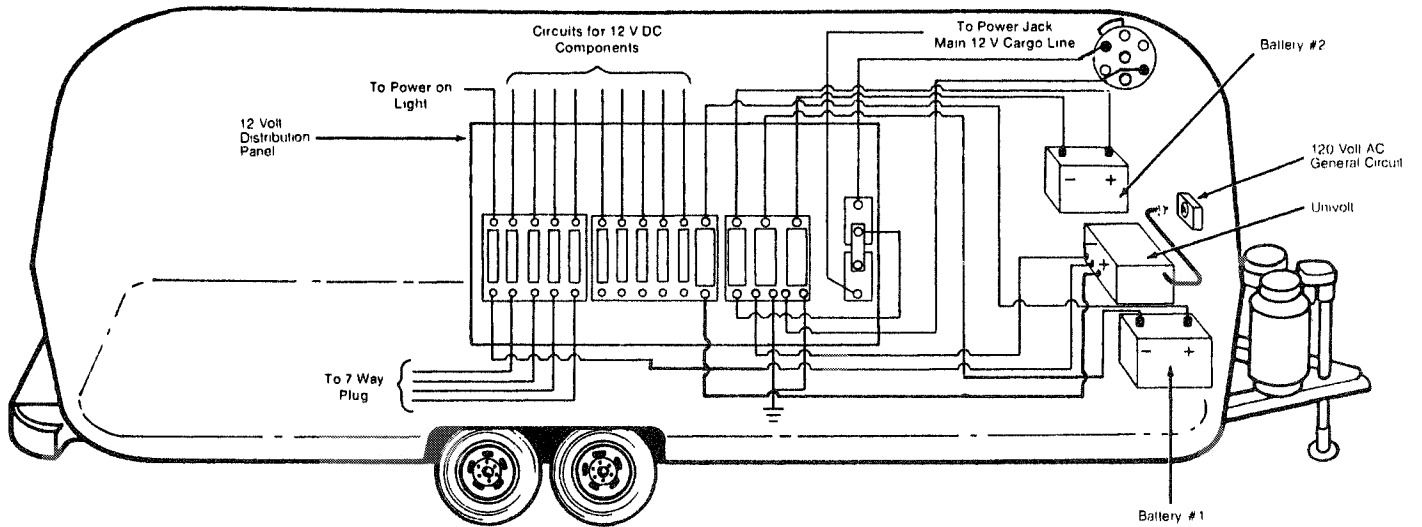
WIRING COLOR CODE

RED - Stop/Left Turn
 GREEN - Taillight/Clearance
 BROWN - Stop/Right Turn
 *YELLOW - Back Up
 WHITE - Ground
 BLUE - Brake
 BLACK - 12V Positive



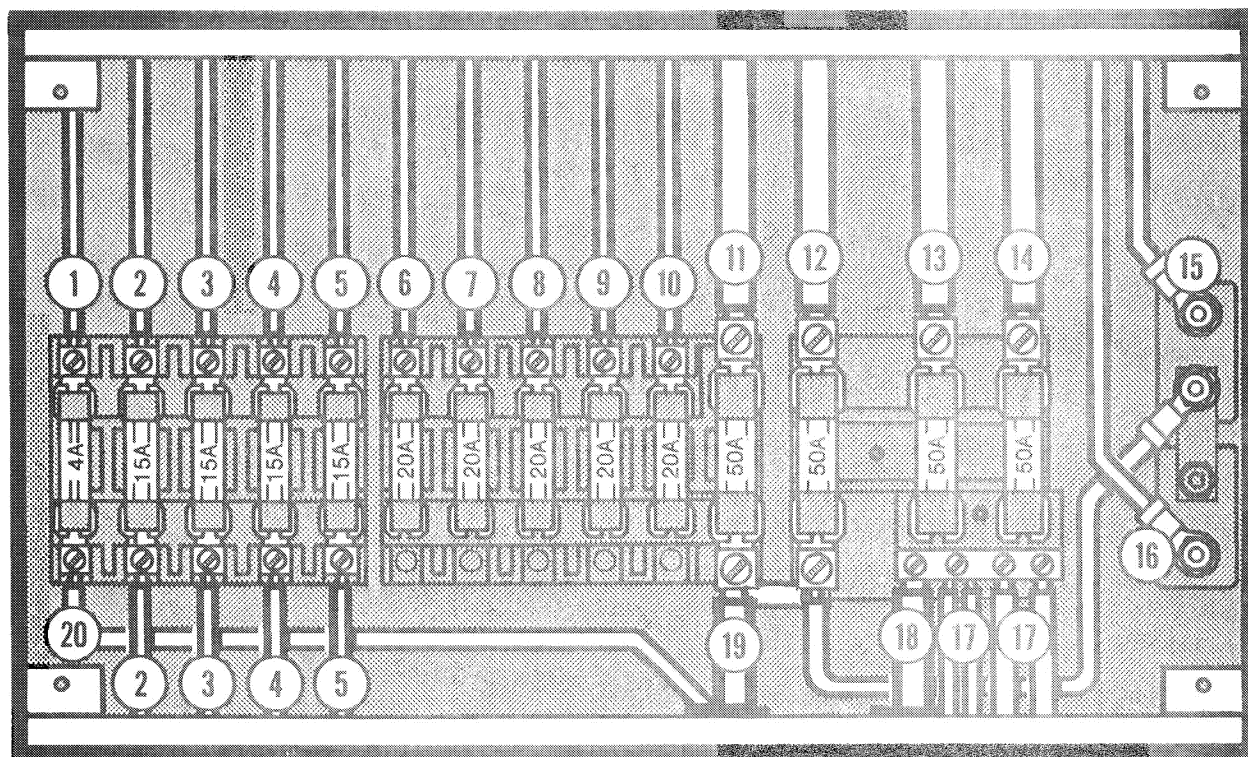
7-WAY PLUG - TRAILER END

TYPICAL 12V SYSTEM



*Univolt converts 120 volts AC to 12 volts DC

12 VOLT FUSE PANEL



No. Description

1. Power on, Grey
2. Back up light, Yellow
3. Clearance & taillight, Green
4. Left turn & stop light, Red
5. Right turn & stop light, Brown
6. Circuit No. 5, Blue
7. Circuit No. 4, Brown
8. Circuit No. 3, Pink
9. Circuit No. 2, Yellow
10. Circuit No. 1, Purple

No. Description

11. Battery No.1, Positive Red
12. Battery No.2, Positive Red
13. Battery No.1, Negative Black
14. Battery No.2, Negative Black
15. Main 12 volt charge, Black
16. Power jack, Orange
17. Ground, White
18. Univolt, Negative
19. Univolt, Positive
20. Power on, White

ELECTRICAL TROUBLE SHOOTING

SYMPTOM

No 12 Volt power (Lights, appliances do not work.)

Possible Cause

1. Input line and/or battery not connected.
2. Discharged trailer battery.
3. Trailer battery on wrong polarity.

Remedy

1. Make necessary connections.
2. Charge battery.
3. See Item 7

SYMPTOM

Blown Fuse

Possible Cause

4. Overloaded circuit (over 50 amps)
5. Electrical Short
6. Shorted battery
7. Battery terminals not properly connected to UNIVOLT + and - terminals.

Remedy

4. Turn off switches to reduce load. Replace blown UNIVOLT fuse.
5. Find blown fuse in UNIVOLT and identify circuit. Check the circuit for defective wiring, lamps or motors.
6. Replace battery and fuse.
7. Make proper connections; replace fuse.

SYMPTOM

Dim lights or sluggish fan motor.

Possible Cause

8. 25-or 50- cycle power (some foreign countries)
9. Discharged battery (when operating without 120V line)
10. Battery is low on water

Remedy

8. Use 60- cycle power
9. Charge battery
10. Add distilled water to battery.

SYMPTOM

UNIVOLT will not charge battery.

Possible Cause

11. Input line not connected
12. Battery not connected (or
polarity reversed)
13. Bad battery
14. Too many lights and appliances
in use.
15. Fuse blown

Remedy

11. Connect input line.
12. Connect battery to UNIVOLT
(Check polarity)
13. Replace battery
14. Reduce electrical load
15. Replace fuse

*Additional electrical trouble shooting information is available
in the Service Manual.*

SPECIFICATIONS

WEIGHTS

MODEL	Gross Vehicle Weight Rating G.V.W.R.	Factory Weight without Options or Variable Weight	Factory Tongue Weight without Options or Variable Weight
27 T&D International	6200	4230	490
27 T&D Excella II	6200	4500	590
31 T&D International	7100	4630	600
31 T&D Excella	7100	4900	650
31 T&D Limited	8500	5500	720
31 A&B International	7100	4680	580
31 A&B Excella	7100	4950	600
31 A&B Limited	8500	5550	725
34 A&B Excella	8300	5500	700
34 A&B Limited	8900	6400	770
34 T&D Excella	8300	5800	600
34 T&D Limited	8900	6600	800

EXTERIOR DIMENSIONS

Width	95.5 in.
Height (Shell)	101.3 in.
Height (to closed vent)	103.0 in.
Height (vent open)	106.8 in.
Height (top of TV antenna folded)	108.3 in.
Height (top of air cond- itioner)	115.5 in.
Ground Clearance	8.5 in.

CAPACITIES

Fresh water tank, all models	50 gal.
Main holding tank, side bath	30 gal.
Main holding tank, rear bath	20 gal.
Auxiliary holding tank, side bath	35 gal.
Auxiliary holding tank, rear bath	20 gal.

TIRE INFLATION (PSI) COLD

7.00-15XCA LRD Radial	60 PSI
7.00-15XCA LRC Radial	45 PSI
7.00-15 LRC Bias	45 PSI

BULBS

LAMP NO.

Reading lights:	
Living Room	1141
Bedroom	1141
Main Door Light	1141
Exterior Light	1156
Ceiling Light (6 bulbs)	
Living Room, Galley	1141
Bedroom, Bathroom	1141
Florescent, bed light	F8+5-CW
Florescent, indirect	F15+8-CW
Florescent, ceiling	F14+8-CW
Galley and Vanity Lights	
under rooflocker	1141
Trunk Lights:	
Service Center, Trunk	67
Clearance & Cluster Lights	1895
Stop & Turn Signal	1156
Taillight	1157
License Plate Light	89
Backup Lights	1156

FUSES AND CIRCUIT BREAKERS

<u>Circuit</u>	<u>Location</u>	<u>Rating</u>
Main Breaker	120 volt panel	30 amp
General Circuit	120 volt panel	15 amp
Appliance Circuit	120 volt panel	20 amp
Air Conditioner	120 volt panel	20 amp
Charge line from car	Univolt	30 amp mini breaker
Low voltage circuits	Univolt	SFE 20 amp fuse
Trailer Battery Fuse (+)	Univolt	AGU 50 amp fuse
Trailer Battery Fuse (-)	Univolt	AGU 50 amp fuse
Power on Circuit	Univolt	SFE 4 amp fuse
Radio, Radio/Tape	Radio, Radio/Tape	IAG 5 amp fuse

Specifications listed herein are those which are designed to be in your trailer. There may be some small differences in the capacities of individual trailers.

LUBRICATION AND MAINTENANCE

EVERY 1,000 MILES OR 30 DAYS

<u>Item</u>	<u>Procedure</u>
All Exterior Door Locks	Lubricate by shooting in dry graphite.
Battery	Check water level.
Entrance Door Hinges	Lubricate with light household oil.
Hitch Ball Latch	Lubricate with engine motor oil.
Hitch Jack (Manual)	Lubricate with light household oil. (Put oil can spout up under handle, and allow oil to run down post.)
LPG Hold Down Knob	Lubricate with light household oil.
Range Exhaust Hood	Clean fan blades and wash filter.
Roof Vent Elevator Screws	Lubricate with light household oil.
Strike Pocket on Main Door	Coat with Paraffin.
Tires	Check for foreign objects. Air pressure.

EVERY 5,000 MILES OR 90 DAYS

<u>Item</u>	<u>Procedure</u>
Brake Fluid (Hydraulic Brakes)	Remove reservoir cover. Add Dot 3 fluid.
Break Away Switch	Pull pin and lubricate with light household oil.
Main Door Step	Lubricate moving parts and check for loose bolts.
Wheel Lug Bolts	Check for tightness.
Window Seals/Door Seals	Clean with mild detergent and coat with "Slipicone".
7-Way Plugs and Receptacle	Clean contacts and coat with "Spray-Kleen".
Holding Tank Valve Rod	Coat rod with Vaseline.

EVERY 10,000 MILES OR 6 MONTHS

<u>Item</u>	<u>Procedure</u>
*Brakes	Inspect and replace as necessary.
Brake Fluid (disc brake)	Fill to 1/4" from top, Dot #3 brake Fluid.
Wheel Bearings	Clean, repack, and adjust.
TV Antenna	Lubricate all moving parts with WD40.
Rotate Tires	See tire section for proper rotation.

**Disc brake pads must be checked for wear at 2,500 mile intervals.*

EVERY 24 MONTHS

Item

Procedure

Exterior Seams

Check for gaps and seal with Ten X.

NOTE: ON NEW TRAILERS CHECK LUG BOLTS EVERY 200 MILES FOR THE FIRST 1,000 MILES.

NOTE: *If and when new materials and production techniques are developed which can improve the quality of its product, Airstream reserves the right to make such changes.*

PRE-TRAVEL CHECK LIST

INTERIOR

1. Turn off water pump switch.
2. Check battery water level.
3. Close windows and vents.
4. Turn off gas to range & oven.
5. Lock all interior cabinet doors.
6. Lock refrigerator door. (seal containers first.)
7. Hold down or stack securely all loose, hard and sharp objects.
8. Fasten sliding & foldette doors.
9. Drain toilet bowl.
10. Turn off interior lights.
11. Secure and lock the main door.
12. Pull up or retract step.

EXTERIOR

1. Disconnect and stow:
 - a) electrical hookup cord.
 - b) sewer hookup hose (flush out)
 - c) water hookup hose.
2. Turn off gas line shut-off valve to appliances.
3. Remove and stow leveling jacks and wheel chocks.
4. Check hitch: it must be properly attached.
5. Check safety chains and break-away switch cable (electric brakes).
6. Fully retract jack. Remove and stow jack stand.
7. Check clearance and stop lights.
8. Check lug nuts.
9. Check tires for correct pressure.
10. Check that TV antenna is pointed forward and dipoles closed.
11. Adjust car mirrors.
12. Pull forward some 50 ft., test brakes, and check site for forgotten objects and cleanliness.

HOME

1. Leave house key with your neighbor.
2. Store valuables and important papers in a safe place.
3. Discontinue newspaper, milk and other deliveries.
4. Ask the Post Office to hold your mail for you.
5. Arrange with the telephone company for discontinued or "Vacation Service".
6. Arrange care for your pets.
7. Have your lawn, garden and house plants cared for.
8. Lock all windows and doors securely. Keep shades open for a lived-in look.
9. Cover all food to keep out mice and insects.
10. Eliminate all fire hazards. Place matches in a tin box or glass jar.
11. Store oil, gasoline and other inflammables properly.
12. Destroy all newspapers, magazines and oily rags.
13. Notify police.

PERSONAL

1. Automobile insurance to cover you and your family fully.
2. Avoid cash. Use travelers checks and credit cards.
3. Confirm reservations.
4. Have sunglasses for everyone.
5. Pack cameras and films.
6. Make a check list of clothing for everyone, and toilet articles.

MOTORING ESSENTIALS

1. Display car and trailer registration properly.
2. Carry driver's license. In Canada you will need a non-resident liability insurance card.

3. In Mexico you must have special auto insurance.
4. Carry an extra set of ignition and trunk keys in a separate pocket, or in your wallet.
5. Keep an operating flashlight with fresh batteries in the glove compartment.
6. Pack the trunk so that you can reach the tools and spare tire without completely unpacking.
7. Keep sharp or hard articles securely packed wherever they may be.
8. Do not pack things in the passenger seating area. You need the maximum space for comfort.
9. Wear easy-wash, drip-dry traveling clothes.
10. Do not make your vacation trips a mileage marathon. Stop and relax frequently.
11. Carry a first aid kit.
12. Carry your pet's dish, food, leash and health and registration papers.

HAPPY JOURNEYS

