

Excelsa 500

1979 OWNER'S MANUAL

1979 Excella 500 Owner's Manual



Introduction

An Airstream Excella Travel Trailer offers you excellence in travel luxury and mobility. This owner's manual is your key to carefree travel fun. It contains information necessary to avoid problems. Consult it when you have a question about your new Excella. It has been designed to aid you in knowing your trailer better. All information, illustrations and specifications contained in this literature are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time without notice. Should you trade or sell your Excella, please leave the manual with the trailer. Go Airstream and make this your year for care-free vacations.

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.

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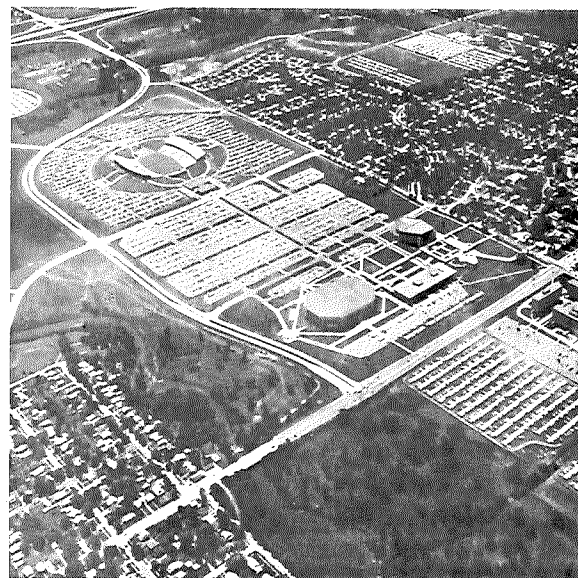
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Wally Byam Caravans, Rallies and Clubs

When you bought your Airstream, you bought a whole new way of life. Airstream owners enjoy endless opportunities for friendship, fun and adventure. You may join every **Airstream Wally Byam Caravan and Airstream Company Rally**, we arrange for such rallies to various areas each year. You also become eligible to join the **Wally Byam Caravan Club International**, the largest single make trailer club in the world. The **WBCCI** is made up of 26,500 family memberships and 170 local chapters or units throughout the United States, Canada and Mexico. They meet at monthly rallies, or where weather conditions prevent, year round rallies, Caravanners come together for pot luck dinners to plan events for the good seasons.

Since the first Wally Byam Caravan in 1951, 120 Airstream Caravans have gone to most parts of the world. Caravans to Canada and Mexico are now so popular that there are several each year. Many a lifelong friendship was started on these trips. Old-timers and new owners share experiences and find a new kind of fellowship, and there is no better way to learn to use your Airstream. Caravanners enjoy many advantages: the security of traveling in a group, planned entertainment and exceptional sightseeing opportunities. The prestige and good will established over many years by our Caravans adds further benefit to Caravanner membership.

The "**Caravanner**" is the Airstream publication and the "**Blue Beret**" is the official Car-



van Club publication. The "Caravanner" is for general distribution to owners and prospective buyers, while the monthly "Blue Beret" is for WBCCI members only.

Several months before a Caravan rolls, the "Caravanner" and the "Blue Beret" publish a description and a registration coupon. Everyone who registers receives a detailed bulletin with complete information on the caravan. When going abroad, all official matters such as insurance, tourist cards and border crossing formalities are handled for you by the Caravan staff. On every Airstream Caravan, the route is carefully planned, and a day by day itinerary, including mail stops, is given to all Caravanners in advance. Our staff also makes all the arrangements for parking, entertainment, tours, etc. well ahead of the



starting date. Airstream Caravan Programs always take Caravanners of all ages into account. Airstream provides a Caravan staff: a leader, a recreation advisor, and service representative and an advance representative. This staff is backed by committees composed of interested Caravan members who assist in the day-to-day operations.

Wally Byam, pioneer trailer traveler, and founder of the Airstream Company, was born on July Fourth and the first **International Rally** was in the form of a huge birthday party for him at Bull Shoals, Arkansas. It was patterned after the International Rallies in Europe which Wally and his wife Stella had attended for many years. Everyone enjoyed this first big rally so much that the club decided to make it an annual event. Since then, International



Rallies have grown and grown. Some 3949 Airstream Travel Trailer families recently gathered at Ames, Iowa, for the 1978 International Rally.

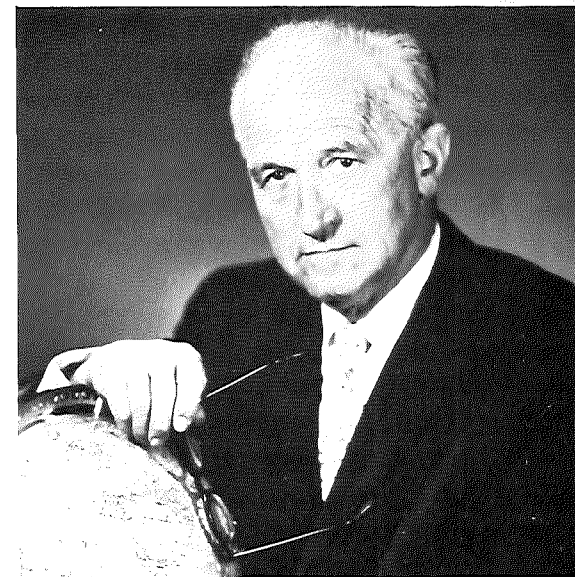
Only Airstream Wally Byam Caravanners and WBCCI members are entitled to have an official **Trailer Number** and be listed in the **1979 Annual Directory**. This directory contains a schedule of all major WBCCI activities and Airstream Wally Byam Caravans and Rallies for the year. It also lists such things as Freewheelers Club membership, C.B. Radio and Amateur Radio Club memberships and call signs, members who offer courtesy parking, and a complete list of Authorized Service Centers.



Along with the fun, Airstream owners recognize the need for better legislation, more and better overnight parking facilities, more sanitary stations and other travel conveniences.

They are alert to adverse bills governing travel trailers and have achieved much through the actions of the strong **WBCCI National Legislative Committee**.

The Way of Life Department, of the Airstream Company dedicates its full time staff to improving the owners' fun and makes use of all the information and experience gained by owners over the years to help develop even better Airstreams and Way of Life programs for the enjoyment of all Airstream owners.



Become part of the Airstream Way of Life.

Join our WBCCI activities and we believe you will enrich your life. Owners join through a local unit of WBCCI. All operate autonomously, elect their own officers and fix their own dues. Annual International dues are paid with the unit dues at the time of application. These are at present: International dues, \$7.50 per trailer and unit dues from \$1 to \$10. If you are interested, please write to the following address for information regarding units in your area:

WBCCI Headquarters Office
15939 Piuma Avenue
Cerritos, California 90701

Please place your Registered Warranty over this Facsimile with the folded edge on top. There is a glue strip on the back for this purpose.

AIRSTREAM LIMITED WARRANTY

When you buy a new Airstream Travel Trailer from an authorized dealer, Airstream warrants to you that, except for tires and battery, it will pay for the repair or replacement of any part of your trailer or any component equipment installed by the factory that is defective in material or workmanship. This warranty extends for a period of two (2) years from the date of original purchase.

All that we require is that you use your trailer in a normal manner and properly maintain and service all component parts requiring scheduled maintenance, and that all repairs and replacements be made by the Airstream factory or any Airstream Certified Dealer Service center. Any warranty defect will be corrected without cost upon return of the trailer, or defective part, to the Airstream factory or Airstream Certified Dealer Service center.

All warranties of merchantability and fitness for a particular purpose, whether written or oral, express or implied, shall extend only a period of two (2) years 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 will not be responsible for any consequential damages incurred as a result of any defect. 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. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For additional information regarding your Airstream Limited Warranty, refer to the materials entitled "Explanation of Airstream Limited Warranty" provided with this warranty.

AIRSTREAM®

Ohio Factory: 419 West Pike Street, Jackson Center, Ohio 45334
California: 15939 Puma Avenue, Cerritos, California 90701

Warranty and Service

Airstream offers the most complete and explicit warranty in the industry. Your valuable warranty covers every item of your trailer (except tires and battery) against failures resulting from defects in either material or workmanship for two years from date of original purchase.

Please read the facsimile warranty carefully. As soon as the factory has received your signed check-out and acceptance sheet, a formal warranty is issued to you, together with an owner's identification card. As soon as you receive your warranty, please attach it over the facsimile for safekeeping. **In order to qualify for service without charge under the Airstream Warranty Program, your owner's identification card or authorization for Interim Warranty must be presented to the service representative.**

The Airstream Certified Performance Checkout, or C.P.C., is an exclusive Airstream program. Before leaving the factory, each and every vital part of an Airstream is tested for performance. Each test is signed and certified by an inspector. After the Airstream arrives on your dealer's lot, all of these vital parts and systems are again tested. When you take delivery of your new Airstream, a factory trained expert personally gives you a complete check-out on the trailer.

C.P.C. does not stop here. After you have traveled with your Airstream for 1000 miles (or 60 days, whichever comes first) you can make an appointment with any one of the 132

Airstream dealers or service centers 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. Give the C.P.C. card overleaf to the dealer when you take your Airstream for the 1000 mile check.

Please contact your dealer if you need service. Major service under your Airstream Warranty is available through our nationwide network of factory trained specialists at Airstream Certified Dealer Service Centers listed on page 8-11 of this manual. **All centers operate on an appointment basis for the utmost efficiency.** When you require service from the Airstream factory or a certified 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.

Airstream factory service may be arranged by contacting the service manager at:

Airstream
15939 Piuma Avenue
Cerritos, California 90701
(213) 860-4411

Airstream
Jackson Center, Ohio 45334
(513) 596-6111



Explanation of Airstream Limited Warranty

The Airstream Limited Warranty applies for a period of two (2) years from the date of original purchase, and the applicable date of all warranties is that indicated on the owner's I.D. 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 the Airstream factory, Airstream Certified Dealer Service Center, or participating Argosy Certified Dealer Service center.

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.

The tire and battery warranties will be handled by their respective service points and according to their written policy.

Caution: Your Airstream may be equipped with the optional Excella-Vac brake system which for the first time 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 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.

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 a plastic coating material to prevent oxidation. This application is covered by the two 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 his trailer as instructed in the Owner's Manual.

Damage to enameled or porcelain surfaces resulting from abrasion or blows is the result of accident or abuse, and is not covered by warranty. Window glass breakage, and what is termed by the automotive industry as

"mysterious explosions," although not covered under this limited warranty, is covered by the comprehensive clause of most insurance policies.

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.

Exclusions:

1. Normal Wear.

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

2. Accident.

We can all recognize damage caused by accident because it is visible, and 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 becomes 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.

3. Abuse.

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

4. 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 air-borne 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.

One other type of exposure is that resulting from an accident, rain or plumbing leak. 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.

5. 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.

Airstream will not be responsible for any consequential damages incurred as a result of any defect. Consequential damages include, but are not limited to, travel expenses, gasoline, oil, lodging, meals, telephone tolls, loss of work and loss of use of the trailer.

In the event of a warranty defect, the warranty holder should take corrective action to lessen damages which might result from such defect. Airstream will not be responsible for resulting damages which could have been avoided.

The full extent of Airstream's warranty is set forth in the "Airstream Limited Warranty" and this "Explanation of Airstream Limited Warranty." Airstream will not be responsible for additional representations or implied warranties made by any of its dealers to the ex-

tent those representations are not a part of, or are contrary to, the terms and conditions of the Airstream Limited Warranty and Explanation of Limited Warranty.

If you believe your trailer needs repairs under the terms of the Airstream Limited Warranty, you should contact the Service Manager at the Airstream factory, Airstream Certified Dealer Service center or participating Argosy Certified Dealer Service center. The trailer or defective part must be returned to the factory or authorized service center at the owner's expense.

This limited warranty is transferrable to subsequent owners for the duration of the warranty period. Warranty transfer application forms are available from your dealer or the Airstream factory.

Factory Authorized Certified Service Centers

ALABAMA

Alabama Auto Carriage Inc.
2359 Fairview
P.O. Box 2763
Montgomery, Alabama 36105
205-262-3563
205-262-3564

R & S Camper Sales
2405 Jordan Lane
Huntsville, Alabama 35806
205-837-5241

ARKANSAS

Fred & Jack Trailer Sales
10318 New Benton Highway
I-30 West
Little Rock, Arkansas 72209
501-565-0131

ARIZONA

Robert Crist and Company
2025 East Main Street
Mesa, Arizona 85203
602-834-9410

Robert Crist and Company
8833 North Black Canyon Hwy.
Phoenix, Arizona 85021
602-997-2611

CALIFORNIA

Adventure Recreational Vehicles
5810 South Union Avenue
Bakersfield, California 93307
805-831-5451

Bay Area Airstream
3534 Santa Rosa Ave.
Santa Rosa, California 95401
707-525-8330

Caswell's Vacation Vehicles
700 East Foothill Boulevard
Pomona, California 91767
213-331-0163
714-624-0021

Coastline Trailer Sales
303 North Ventura Avenue
Ventura, California 93001
805-648-1772
805-648-1776

Haller Trailer Sales

15711 South Lakewood Boulevard
Paramount, California 90723
213-634-3553

Highway 17 Trailer Sales

175 Curtner Avenue
Campbell, California 95008
408-377-8500

Holiday Trailer Sales

770 East Baseline
San Bernardino, California 92410
717-889-8918

Manteca Trailer Sales

1990 East Yosemite
Manteca, California 95336
209-239-1267

Pulmobile Trailer Sales

4563 San Fernando Road
Glendale, California 91204
213-245-6068
213-241-0310

Ralph's Trailer Sales & Supply

1025 East Main
El Cajon, California 92021
714-442-4435

Toscano Recreation Center

617 West Pacheco Boulevard
Los Banos, California 93635
209-826-4923

COLORADO

Chisman Trailer Sales

2500 East Boulder Street
Colorado Springs, Colorado 80909
303-473-7043

Trailerland

8200 West Colfax Avenue
Denver, Colorado 80214
303-238-8283

DELAWARE

Marty's Travel Trailers, Inc.

2343 South DuPont Highway
Dover, Delaware 19901
302-697-3173

FLORIDA

Bell's Trailer Park & Sales, Inc.
6401 West Tennessee Street
Highway 90, West
904-576-2915

Camptown USA, Inc.

23905 S.W. 132nd Avenue
6 Miles S. of Perrien on U.S. 1 at Princeton
Miami, Florida 33032
305-245-2353

Carpenters Campers, Inc.

8450 Pensacola Boulevard
US 29 North, Between I-10 & 90
Pensacola, Florida 32504
904-477-6666

Fallin Camper Sales, Inc.

100 South Edgewood Avenue
Jacksonville, Florida 32205
904-783-0630

General R.V.

5610 Okeechobee Road
West Palm Beach, Florida 33406
305-686-3707
305-525-3374

Heintzelman's Motor Coaches

1080 East Highway 436
Altamonte Springs, Florida 32701
305-831-4442

Indian River RV Sales, Inc.

5855 US Highway 1
Between Cocoa and Titusville
Cocoa, Florida 32922
305-636-1422

Kropt Eldorado, Inc.

6915 14th Street West
US 41 South
Bradenton, Florida 33507
813-755-1586

C. J. Stoll, Inc.

5985 34th Street
North US 19
St. Petersburg, Florida 33714
813-527-2189

GEORGIA

Three-Way Campers, Inc.
1660 Cobb Parkway, N.W.
Marietta, Georgia 30062
404-422-9300

IDAHO

Wheels Unlimited

6715 West State Street
Boise, Idaho 83703
208-336-8970

Wheels Unlimited

4498 Yellowstone
Pocatello, Idaho 83201
208-237-8800
208-237-8801
208-237-8802
208-237-8803

ILLINOIS

Crystal Valley, Inc.

4220 Northwest Highway
US 14 at Route 31
Crystal Lake, Illinois 60014
815-459-6611

Rocket Trailer Sales

528 West Route 30
Rock Falls, Illinois 61071
815-625-6245

Wilderness Lake Camping Center, Inc.

Route #2
Martinsville, Illinois 62442
217-279-3396

INDIANA

Berning Trailer Sales, Inc.

5220 New Haven Avenue
Fort Wayne, Indiana 46803
219-749-9415

Four Seasons RV Center

8225 West Washington Street
Indianapolis, Indiana 46231
317-241-8348

Midwest Trailer Mart, Inc.

2409 Corydon Pike
New Albany, Indiana 47150
812-945-1173

Vacationland, Inc.

58049 State Road 19 South
Elkhart, Indiana 46514
219-295-8524

IOWA

Ace Fogdall, Inc.
5424 University Avenue
Cedar Falls, Iowa 50613
319-277-2641

Imperial RV Center

1727 South Ankeny Blvd. Hwy. 69
Ankeny, Iowa 50021
515-964-1424

KANSAS

Scholfield Winnebago, Inc.
11516 East Kellogg
Wichita, Kansas 67207
316-684-0236

KENTUCKY

Crouch Campers & Trailers, Inc.
5081 Reidland Road, Route 4
Highways 62 & 68 S.E.
Paducah, Kentucky 42001
502-898-7373

Murphy Sales Company, Inc.
Box 404
Winchester Road US 60 West
Mt. Sterling, Kentucky 40353
606-498-1168

LOUISIANA

Camper Village, Inc.
705 Florida Boulevard, S.W.
Denham Springs, Louisiana 70726
504-664-7104

Superior Pontiac GMC, Inc.
200 Wright Avenue
Gretna, Louisiana 70053
504-368-5640

MARYLAND

B & J Trailer Sales
Box 369, US Route 40
Aberdeen, Maryland 21001
301-575-6840
301-272-0435

Koon's Ford of Annapolis, Inc.
2540 Riva Road
Annapolis, Maryland 21401
301-224-2100

MASSACHUSETTS

Donahue's Trailer Sales
88 Mountain Road, Box 126
Off Route 128 at Exit 41-S
Burlington, Massachusetts 01803
617-272-9830

MICHIGAN

Bay Valley RV Center
2717 Delta Road
Route 4
Bay City, Michigan 48706
517-684-0930

Caswell & Company
243 South Dexter
Ionia, Michigan 48846
616-527-3310

Ewing Trailer Sales
4251 West Columbia Avenue
Battle Creek, Michigan 49017
616-965-0597

Kolbe Trailer Sales
4401 East Eight Mile Road
Warren, Michigan 48091
313-536-0265
313-754-8310

Moore's Recreation
1222 North Territorial Road
U.S. 23, 5 miles N. Ann Arbor Exit 49E
Whitmore Lake, Michigan 48189
313-662-4548

Northwoods Recreational Vehicle Center
G-6369 North Dort Highway
Mt. Morris, Michigan 48458
313-686-4330

Woodland Travel Center, Inc.
5190 Plainfield Avenue N.E.
Grand Rapids, Michigan 49505
616-363-9038

MINNESOTA

Hart Trailer Sales
Highway 71
Long Prairie, Minnesota 56347
612-732-6106

Minnesota Trailer Sales, Inc.
11350 Highway 65 N.E.
Blaine, Minnesota 55434
612-757-1420

Rochester RV Center
Airport Overpass and Highway 63
S. Route 2
Rochester, Minnesota 55901
507-285-9102

MISSOURI

Kansas City Trailer Sales, Inc.
11530 South 71 Highway
Kansas City, Missouri 64137
817-761-3322

Bill Thomas Camper Sales, Inc.
5217 North Lindbergh Boulevard
St. Louis (Bridgetown), Missouri 63044
314-731-2217

MONTANA

Big Sky Airstream
1923 Old Hardin Road
Billings, Montana 59101
406-259-5571

NEBRASKA

Autosport RV Center, Inc.
6101 "L" Street
Omaha, Nebraska 68117
402-734-1133

NEW JERSEY

Airstream by Angell, Inc.
Route 78 & 173 Interchange
Box 94
Bloomsbury, New Jersey 08804
201-479-4118

South Jersey Travel Trailer Center, Inc.
Route 47 and Leonard Cake Rd.
Franklinville, New Jersey 08322
609-694-1700
Service: 609-694-1701

NEW MEXICO

Wayne's Recreational Vehicles, Inc.
12020 Central Avenue, S.E.
Albuquerque, New Mexico 87123
505-296-0507

NEW YORK

Filion-McGee, Inc.
AKA Bailey-Momot Trailer World
RFD 1, Box 316
Plattsburgh, New York 12901
518-563-2440
518-563-2441

Ralph Bubbs Sport Center
RD 5, Route 57
Fulton, New York 13069
315-695-5020

Maroone Family Travel Center, Inc.
2550 Walden Avenue
Exit 52 E from NY Thruway
Buffalo, New York 14225
716-681-1700

Niblack Trailer Sales
691 McLean Avenue
Corner NY Thruway
Yonkers, New York 10704
914-965-5685

O'Malley Enterprises, Inc.
Traffic Circles - Routes 9 & 7
P.O. Box 116
Latham, New York 12110
518-785-6654

Walker's Four Seasons, Inc.
Route 17, Box 265
Big Flats, New York 14814
607-562-8731

NORTH CAROLINA

College Park
4208 New Bern Avenue
Raleigh, North Carolina 27610
919-833-7015

College Park
North Church Street Extension
U.S. 301 and 301A North
Rocky Mount, North Carolina 27801
919-446-9233
919-446-7166

Hawley's Cycle & Camping Center, Inc.
4784 Raeford Road
Fayetteville, North Carolina 28304
919-425-3145

Out-of-Doors Mart, Inc.
I-40 at Sandy Ridge Road Exit
Drawer 799
Kernersville, North Carolina 27284
919-993-4518

Tracy Trigg RV Center, Inc.
P.O. Box 12522
9136 East Independence Boulevard
Charlotte, North Carolina 28205
704-537-7844

Wray Frazier Camping Ctr. of Asheville
I-40 Exit P.O. Box 868
Swannanoa
Asheville, North Carolina 28776
704-686-3414

NORTH DAKOTA

McLaughlin Equipment Co.
320 27th Street, South
Fargo, North Dakota 58102
701-237-6046

OHIO

Avalon R.V. Center, Inc.
11761 Portage Road
Canal Fulton, Ohio 44614
216-854-2222

Coachmen Camping Center
410 East Sandusky Street
Findlay, Ohio 45840
419-423-1912

Jerry Greer Airstream/Argosy, Inc.
4855 Groveport Road
Columbus, Ohio 43207
614-491-8544

Murphy Travel Trailers of Ohio, Inc.
11526 Chester Road
3 Miles North of Windjammer
Cincinnati, Ohio 45246
513-771-5771

Frank B. Ricketts Travel Trailers
P.O. Box 683
I-77 at US 40
Cambridge, Ohio 43725
614-432-4040

Teynor's Mobile Home Center, Inc.
3884 SR 4
Bucyrus, Ohio 44820
419-562-8827

OKLAHOMA

Brassfield Travel Trailers
7727 N.W. 39th Expressway
Bethany, Oklahoma 73008
405-789-4941

Travel Home Sales
16015 East Admiral Place
Tulsa, Oklahoma 74138
918-437-0020

OREGON

Cascade Trailer Sales
1876 Highway 99 North
Eugene, Oregon 97402
503-688-8505

Spencer's RV Center, Inc.
9341 S.E. 82nd Avenue
Portland, Oregon 97266
503-777-1484

PENNSYLVANIA

Farnsworth Camping Center, Inc.
Route 54
Elysburg, Pennsylvania 17824
717-672-2332

Glasgow Recreational Vehicles, Inc.
1650 Lincoln Way East
Chambersburg, Pennsylvania 17201
717-264-9551

Robison Trailer Sales
Route 198 at Blooming Valley
R.D. 3
Meadville, Pennsylvania 16335
814-724-8129

Trav-L-Homes
Lewis Road
Royersford, Pennsylvania 19468
215-948-5900

Turner Airstream Sales
472 Lincoln Highway W., Adamsburg
Jeannette, Pennsylvania 15644
412-523-6545
412-523-6546

Wiles Trailer Sales
1030 North Main Street
Route 8 & 422
Butler, Pennsylvania 16001
412-287-4745

Wise Trailer Sales
Division of F.W. Wise Gas Co.
1501 Airstream Way
Clearfield, Pennsylvania 16830
814-765-7801

SOUTH CAROLINA

Dixie Lee Trailer Sales
Highways US 1 & 78
P.O. Box 306
Clearwater, South Carolina 29822
803-593-2162

SOUTH DAKOTA

Spader, Inc.
DBA Spader Camper Center
5500 North Cliff, Box 963
Sioux Falls, South Dakota 57101
605-339-3230

TENNESSEE

Cullum & Maxey Camping Center
Music Valley Drive
2 Miles North of Opryland
Donelson (Nashville), Tennessee 37214
615-889-1600

Jewell's Camping Center
Route 4, Highway 45
Trenton, Tennessee 38382
901-855-9590

Bobby Jones Trailer Sales
4222 James Road (In Raleigh)
Memphis, Tennessee 38128
901-386-5833

TEXAS

A and A Trailer Sales
118 Arnold Boulevard
Abilene, Texas 79605
915-692-1555

Abbott Trailer Sales
408 Avenue Q
Lubbock, Texas 79401
806-763-4747

Bear Trailer Sales
South of Dallas on I-35
Bear Creek Road Exit
Lancaster, Texas 75146
214-223-6025

D & M Trailer Sales, Inc.
3900 I-40 East
Amarillo, Texas 79103
806-374-1211
806-374-3789

Land Yacht Trailer Sales
4616 Titanic Avenue
El Paso, Texas 79904
915-755-2339
915-755-2338

Lloyd's Trailer Sales, Inc.
350 Twin City Highway
Port Neches, Texas 77651
713-727-1666

South Texas Trailers & Supply, Inc.
11210 Interstate 35 North
San Antonio, Texas 78233
512-653-4161

South Texas Trailers & Supplies, Inc.
Highway 77 South
P.O. Box 880
Sinton, Texas 78387
512-364-1118

South Texas Trailers & Supply, Inc.
Box 457, 101 Expressway 83
Donna, Texas 78537
512-464-3432

UTAH

B & K Sales
3371 South State
Salt Lake City, Utah 84115
801-466-5501

VIRGINIA

James River Camper Sales, Inc.
Box 834, US 460
Lynchburg, Virginia 24505
804-846-7444
804-845-6127

Koons Pontiac-Oldsmobile, Inc.
7105 Sudley Road
Manassas, Virginia 22110
703-631-9500

Poquoson Motors, Inc.
4116 West Mercury Boulevard
Hampton, Virginia 23666
804-826-1100

Travel Trailers of Virginia
2211 South Main Street
P.O. Box 1089
Harrisonburg, Virginia 22801
703-434-9676

VERMONT

Camperama Air./Arg. & RV Sales
Harmony Depot Road
Townshend, Vermont 05353
802-365-4451

WASHINGTON

Central Trailer Exchange, Inc.
14433 Pacific Highway South
P.O. Box 68425
Seattle, Washington 98188
206-244-9600

Devon Lee Corporation
11257 Kirkland Way
P.O. Box 464
Kirkland, Washington 98033
206-822-2211

Spokane Travel Center
E. 5019 Sprague Avenue
Spokane, Washington 99206
509-535-3675

Tveten Motor Company
7700 Pacific Highway East
Tacoma, Washington 98424
206-922-7770

WEST VIRGINIA

Airstream by Stanley
1400 North Eisenhower Drive
Box 1545
Beckley, West Virginia 25801
304-252-6121

Don's Travel Trailers, Inc.
459 Winfield Road
St. Albans, West Virginia 25177
304-727-2153

WISCONSIN

Spitzer's Northside RV
N56 W13180 Silver Spring Road
Menomonee Falls, WI 53051
414-781-9646

Swee Trailer Sales
US 2 and US 51
Hurley, Wisconsin 54534
715-561-4887

WYOMING

Bundy's Marine and Ski
3201 CY Avenue
Casper, Wyoming 82601
307-237-2509

CANADA

Can-Am Trailers Ltd.
Box 370
Highway 4, ½ mile N. 401, Exit 19
Lambeth, Ontario N0L1S0
519-652-3284

Claynor Trailer Sales
4053 208th Street
Langley, B.C., Canada
604-530-9141

Maurice Gareau, Inc.
7965 Henri-Bourassa Boulevard East
Montreal, Quebec, Canada
514-321-7933

Go Camping, Limited
Route 4, Highway 7
Brampton, Ontario, Canada L6T3S1
416-794-0031

Kanata Trailer Sales
Div. of K. Dilawri Auto
Highway 7, Box 900
Stittsville, Ontario, Canada
613-836-1421

Pik-A-Dilly Trailer & Marine Sales, Ltd.
Trans Canada Highway
West of 1st Street
Brandon, Manitoba, Canada R7B0M0
204-728-8570

Travel Trailers Western, Ltd.
5934 104th Street
Edmonton, Alberta, Canada T2N2K3
403-437-0276

Twin City Trailer Sales, Ltd.
Dartmouth Highway, Box 395
Bedford, Halifax County
Nova Scotia, Canada B0N1B0
902-835-8375

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 Airstream 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 a Wally Byam Stores Catalog from your dealer or write to:

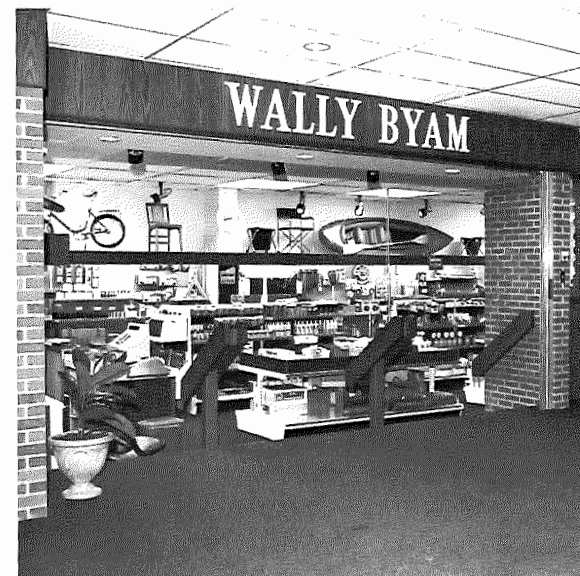
Wally Byam Stores

Ohio Building
P.O. Box 128
Sidney, Ohio 45365

The following is a list of equipment we recommend:

1. First Aid Kit
2. Flashlight
3. Emergency Road Warning Triangle
4. Handi-Roll Trailer Tool File — with small hand tools — hammers, pliers, crescent wrench, screwdrivers, electrical tape
5. Crosstype Lug Wrench for Trailer Wheels
6. Pop Rivets (3 sizes)
7. Pop Rivet Gun
8. Battery Booster Cables
9. Tire Gauge (up to 100 pounds P.S.I.)
10. Hitch Ball Lube
11. Small Bi-Directional Spirit Level
12. Heavy-Duty Turn Signal Flasher
13. Leveling Ramps
14. Wheel Chocks

15. Y-Connection with Cap
16. 5 Gal. Water Jug
17. Quick Disconnect Garden Hose Coupling
18. One 10 ft. or 20 ft. Sewer Hose
19. One Thetford Sewer Hose Adapter — Straight or Elbow
20. One Elbow Sewer Hose Outlet
21. Two 2½" to 3¾" Adjustable Hose Clamps
22. One Thetford Plastic Cap with Hose Drain
23. One ½ Gal. Holding Tank Cleaner and Deodorizer
24. One Service Cord Adapter 30-15 amp
25. Spare 20, 40, and 50 amp Cartridge Fuses
26. Spare Light Bulbs (see page 92 for sizes)
27. Electrical Contact Cleaner (Spra-Kleen)



Tow Car Equipment

If you plan to buy a new car to tow your Airstream, we suggest that you include in your purchase the trailer towing options offered by most automobile manufacturers. These include such things as a heavy duty generator and radiator, heavy duty springs and shock absorbers, automatic transmission cooler, heavy duty fan, heavy duty flusher unit and others, depending on the make of the vehicle.

Transmissions may be manual or automatic, but an automatic transmission will prolong your car's engine life and 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 7000 pounds totally loaded for travel and a car with 400 cubic inch displacement engine, divide 7000 by 400 giving a value of 17.50 pounds of trailer weight per cubic inch displacement. The automobile should have adequate power for towing the 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.

The majority of new trailerists 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.

See tire section for correct tire sizes and pressure for your trailer and load on page 26.

Electric Brakes

The Kelsey Hayes 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 you 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 counter-clockwise 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. However, if you wish to change the action of your brakes proceed as follows:

The selective resistor adjustment affects the maximum braking capacity of the trailer brakes. Because of the variety of axle loadings, the rated load capacity of the brakes may exceed the load on the trailer axle.

When a resistor is installed on the towing vehicle and a setting is made according to the chart on page 15, check the initial trailer brake application with the controller fully applied. If the setting is correct, the controller full "on" position should provide firm braking action just short of skidding on dry pavement. Follow the chart and change the setting to achieve greater or less braking, as required.

Due to normal brake lining wear, the brakes and the controller setting should be checked and readjusted, if necessary, during recommended inspection intervals. Normally, it is not necessary to reset the selective resistor unless there are major changes in the trailer loading. Note: Brake lining adjustment should be periodically checked to be sure trailer brakes are in the same adjustment as the automobile's.

Properly set, these adjustments will provide for safe comfortable stops. They will also help

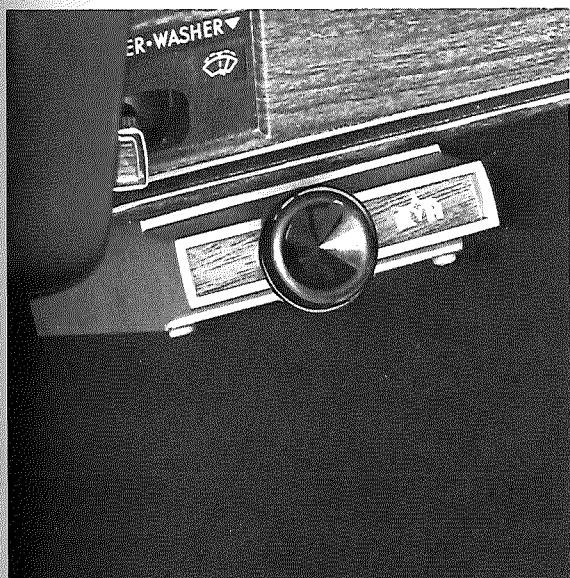
assure optimum brake and tire life for both the tow vehicle and the trailer.

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 pin will allow 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.**

We recommend that your brake system be checked and adjusted by a Certified Service Center. However, in emergencies, to adjust brakes:

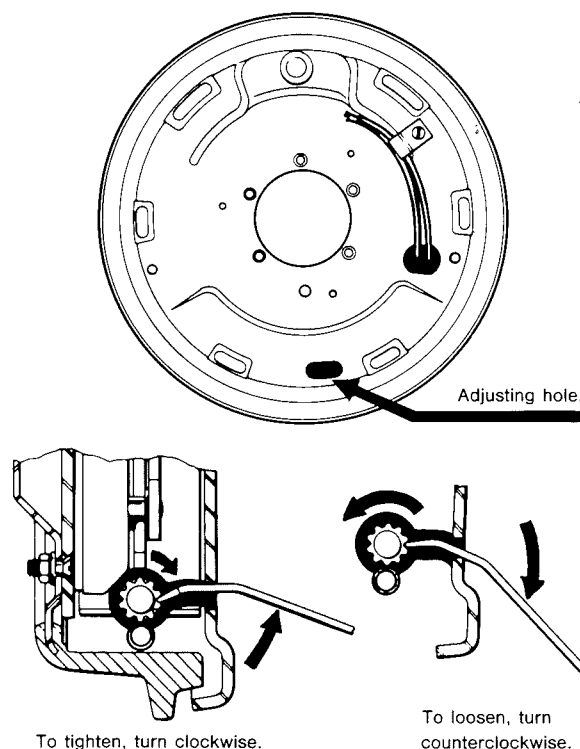
1. Remove the small rubber plug at the base of the backing plate on the brake drum.



Trailer Brake Controller

2. Jack the wheel so that you can spin it by hand. Tighten the brakes (using a brake adjusting tool or a screwdriver that has been bent to a 90° angle) until the wheel is locked, then back off until you have a free spinning wheel, which will be approximately 8 notches.
3. Repeat this operation with all trailer wheels.

Brake Adjustment



Selective Resistor Settings

All settings shown are for 12 volt tow car with 12 volt brakes, and trailers with 2 axle - 4 brake arrangement.

Model	Trailer Wt. (lbs.)
31 Ft.	5500 - 6500
31 Ft.	6500 - 8500

Hydraulic Brakes

The optional **Excella-Vac disc brake system** is operated by 12 volt negative ground current and engine vacuum from your tow vehicle. The system's 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.

The **Excella-Vac** system controller furnished in your disc brake tow vehicle kit must be installed in your tow vehicle for proper brake operation. The controller is activated when you apply the brakes of the tow vehicle. This sends a modulated electrical signal to the power **brake booster** assembly located on the tongue. Trailer brakes may be applied manually, independent from your tow vehicle brake system, by moving the controller's lever to the right.

Note: The tow vehicle's engine should be warm (near operating temperature) to insure maximum braking.

A **Trailer brake sensitivity lever** located on the top of the controller (see photo) provides adjustments to synchronize the trailer brakes with your tow vehicle's brakes. It is designed

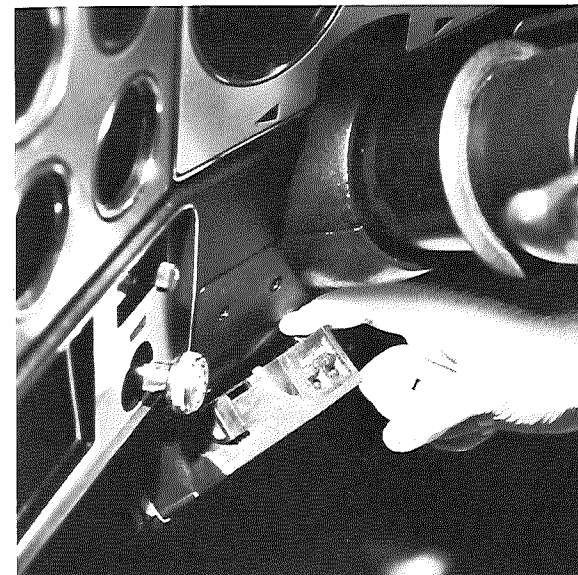
to balance the trailer brakes with your car brakes. Move the lever away from you to increase or toward you to decrease the sensitivity of your trailer brakes. Set the sensitivity adjustment to the maximum setting, then reduce sensitivity setting as required to obtain smooth braking.

There are **two indicator lights** on our controller. During brake application, the green light glowing indicates normal system operation. 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.

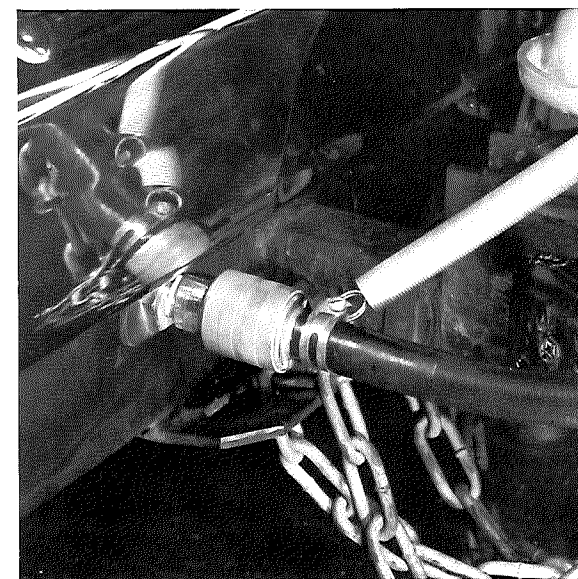
Do not use a selective resistor.

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 in your trailer. Vacuum is supplied to the trailer by coupling the trailer vacuum hose (see photo) to tow vehicle 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.

Important: 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, inoperative vacuum boosted accessories (brakes, emissions, etc.) and engine damage. An extra plug is supplied in the kit.



Excella-Vac System Controller



Trailer Vacuum Hose Connection

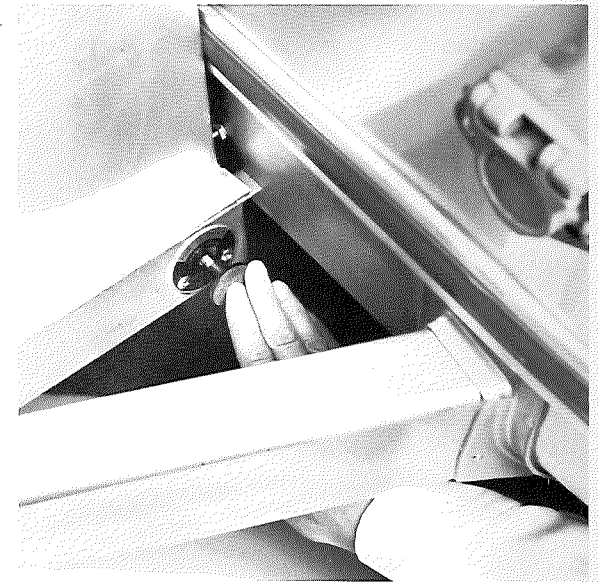
The **power brake booster** (located under the front or side lounge or on the tongue behind the L.P.G. tanks) supplies hydraulic pressure to the disc brake calipers. The fluid level in the booster's master cylinder (see photo) should be checked twice a year. If necessary, add fluid to bring level to within $\frac{1}{4}$ 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.

When the **trailer vacuum hose** 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. Disconnecting the supply line engages the trailer brakes. The trailer brakes must be disengaged by pushing and holding knob on brake release valve for 10 seconds. (see photo) Blocking or chocking wheels is necessary when parking your trailer. Do not use trailer brakes as parking brakes by disconnecting the trailer vacuum line.

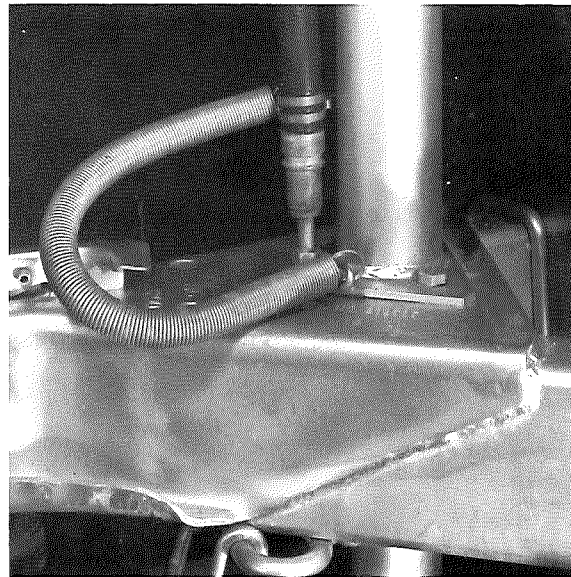
The self-adjusting **disc brake calipers** should be inspected for wear any time the wheels are removed for tire rotation, wheel bearing maintenance, etc. The lining will need replacement if there is evidence of brake fluid leakage or if there is less than $\frac{1}{16}$ " between the liner and liner's steel backing plate. See your Air-stream dealer for all trailer braking service.



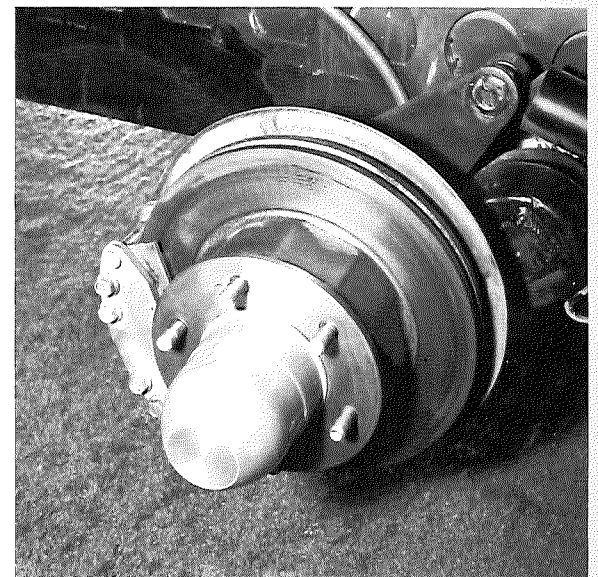
Power Brake Actuator and Breather



Brake Release Knob



Trailer Vacuum Hose Storage



Disc Brake Calipers, Hub and Rotor

Loading

For over 40 years, Airstream has been building trailers and has rarely found an instance where people have overloaded their trailer. Because it can happen we are giving you instructions for weighing your trailer. We are also providing you with an alternate method of determining the weight of your trailer without the use of scales. The following weight information and form will help you determine the actual weight of your trailer, with all its options and variable weights, and how much personal cargo weight can be added, staying within the weight ratings of your trailer.

Per Federal regulations, your trailer is placarded on the front roadside area with a gross vehicle weight rating and a gross axle weight rating. The gross vehicle weight rating is the maximum the trailer can weigh when it is being towed. The gross axle weight rating is the maximum load that can be on each axle when the trailer is being towed.

The **Dura-Torque axle** is designed to last the life of your trailer without service, except for lubrication of the wheel bearings. **Under no circumstances should welding be done on or near the axle.**

The diagrams on the following pages illustrate the use of scales in determining (1) your trailer's total weight, (2) weight on axle assemblies and (3) weight on tongue.

The allowable personal cargo, and placement within the trailer, may be determined by the following methods.



Gross Vehicle Weight Rating

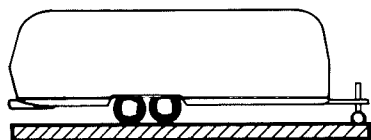
Before weighing trailer **add all trailer's variable weights** which are full water tank, LPG tanks and water heater.

Note: The variable weights of the main and auxiliary holding tanks are not used because, under typical usage, if the water tank is full, there is storage capacity in the holding tanks. As the water tank is emptied, the holding tanks are filled.

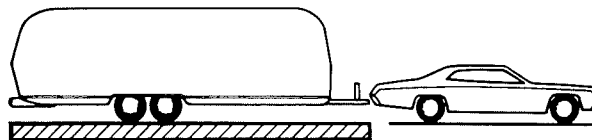
Remove personal cargo which includes food, clothing, kitchen utensils, etc. from trailer. Your trailer is now ready for weighing.

The **trailer's total weight** is determined by placing the trailer, without tow vehicle, on a scale. This weight indicates your trailer's total weight without personal cargo. The allowable

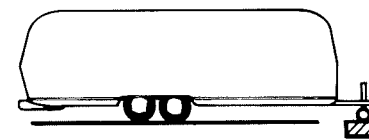
Trailer Weighing



1. Trailer's Total Weight
(cannot exceed G.V.W.R.)



2. Trailer's Weight on
Axle Assemblies
(cannot exceed G.A.W.R.)



3. Weight on
Trailer's Tongue

personal cargo that you add to your trailer **shall not exceed** the difference between the Gross Vehicle Weight Rating (G.V.W.R.) and this weight. Example: if the G.V.W.R. rating on the placard is **8500 lbs.** and the trailer's total weight is **7500 lbs.**, your personal cargo may not exceed 1000 lbs. (**8500—7500=1000**).

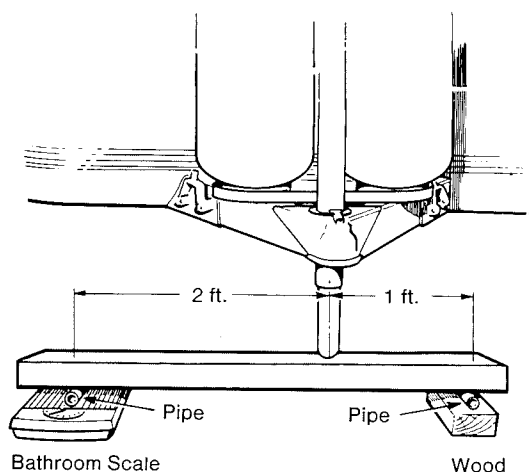
The **allowable personal cargo**, determined above, must be distributed in your trailer in such a manner that the **Gross Axle Weight Rating** (G.A.W.R.) is not exceeded.

To determine this, it is necessary to load all of your allowable personal cargo (example above 1000 lbs. total) and variable weights. Then hitch trailer to tow vehicle with load

equalizing hitch properly adjusted, see diagram page 27.

Place trailer on scale with both axles only on scale, see (2). If the weight on the axles exceeds the axle system G.A.W.R. then some personal cargo must be redistributed forward in order to place some of this weight on the tongue.

The **tongue weight** should be between 10%-15% of the trailer's total weight but **must not exceed 1000 lbs.** Some tow vehicle manufacturers may restrict the amount of tongue load to a lower value. To determine tongue load, unhitch tow vehicle and place tongue hitch post on scale, see (3). The trailer must be properly loaded, as determined above, with your allowable personal cargo and variable weights.



Tongue Weight

A scale which has a lower weight limit than your tongue load, such as a bathroom scale, may be used to check the tongue weight by using the following method (see illustration).

Place a piece of wood of approximately the same thickness as the bathroom scales on the ground in line with the trailer hitch jack as shown. It should be so spaced that a short piece of pipe or other round piece will lay exactly one foot from the center line of the jack extension. Place the scales so that another round piece can be exactly two feet from the center line of the jack extension in the other direction. Place a 4x4 on the two round pieces and screw the jack extension down on the top of the 4x4 until the tongue of the trailer is supported by it. Multiply the scale reading by three. This will be the tongue weight of

your trailer. If you exceed the capacity of the bathroom scales, increase the two foot dimension to three or four or more feet but always multiply the scale reading by the total number of feet between the wood and scales.

Caution: Be sure trailer is level when you read scales.

An alternate method for determining the weight of your trailer, without the use of scales, is by using the following information and form.

Before you fill in the blank form that pertains to your trailer, please read the sample form, page 22, to see what type of information will be needed.

First enter the model length, type of beds, and type of bathroom of your trailer on the first line (i.e. **Excella Twin Rear Bath**).

Column A

Column A represents the Total Maximum Personal Cargo weight that can be added to your trailer. Personal Cargo includes food supplies, clothing, other personal items, etc. Find the Factory Weight of your trailer, Chart A, page 24 and enter it across from ITEM 1 Column A (Factory Weight = weight without options and variable weights (i.e. **5670 lbs.**)).

Next fill in the total weights of the options and variable weights with which your trailer is equipped. This information is on Chart B and C, page 25. Add all of the weights together

and this total becomes ITEM 2, Column A (i.e. **736 lbs.**).

Next add ITEM 1 and ITEM 2. This becomes ITEM 4, Column A (i.e. **6406 lbs.**). This is the sum total of your trailer's Factory Weight plus the Options and Variable Weights.

Next enter in ITEM 5, Column A (i.e. **8500 lbs.**), your trailer's Gross Vehicle Weight Rating (G.V.W.R.). This information is on the placard located on the front road side area of your trailer which corresponds to information on Chart A, page 24. The Gross Vehicle Weight Rating is the maximum the trailer can weigh when it is being towed. Next subtract ITEM 4, Column A from ITEM 5, Column A; this amount indicates the Total Maximum Personal Cargo that can be added to your trailer (i.e. **2094 lbs.**). Under no circumstances shall the G.V.W.R. be exceeded.

Column B

Column B represents the Recommended Personal Cargo that can be added to your trailer's tongue. Find the Factory Tongue Weight of your trailer and enter it in ITEM 1 Column B (Factory Tongue = weight without options and variable weights (i.e. **720 lbs.**)). This information is on Chart A page 24. Column B has + weight and - weight. Due to the location of optional items within the trailer, their weight will either have a + weight or - weight effect on the tongue. If the option is behind the axle system, or rear of trailer, it will tend to have a - weight, or lifting effect on the tongue; if the option is forward of the axle

system or the front of the trailer, it will have a + weight or loading effect on the tongue. Next fill in + weights or - weights of the options and variable weights with which your trailer is equipped, indicated in the Tongue Weight Columns on Chart B or C.

Next total both the + weight (i.e. **94 lbs.**) and - weight (i.e. - **32 lbs.**) columns and find the difference between the two columns; this becomes ITEM 2 Column B (i.e. **+ 62 lbs.**). Next add ITEM 1 Column B and ITEM 2 Column B; this becomes ITEM 4 (i.e. **782 lbs.**). This is the total of your trailer's Factory Tongue Weight, plus the weight of the Options and Variable Weights on the tongue. Next enter in ITEM 5 Column B $12\frac{1}{2}\%$ of your trailer's G.V.W.R. or 1000 lbs., whichever is smaller (i.e. $.125 \times 8500 = 1063$, therefore use **1000 lbs.**). This information is located on Chart A, page 24.

Next subtract ITEM 4 Column B from ITEM 5 Column B and the amount indicates the amount of Recommended Personal Cargo that can be added to your trailer's tongue (i.e. **218 lbs.**).

The maximum tongue load must not exceed 1000 pounds. Some tow vehicles may restrict the amount of tongue load to a lower value. The tongue load is a total of the weight in ITEM 4 Column B plus your personal cargo.

Column C

Column C represents the Maximum Personal Cargo that can be added to your trailer's axle

system. Find the Factory Axle Weight of your trailer and enter it in ITEM 1 Column C (i.e. **4950 lbs.**).—Factory Axle Weight = weight without options and variable weights). This information is on Chart A page 24. Next fill in the axle system weights of the options and variable weights with which your trailer is equipped from the Axle System columns on Chart B or C, page 25. Add all of the weights together and this total becomes ITEM 2, Column C (i.e. **674 lbs.**).

Next calculate 34% of ITEM 5 Column B (i.e. $.34 \times 1000 = 340$). This becomes ITEM 3 Column C and represents the amount of tongue weight that is transferred to the trailer's axle system when properly hitched with a load equalizing assembly. (The remaining 66% is transferred to the tow vehicle.) Next add ITEM 1 Column C, ITEM 2 Column C, and ITEM 3 Column C; this becomes ITEM 4 Column C (i.e. **5964 lbs.**). This is the sum total of your trailer's Factory Axle Weight, the weight of the Options and Variable Weights on the axle system; and 34% of the tongue weight. Next enter in ITEM 5 Column C, the sum of your trailer's Gross Axle Weight Rating (G.A.W.R.-i.e. **4000 + 4000 = 8000 lbs.**).

This information is on the placard on the front roadside area of your trailer which corresponds to information on Chart A page 24.

The Gross Axle Weight Rating is the maximum load that can be carried on the axle system when the trailer is being towed. Next subtract ITEM 4 Column C from ITEM 5 Column C. The remainder is the amount of total Maximum Personal Cargo that can be added to your trailer's axle system (i.e. **2036 lbs.**).

Under no circumstances shall the G.A.W.R. be exceeded.

Sample Form

	Column A		Column B			Column C		
	Maximum Personal Cargo Total (includes axle systems & tongue)		Recommended Personal Cargo on Tongue			Maximum Personal Cargo per Axle System		
Model: <i>Excelsa Twin Rear Bath</i>								
Factory Weight (without options and variable weights)	Item 1	<i>5670</i>						
Factory Axle Weight (without options and variable weights)	----->					Item 1	<i>4950</i>	
Factory Tongue Weight (without options and variable weights)	----->					Item 1	<i>720</i>	
Options:			+ Weight	- Weight				
Bunk Bed (each)	<i>90</i>			<i>-10</i>		<i>100</i>		
Microwave Oven	<i>66</i>		<i>8</i>			<i>58</i>		
Spare Tire Bracket	<i>13</i>		<i>10</i>			<i>3</i>		
Spare Tire	<i>52</i>		<i>40</i>			<i>12</i>		
L.P.G. 10 Gal. (tank and liquid)								
Space Locker								
Lounge Chair								
Excelsa Vac Disc Brakes								
Variable Weights:								
Water Heater	<i>50</i>			<i>-22</i>				
Water Tank	<i>425</i>							
L.P.G. Std. 7 1/2 Gal. (tank and liquid)	<i>40</i>							
L.P.G. 10 Gal. (tank and liquid)			<i>36</i>					
Item 2	Total	<i>736</i>	<i>736</i>	<i>+ 94</i>	<i>- 32</i>	<i>= 62</i>	<i>674</i>	
Item 3	34% of Item 5 Column B	----->					<i>340</i>	
Item 4	Items 1 & 2 Total	<i>6406</i>	Add Item 1 & 2		<i>782</i>	Add Items 1, 2, 3		
Item 5	G.V.W.R.	<i>8500</i>	Enter 12 1/2% G.V.W.R. or 1000 lbs. whichever is smaller.		<i>1000</i>	G.A.W.R.		
Enter Item 4 and subtract from Item 5		<i>- 6406</i>			<i>- 782</i>	<i>- 5964</i>		
Maximum Personal Cargo		<i>2094</i>						
Recommended Personal Cargo on Tongue		----->					<i>218</i>	
Maximum Personal Cargo per Axle System		----->					<i>2036</i>	

Blank Form

	Column A		Column B			Column C	
	Maximum Personal Cargo Total (includes axle systems & tongue)		Recommended Personal Cargo on Tongue			Maximum Personal Cargo per Axle System	
Model:							
Factory Weight (without options and variable weights)	Item 1					Item 1	
Factory Axle Weight (without options and variable weights)	----->						
Factory Tongue Weight (without options and variable weights)	----->		Item 1	----->			
Options:			+ Weight	- Weight			
Bunk Bed (each)							
Microwave Oven							
Spare Tire Bracket							
Spare Tire							
L.P.G. 10 Gal. (tank and liquid)							
Space Locker							
Lounge Chair							
Excella Vac Disc Brakes							
Variable Weights:							
Water Heater							
Water Tank							
L.P.G. Std. 7 1/2 Gal. (tank and liquid)							
L.P.G. 10 Gal. (tank and liquid)							
Item 2	Total	----->	+	---	=	----->	
Item 3	34% of Item 5 Column B	----->					
Item 4	Items 1 & 2 Total			Add Item 1 & 2		-Add Items 1, 2, 3	
Item 5	G.V.W.R.			Enter 12 1/2% G.V.W.R. or 1000 lbs. whichever is smaller.		G.A.W.R.	
Enter Item 4 and subtract from Item 5							
Maximum Personal Cargo							
Recommended Personal Cargo on Tongue		----->					
Maximum Personal Cargo per Axle System		----->					

Chart A — Weights and Ratings

		Gross Vehicle Weight Rating G.V.W.R.	Factory Weight Without Options or Variable Weights	Allowable Additional Total Weight Incl. Personal Cargo	Gross Axle Weight Rating G.A.W.R. (Axle System)	Factory Axle Weight (Axle System)	Allowable Additional Weight* (Axle System)	Factory Tongue Weight Without Options or Variable Weights
Rear Bath	T	8500	5670	2830	8000	4950	3050	720
	D	8500	5740	2760	8000	5005	2995	735
	G	8500	5750	2750	8000	5010	2990	740
	H	8500	5820	2680	8000	5065	2935	755
Center Bath	T	8500	5700	2800	8000	4975	3025	725
	D	8500	5690	2810	8000	4965	3035	725

* Allowable additional weight includes all options and accessories, L.P.G. water, waste, food supplies, clothing, other personal cargo, etc.

T-Twin Bed Models
D-Double Bed Models

G - Twin Bed Model (Roadside Galley)
H - Double Bed Model (Roadside Galley)

Chart B — Rear Bath (Including G & H)

Optional Equipment & Variable Weight	Total Weight	Twin		Double	
		Axle System	Tongue	Axle System	Tongue
Bunk Bed	45 each	50	-5	50	-5
Spare Tire Bracket	13	3	10	3	10
Space Locker	20	22	-2	22	-2
Microwave Oven	66	58	8	58	8
Water Tank — Liquid Only	425	425	0	425	0
Water Heater — Liquid Only	50	72	-22	72	-22
L.P.G. 7½ Gal. Tank (Std.) — Liquid Only	40	4	36	4	36
L.P.G. 10 Gal. Tank (Opt.) & Liquid	66	7	59	7	59
Lounge Chair	28	21	7	21	7
Excella Vac-Disc Brakes	108	59	49	59	49

Chart C — Center Bath

Optional Equipment & Variable Weight	Total Weight	Twin		Double	
		Axle System	Tongue	Axle System	Tongue
Spare Tire Bracket	13	3	10	3	10
Spare Tire	52	12	40	17	40
Microwave Oven	66	58	8	58	8
Water Tank — Liquid Only	425	425	0	425	0
Water Heater — Liquid Only	50	61	-11	61	-11
L.P.G. 7½ Gal. Tank (Std.) — Liquid Only	40	4	36	4	36
L.P.G. 10 Gal. Tank (Opt.) & Liquid	66	7	59	7	59
Lounge Chair	28	21	7	21	7
Excella Vac-Disc Brakes	108	59	49	59	49

Liquid weights indicate full container. * The total weight is the difference between the standard and optional tanks plus liquid.

Tires

Your Excella is equipped at the factory with steel belted radial tires. Airstream dealers cannot make price 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.

It is also important to periodically check on the tightness of lug bolts. They should be tightened to a torque of 90-95-ft.-lbs. 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 ultraviolet 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 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 so that the flat tire is hanging free. (see photo)

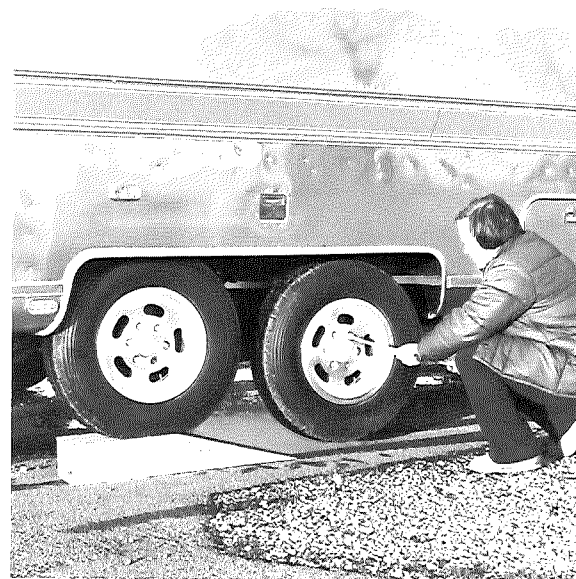
All tire, wheel, hub and drum assemblies are dynamically balanced at the factory.

Be sure to rebalance the tire, wheel, hub and drum assemblies each time a tire is changed or rotated.

In an emergency remove the flat tire. The independent suspension of the Dura-Torque Axle allows a four wheel unit to be safely towed on three 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. It is good practice to set your rear view mirrors so that you can observe your tires at all times.

Tire Load and Inflation Pressure Notes

1. Tire inflation pressure may increase as much as 6 pounds per square inch (PSI) when hot.
2. Cold tire inflation pressure: after vehicle has been inoperative for 3 hours or more, or driven less than 1 mile. Hot tires inflation pressure: after vehicle has been driven 10 miles or at speeds of more than 60 miles per hour.

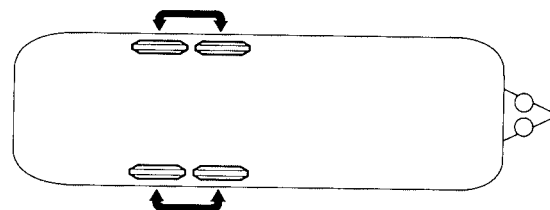


Tire Changing

Minimum Tire Pressure (cold inflation)

Tire Size	Load Per Axle (Lbs.)	Pressure
7.00-15XC	up to 2820	35 p.s.i.
Steel belted	2820-3130	40 p.s.i.
radial Load	3130-3440	45 p.s.i.
range D	3440-3600	50 p.s.i.
	3600-3780	55 p.s.i.
	3780-4000	60 p.s.i.

Tire Rotation (steel belted radial)



Hitching Up

Hitching up your Airstream 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.

Your electric jack makes hitching and unhitching a much easier operation. A two position toggle switch on the underside of the jack motor operates the jack. Emergency manual operation is made possible by removing the electrical jack head and engaging a manual crank handle in the post coupler.

To Remove the Electrical Head

1. Disconnect trailer battery.
2. Disconnect jack motor positive lead from solderless connector located under "A" frame coupler.
3. Loosen two Allen Lock Screws securing jack head to jack post. Remove jack head. (NOTE: Use care when removing jack head lead wire from wire channel to prevent the sharp edges of the channel from cutting into the wire insulation.)

To Install Electrical Head

1. With 12V lead temporarily connected, ground the jack head assembly to "A" frame and operate motor in a "lowering" direction until it stops.
2. Manually crank jack post clockwise until fully retracted. Turn crank one complete turn counterclockwise.
3. Reinsert motor electrical connection into wire channel and replace jack head on

jack post. Make sure that drive pin on motor assembly is engaged in post coupler.

4. Tighten Allen Lock Screws, re-connect lead wires and stow under coupler assembly. Re-connect battery.

Equalizing Hitch Load Distribution

When a trailer is hitched up properly to a tow vehicle, with a load equalizing hitch, 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 tow vehicle owner's manual for this information.

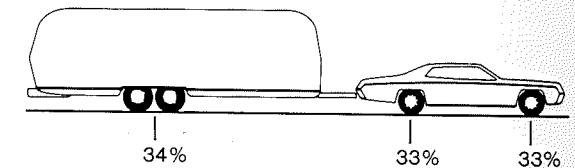
The **tongue weight** should be between 10%-15% of the trailer's total weight but **must not exceed 1000 lbs.** and under no condition exceed the hitch rating. Some tow vehicle manufacturers may restrict amount of tongue load to a lower value.

Steps for Hitching up

1. 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. This can best be accomplished through the use of prearranged hand

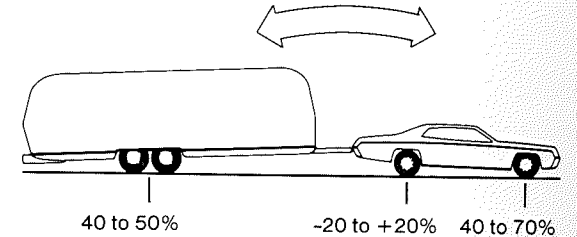
Equalizing Hitch Load Distribution

Proper Installation

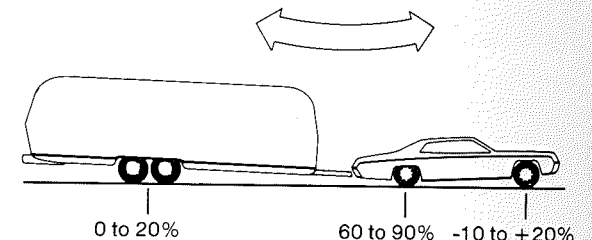


Percentage of Tongue Load distributed to car and/or trailer wheels

Hitch High



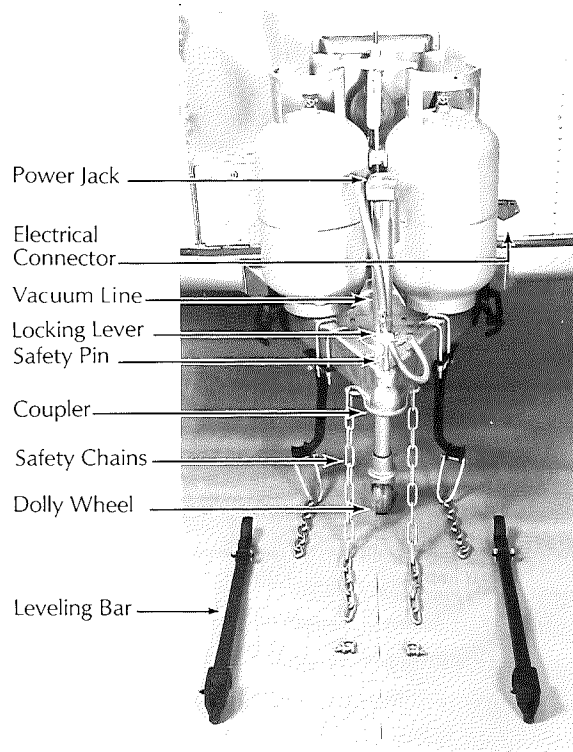
Hitch Low



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**.

2. Lower the trailer hitch onto the hitch ball; then close the locking lever and insert safety pin.
3. Now raise the trailer and car to the full height of the hitch jack and then attach the **leveling bars**. Lower the car and trailer. The hitch ball should be level to slightly higher (see photo). Readjust leveling bars until this condition is correct. This will result in the best balance for towing and steering controls as the weight equalizing hitch distributes the hitch load. Approximately 1/3 of the load is distributed onto the front wheels of the tow vehicle, 1/3 onto the rear wheels of the tow vehicle and 1/3 onto the trailer axle assembly. With proper hitch installation and hitching up the bar should have a noticeable amount of deflection or bending (see photo 3.d.). A little practice with your rig will teach you how far to pull up the bar, and 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.

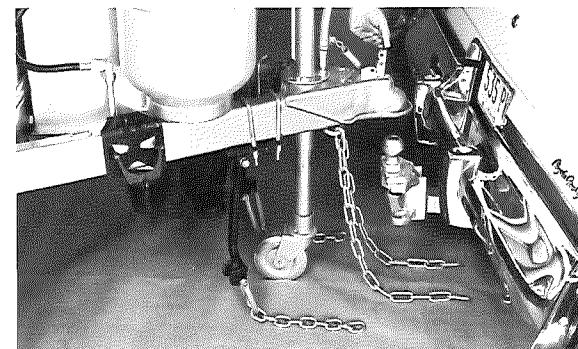
Note: If your car is equipped with adjustable load leveling air shocks, you must load the car first with typical luggage and passengers and bring it back to level. Then attach the



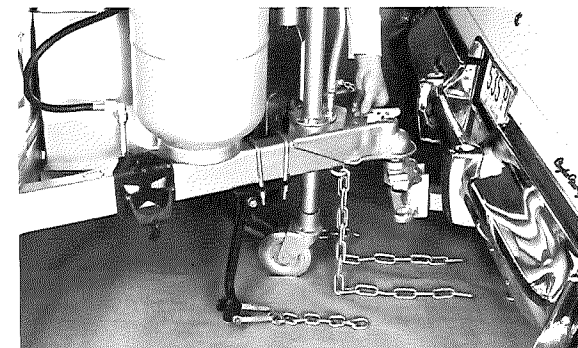
Hitching Up Equipment

trailer and adjust the load leveling bars. Otherwise the air shocks on your car will overload the rear wheels.

The hitch ball on your car should be installed at a height of 19-1/2" to the top of the hitch ball, measured when the car is loaded. A low hitch ball increases tailwagging 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.

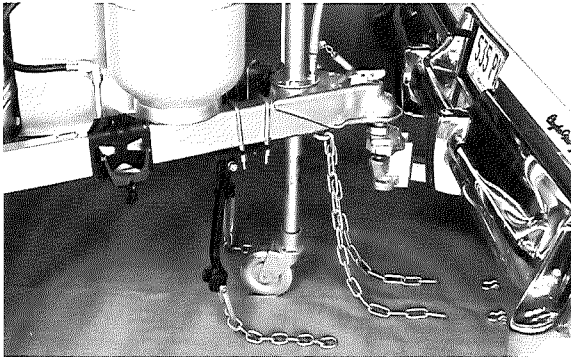


Hitching Up Step 1.

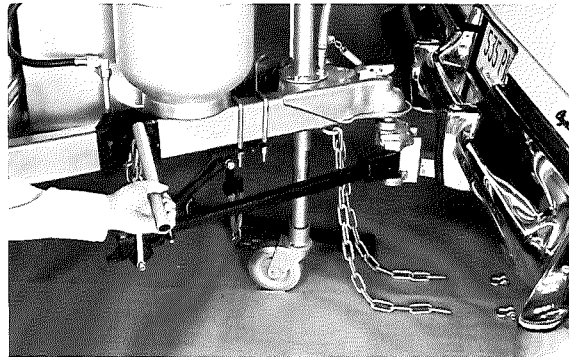


Step 2.

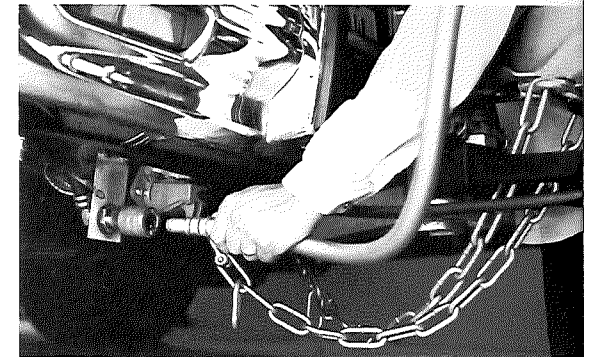
4. Plug in the electrical connector cord and check running, directional, and brake lights. Remove dust cover and plug in 12 V refrigerator cord. Remove plug from tow vehicle's vacuum coupling and insert trailer's vacuum line plug. To couple, push knurled coupling sleeve forward, firmly insert trailer's vacuum hose fitting and pull sleeve back. Check for proper locking by firmly pulling trailer's hose fitting. Attach the safety chains to the welded portion of the hitch or the car's frame, but never to



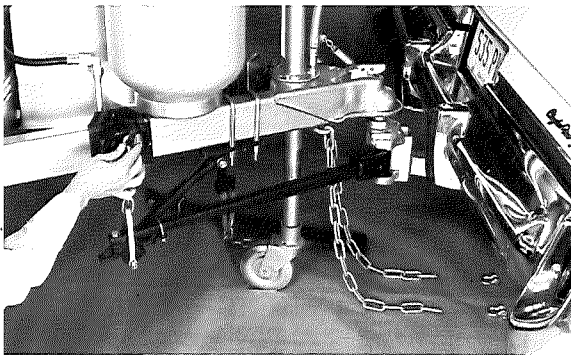
Step 3a.



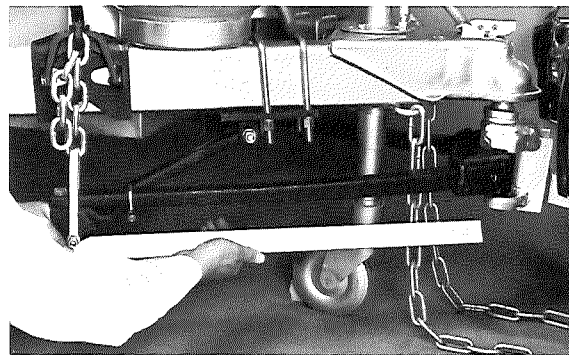
Step 3b.



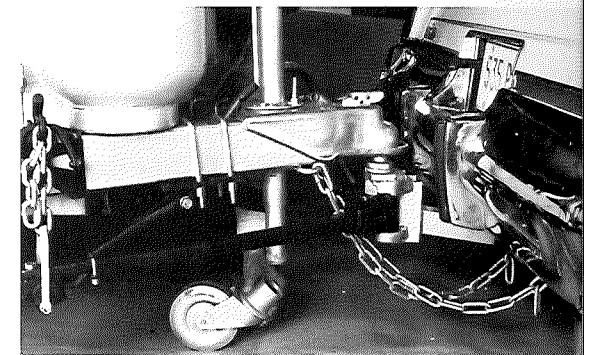
Step 3c.



Step 3d.



Step 4.



Step 5.

the removable ball mount. Cross the safety chains under the hitch.

5. Retract the hitch jack completely for maximum ground clearance. Remove the jack pad, and stow in the car's truck, along with leveling jack and other gear used when stopped. Never tow your trailer with the jack down or the jack pad on. 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.

6. 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. For specific tire pressures refer to page 26.

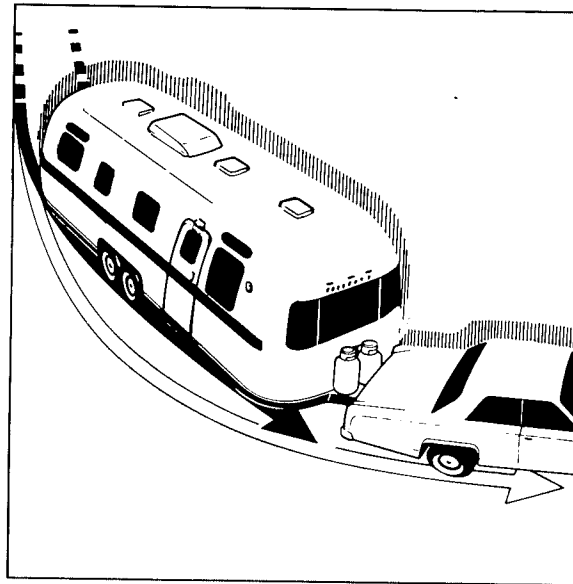
Towing Tips

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

A few hours of towing practice in a large empty supermarket lot will make pulling your Airstream 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.**

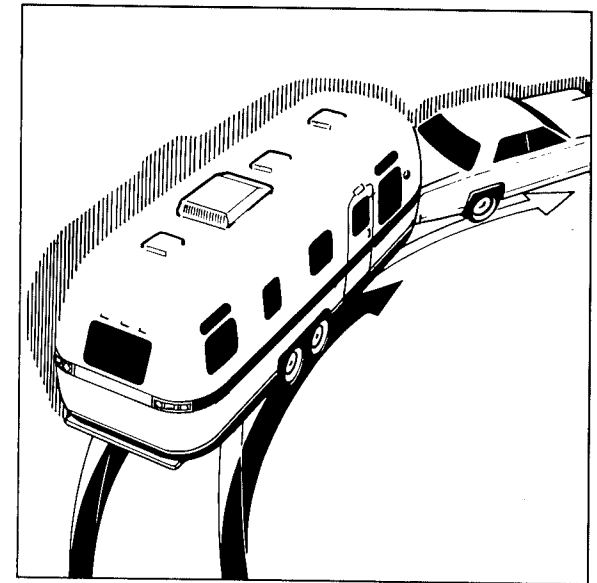
On freeways or expressways try to pick the lane you want, and stay in it. Always maintain plenty of space between you and the car ahead, at least the length of the car plus trailer, for every ten miles per hour. Remember that in order to pass another vehicle, you will need longer to accelerate. You must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



Tracking

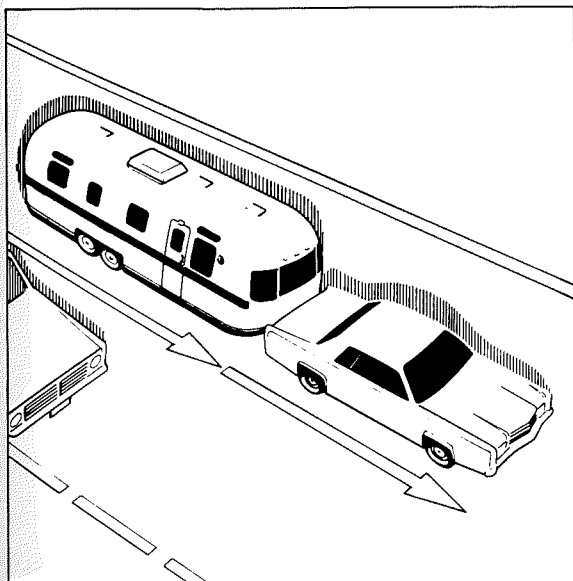
On a two lane road, cars will be lining up behind you because you are traveling at a lower speed. It is both courteous and sensible to signal, pull onto the shoulder, and let them pass. Your Airstream is designed to be towed easily at any legal speed, so if you are not careful you may be inclined to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

The **brake controller** is activated when you apply the brakes of the tow vehicle. This sends and modulated electrical signal to the wheel brakes when the electric brakes are installed or to the **power brake booster** assembly located on the tongue when the optional Excella-vac disc brakes are installed. Trailer brakes may be applied manually, independent from your tow vehicle brake system, by moving the controller's lever to the right.



Note: The tow vehicle's engine should be warm (near operating temperature) to insure maximum braking, with optional 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 hose, radiator or radiator overflow outlet. Check to see that all

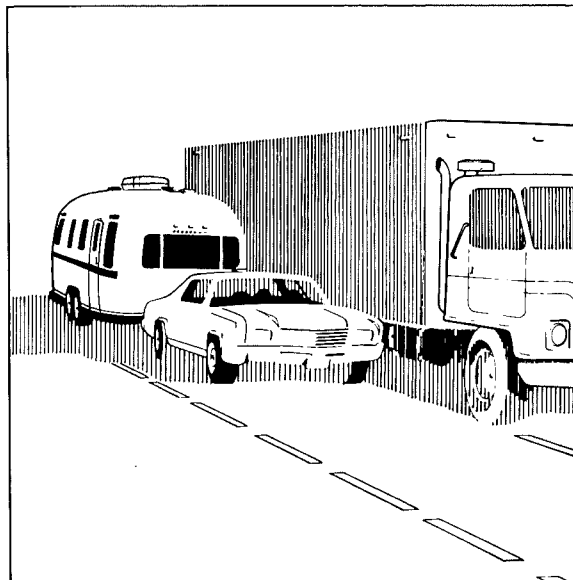


Passing

drive belts are intact and the fan is turning. If you have a problem, have it fixed at the next opportunity. If there is no problem, 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.

Caution: 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.



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.

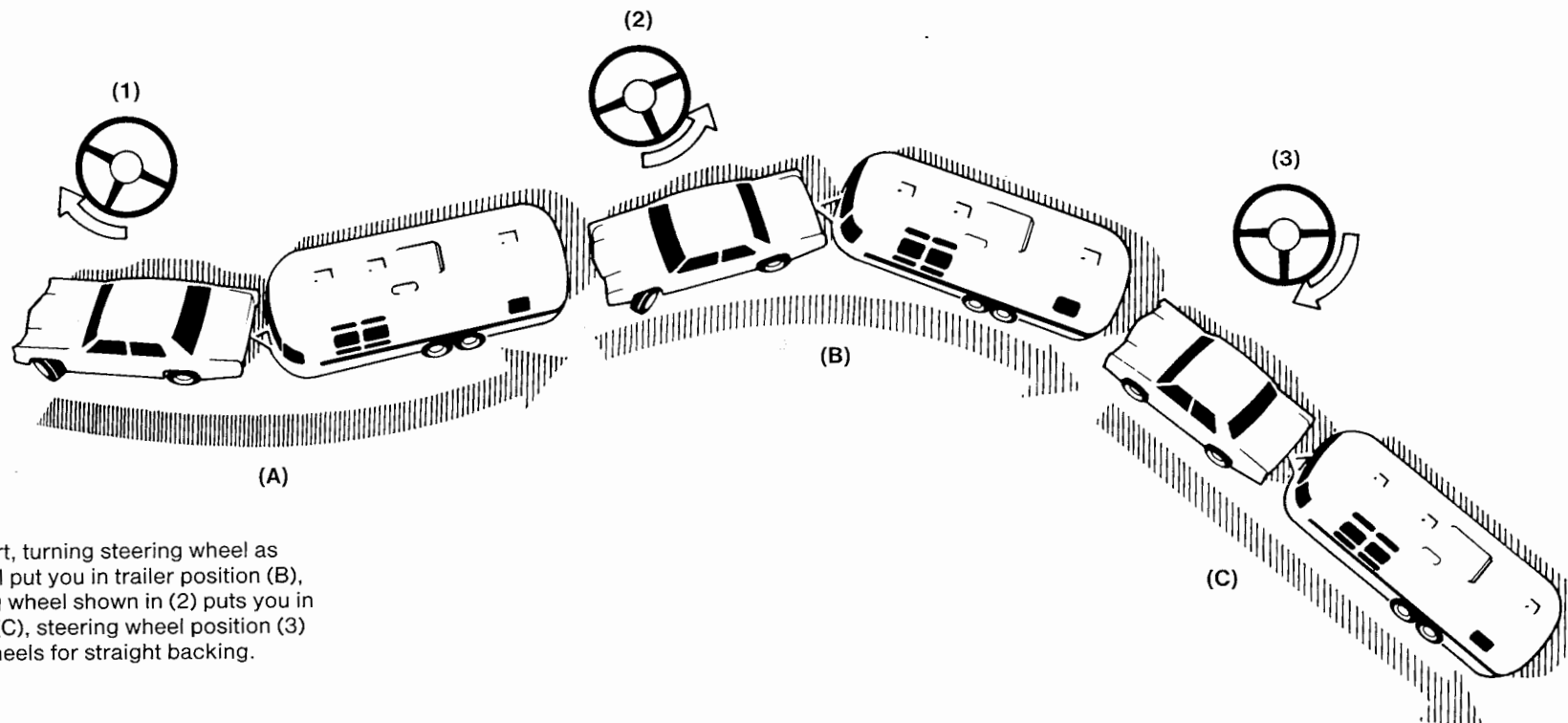
If you have to tow long distance over bad roads, the stones and gravel thrown back by

your tires will dent and scratch the aluminum finish of your Airstream. To prevent this, use masking tape to secure heavy sheets of cardboard to the lower front end of the trailer.

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.

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 by engaging the break away switch or disconnecting the trailer vacuum line.

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 direction

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. Then turn the steering wheel in the opposite 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. **Al-**

ways 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.

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 hook-ups 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 hook-ups.

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.

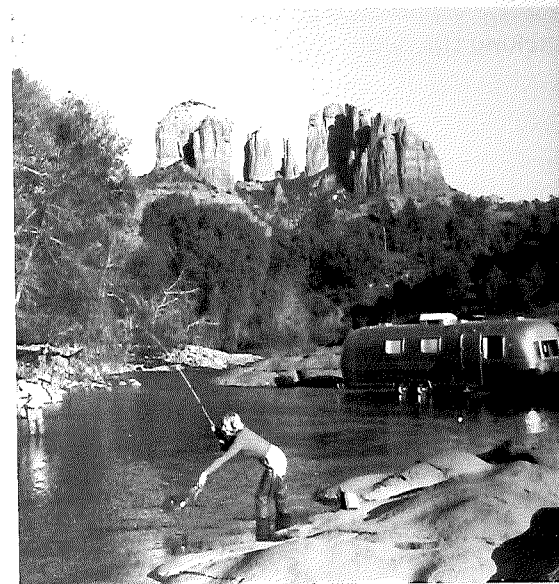
When stopping for the night your Airstream is built to be safely parked in any spot that is relatively level and where the ground is firm.

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 Airstream 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. See pages 58-70 for complete details on LPG system and gas operated appliances.
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 petcock to the range and make sure everything is properly stowed. Use your Pre-Travel Check List on page 94 and you are ready for more travel adventure.



Extended Stay

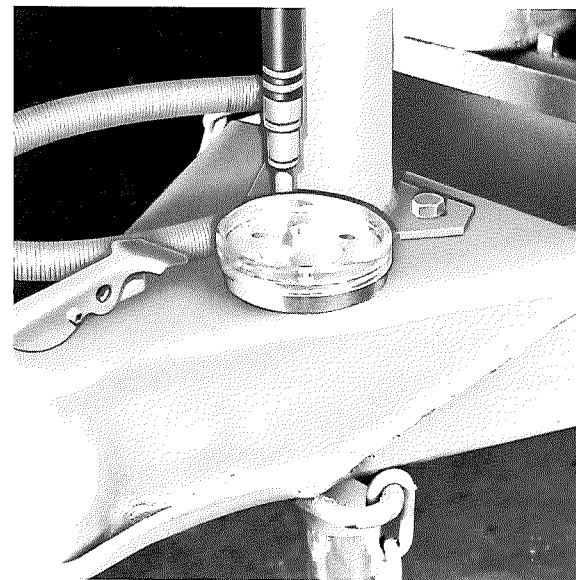
Making a long trip in your Airstream is not very different from making a weekend excursion. Since everything you need is right at hand you are at home wherever you go. When packing for an extended trip take everything you need, but only what you need.

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 of your Airstream with a small spirit level set on the inside work counter or the trailer hitch "A-Frame". If a correction is necessary then **you must level from side to side first**. This can be done most easily up a small ramp consisting of 2"x 6" boards about four feet long and tapered at both ends. (See photo.) We do not recommend placing tires in a hole for leveling.

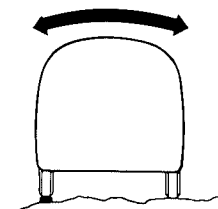
Level from front to rear by disconnecting the hitch from the car, putting the jack pad under the hitch jack and adjusting the jack up or down until you are level. Block or chock the wheels to keep the trailer from rolling. Use the wrench, located in the hose carrier, to lower the two **B.A.L. stabilizing jacks** on the low side. Bring the trailer to a level position side to side. Lower opposite stabilizing units to a firm position. **Note:** Whenever the trailer must be lifted with a jack as when changing a tire or leveling on very rough terrain, **always place the 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.**



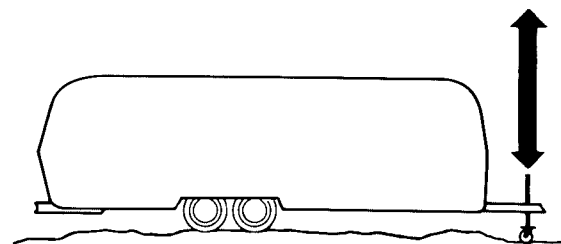
Trailer Leveling



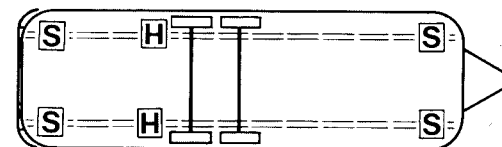
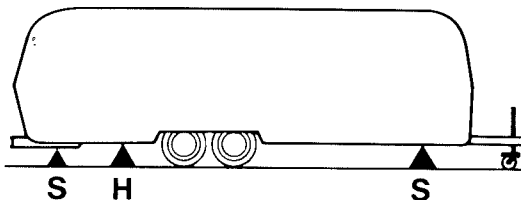
Spirit Level



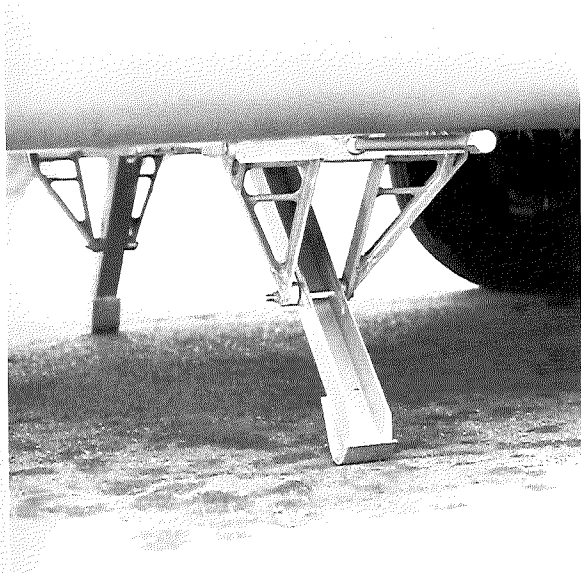
1. Level from Side to Side



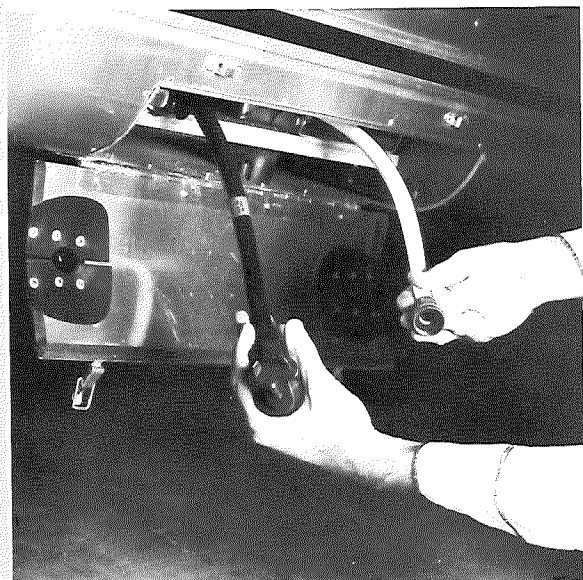
2. Level from Front to Rear



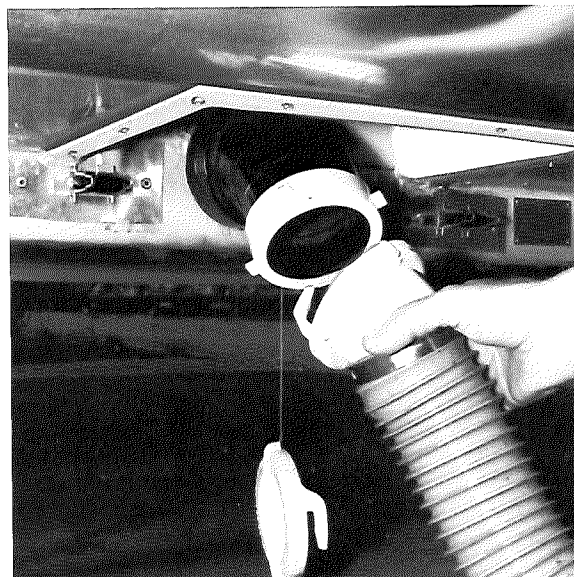
H - Hydraulic Jack Positions
S - B.A.L. Stabilizers



B.A.L. Stabilizing Jack



City Water and Power Inlets



Waste Drain Hose Hook-Up (Center Bath)

When you stay for extended periods where electric or water are not available, you must make regular checks on the condition of your 12 volt battery and the contents of your water tank. Try to conserve electricity. You can recharge your 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 refill your potable water tank. When your waste holding tank nears capacity, move to a dumping location.

The water line connection for city water and electrical connection for 120 volt, 60 cycle city power is located on the roadside of the trailer in back of the wheels. Unlatch the access cover and pull the connections out to the

desired length. They will automatically lock in this position. The access door can now be closed to prevent the entry of any foreign objects. On the electrical connection, be sure you have the wire **grounded** and have the **proper polarity** (see pages 71 and 77 for water and electrical system details).

To stow the electrical cable when leaving, unlatch the access cover, unhook the electrical cable from its connection, give a slight pull on the cable, and it will automatically wind up. To stow the water hose, move the release lever to its left hand position. Caution: Keep a light hold on the cable and hose as they are winding up so that they do not whiplash against the side of the trailer.

Hook your **waste drain hose** into the sewer disposal facility and attach to the drain outlet in your trailer. For details on this procedure refer to page 74.

Turn on gas supply; light the range and oven pilots, light the water heater and refrigerator pilots. See page 58-70 for complete details on L.P.G. system and gas operated appliances.

Winter Airstreaming

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 0 to -10 degrees. Airstreams properly outfitted with dual-pane windows have been cold-soaked at -20 degrees with no adverse effects and with no real discomfort. Dual-pane side windows do not require storm windows. Dual-pane windows and window shades 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. Some states do not allow L.P.G. 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, L.P.G. should always be shut off as a safety precaution when gasoline is added to the tow vehicle.
2. You must have a plentiful supply of propane gas.
3. If your stay is longer than overnight, then you should endeavor to have 110V electricity available. The battery (fully charged) will not last more than about 10 hours in zero weather. Of course you can always run your car to recharge your battery and normally the battery will attain sufficient

power to run another 3-4 hours by running your engine for approximately 45 minutes to one hour at fast idle. For more detailed information on the battery see page 79.

4. Minimize use of electricity if a 110 volt power source is not available.
5. Your Airstream has forced air heating in the holding tank area. There is also heating around the water tank.
6. Leave cabinet doors, bed doors and wardrobe doors slightly open at night to allow circulation of air around all furniture components.
7. For extended stays in cold weather, insulate the water line outside the trailer.

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 minus 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.

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 system, the waste drain system (including the traps), the waste-holding tanks, the water heater and the battery. To completely winterize your Airstream, 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. Two are located in the rear trunk on rear bath models and in the wardrobe on center bath models. On all models one is located on the water heater accessible through the exterior access panel. Fully uncoil hose on ground to allow complete draining.
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 pump has removed all water from the storage tank, turn 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.
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.
9. Pour a cup of nontoxic 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 the batteries from your Airstream 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.

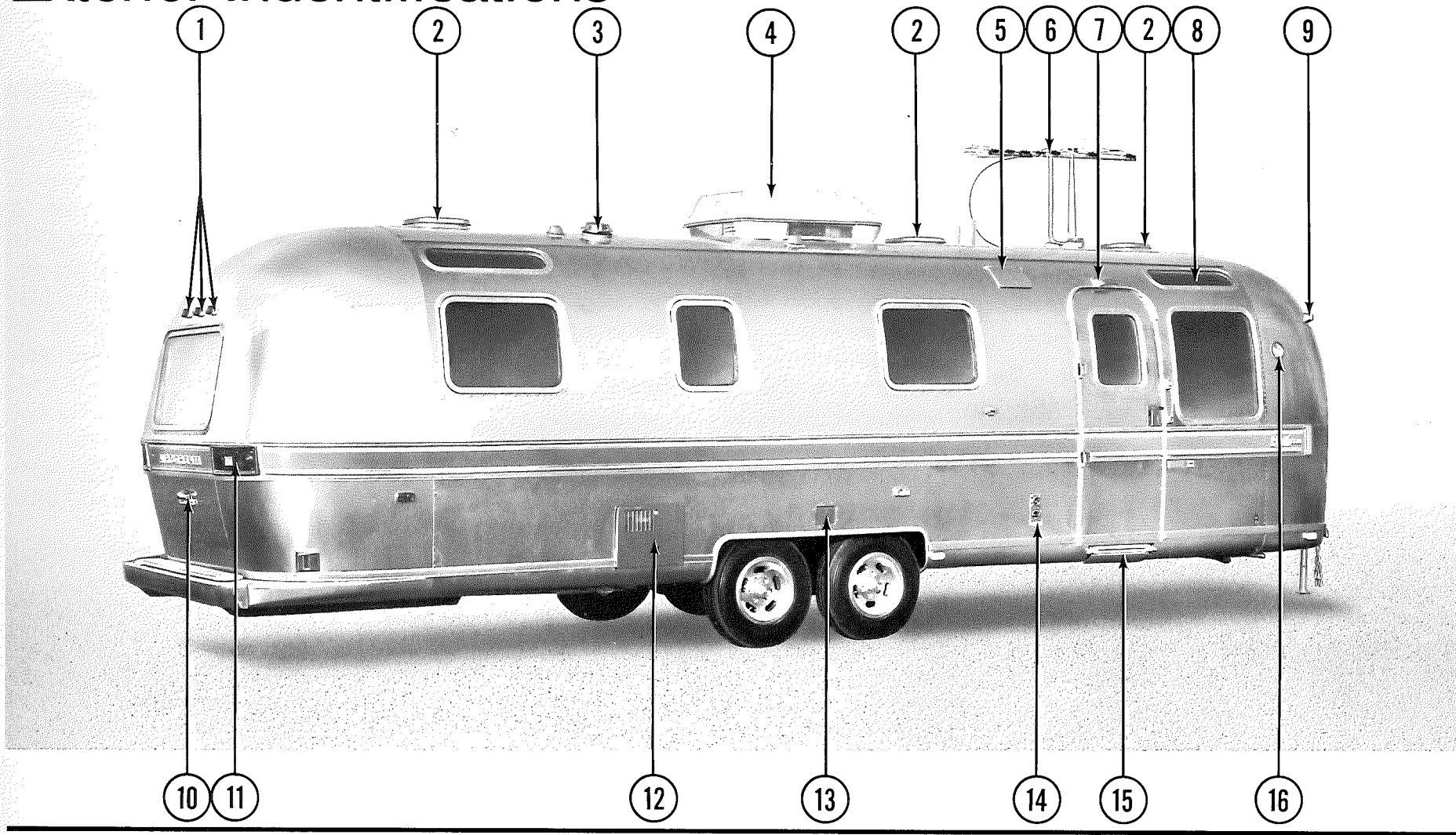
13. Remove any items (food, cosmetics, etc.) from trailer interior that might be damaged by freezing — or might damage the trailer if containers break.

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. 3).
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.

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.

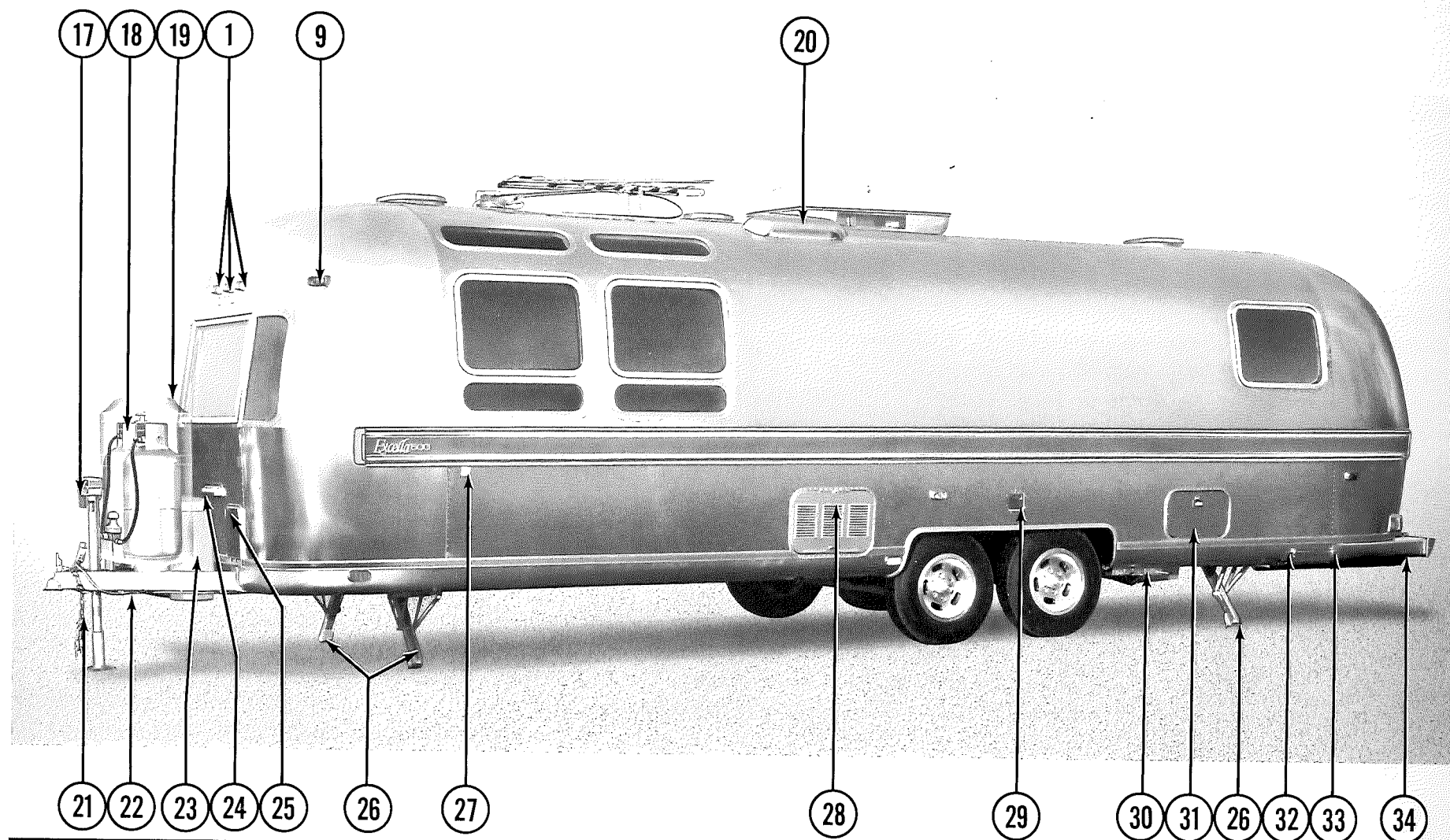
Exterior Indentifications



No. Description

Page No.

1. Cluster lights	92	7. Main door light	92	13. 120 volt outlet	77
2. Roof vent	55	8. Vista view window	41	14. Furnace vent	68
3. Bathroom exhaust fan	56	9. Clearance light	92	15. Main door step	40
4. Air conditioner	53	10. License plate light	92	16. Exterior light	92
5. Range exhaust vent	67	11. Stop, tail, turn and backing lights	92	17. Power jack	27
6. T.V. antenna	41	12. Water heater access panel	70	18. L.P.G. tanks and regulator	58



No. Description

Page No.

19. L.P.G. Bottle Cover.....	—
20. Refrigerator vent	61
21. Safety chain	28
22. Seven way connector - 12 volt.....	78
23. Disc brake vacuum booster.....	16
24. Univolt vent.....	77

25. Battery compartment	79
26. B.A.L. stabilizing jacks	34
27. Stop and turn signal monitor	78
28. Refrigerator access door	61
29. Water inlet (tank)	71
30. Sewage outlet and dump valves (C.B.)	74

31. Side access door	—
32. Electrical inlet (city)	77
33. Water inlet (city)	71
34. Sewage outlet (Rear Bath).....	74

Exterior

The Airstream exterior has been covered by an acrylic lacquer finish providing years of environmental protection. Washing the exterior of your Airstream is similar to washing an automobile. Both have high quality finishes and certain precautions must be taken to protect them. Oil, grease, dust and dirt may be removed by washing with any mild non-abrasive soap or detergent. Automatic dishwasher detergents and acid etch cleansers are too strong and should never be used. **Always clean your Airstream in the shade or on a cloudy day when the aluminum skin is cool.** Cleaning should be followed by a thorough clean water rinse. Spots and streaks may be prevented by drying unit with a chamois or a soft cloth.

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, seeds, 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

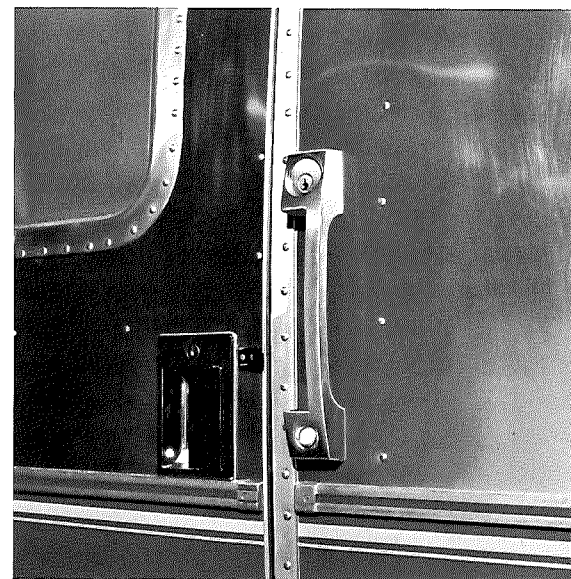
the trailer after washing use a small amount of kerosene on a rag and wipe the spots individually, being careful not to scratch the aluminum.

For small areas of damage to the acrylic protective coating, or where oxidation is beginning to occur, remove all traces of the acrylic coating with a good grade of lacquer solvent. Respray the area with clear acrylic 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 for instructions. To keep your trailer looking new, paint the "A" frame, L.P.G. tanks, and rear frame periodically, by brushing on aluminum lacquer or, if possible, by spraying.

Each time you connect the **7-way electrical connector** check for dirt and corrosion. Keep the contacts clean with "Spra-Kleen."

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 main door latch has been designed as a dead bolt. For this reason never try to shut the door when it is locked. 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 all the way open it will automatically latch against the trailer. An optional dead bolt

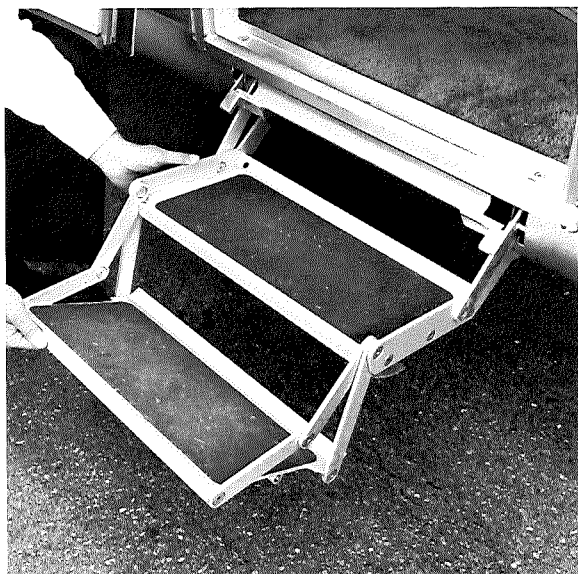


Side Handle and Lock

lock installed on the inside of the door frame, provides added security. This lock operates by twisting the knob clockwise to lock, counterclockwise to open.

The **screen door** latches to the main door using a manually operated slide bolt latch. It can be released from the main door to operate independently. A Nylatch catch on the screen door holds it closed. A second slide bolt latch on the door frame can be used to provide positive screen door locking while inside the trailer.

To operate the **fold-away step** just press down the latch on either side 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.

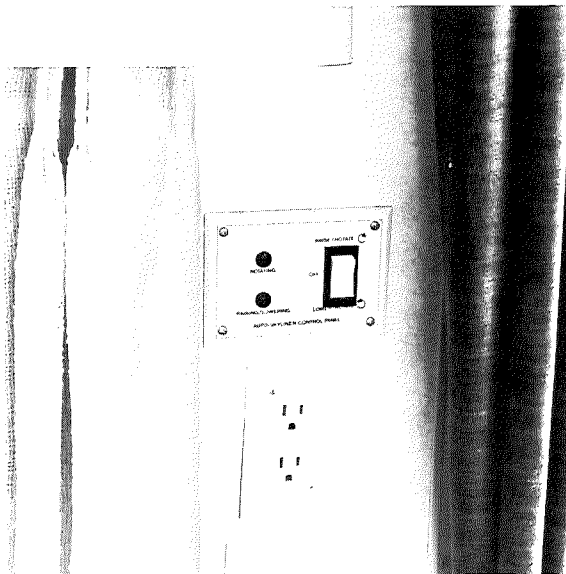


Fold-Away Step

The **extension step** is permanently attached to the main step and when needed it is simply flipped out.

Never travel with step lowered.

All **standard windows** including front and rear are constructed with dual solar gray tinted safety plate glass panes, eliminating the need for storm windows. To open: 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 and place the operators into one of the five positioning recesses. To close: pull the two outside operator handles toward the center and slowly lift.



Motorized TV Antenna Controls

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

Screens are made of plastic for hard wear and easy maintenance. Clean with a damp cloth. **Note: They will melt at the point of contact if touched by a cigarette.**

Vista view windows are single paned, allow for interior lighting while maintaining privacy and are equipped with integral shades.

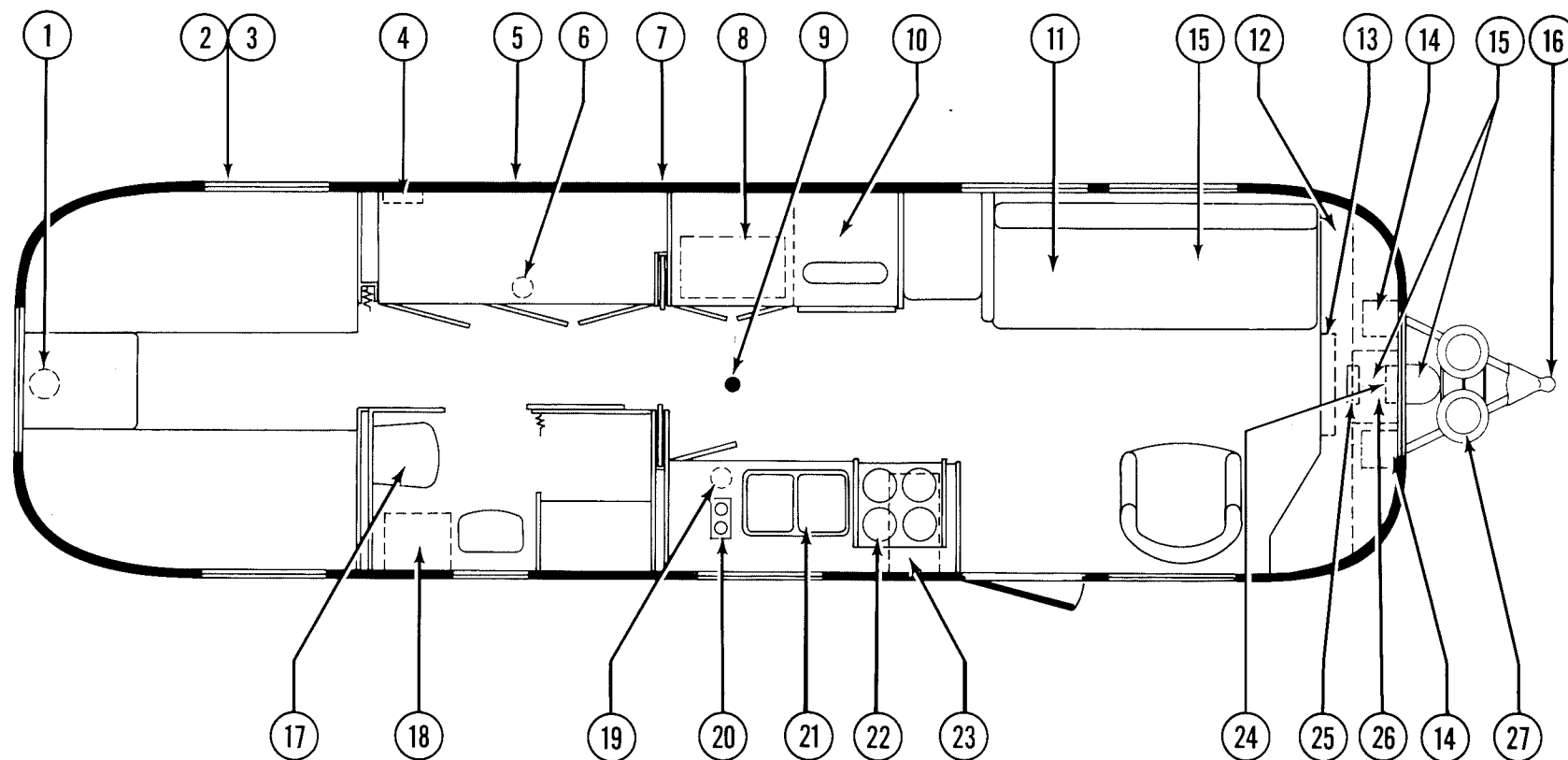
Factory recommended awnings give shade during trips and rallies. They are easy to operate and can be installed by your dealer.

The aluminum construction of your trailer creates a radio-shield and you will need outside antennas for good reception.

The **motorized radio/T.V. antenna** is connected to an auto-coupler. This enables you to utilize your T.V. antenna in the raised position for AM-FM radio reception.

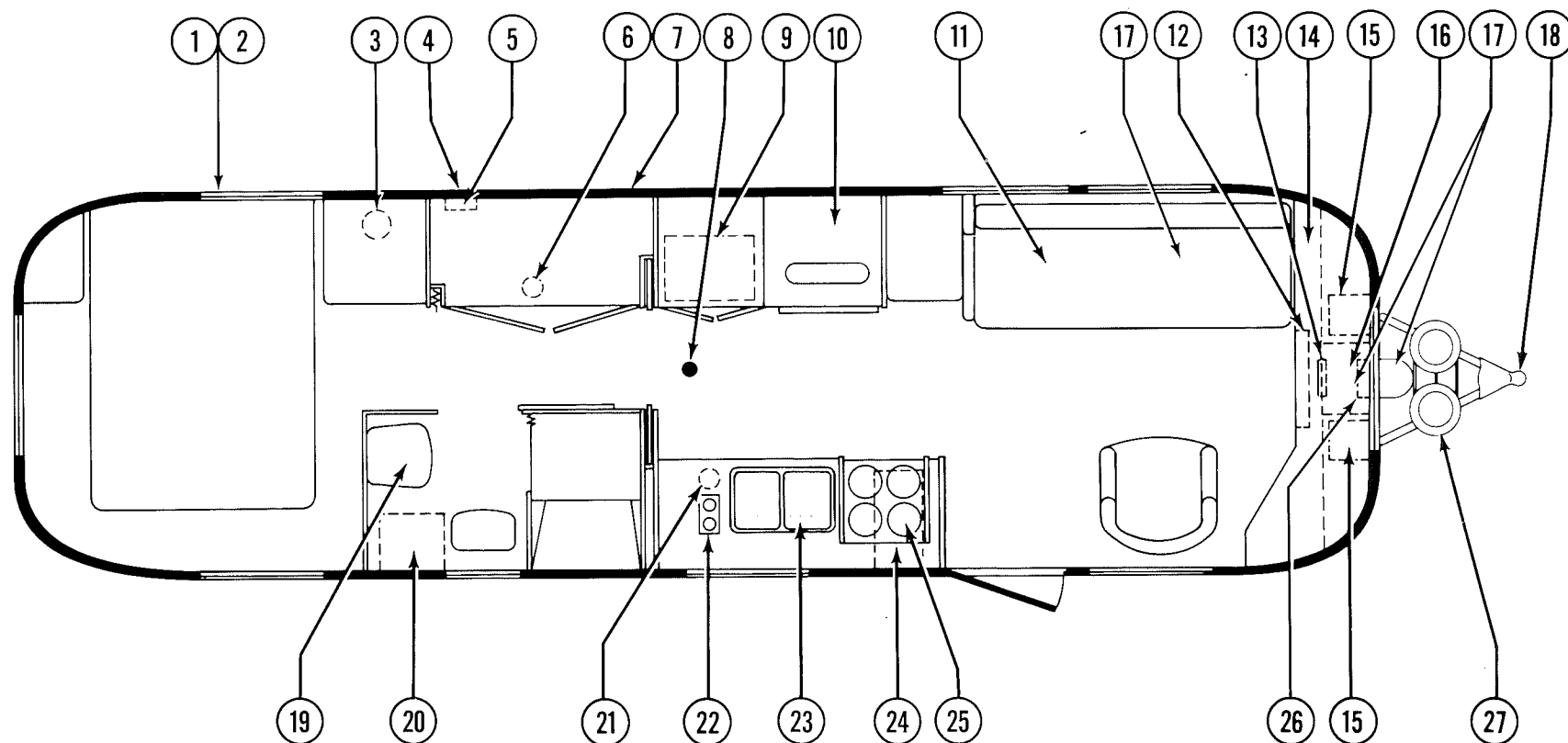
The antenna control panel is located on the curb side wall just above the arm rest. A two position rocker-type switch is used to control the antenna. When the upper portion of the switch is pushed, the antenna raises to the full "up" position then starts to turn in a clockwise direction. When the strongest 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 in motion. The antenna must be fully stowed to travel.

Floor Plans



Center Bath (Twin)

No.	Description	Page No.
1.	Vacuum cleaner	57
2.	Water inlet - city	71
3.	Electrical inlet - city	77
4.	120 Volt circuit breaker panel	77
5.	Waste outlet	74
6.	Water pump	71
7.	Water inlet - tank	71
8.	Microwave oven (optional)	64
9.	Air conditioner	53
10.	Refrigerator	61
11.	Front lounge	48
12.	Entertainment center	50
13.	Table	52
14.	Battery	79
15.	Power brake booster (location varies)	17
16.	Hitch	27
17.	Toilet	75
18.	Water heater	70
19.	Water purifier	72
20.	Appliance center	55
21.	Sink	53
22.	Range and oven	66
23.	Furnace	68
24.	12 volt distribution panel	89
25.	Digital clock	50
26.	Univolt	77
27.	L.P.G. tanks and regulator	58

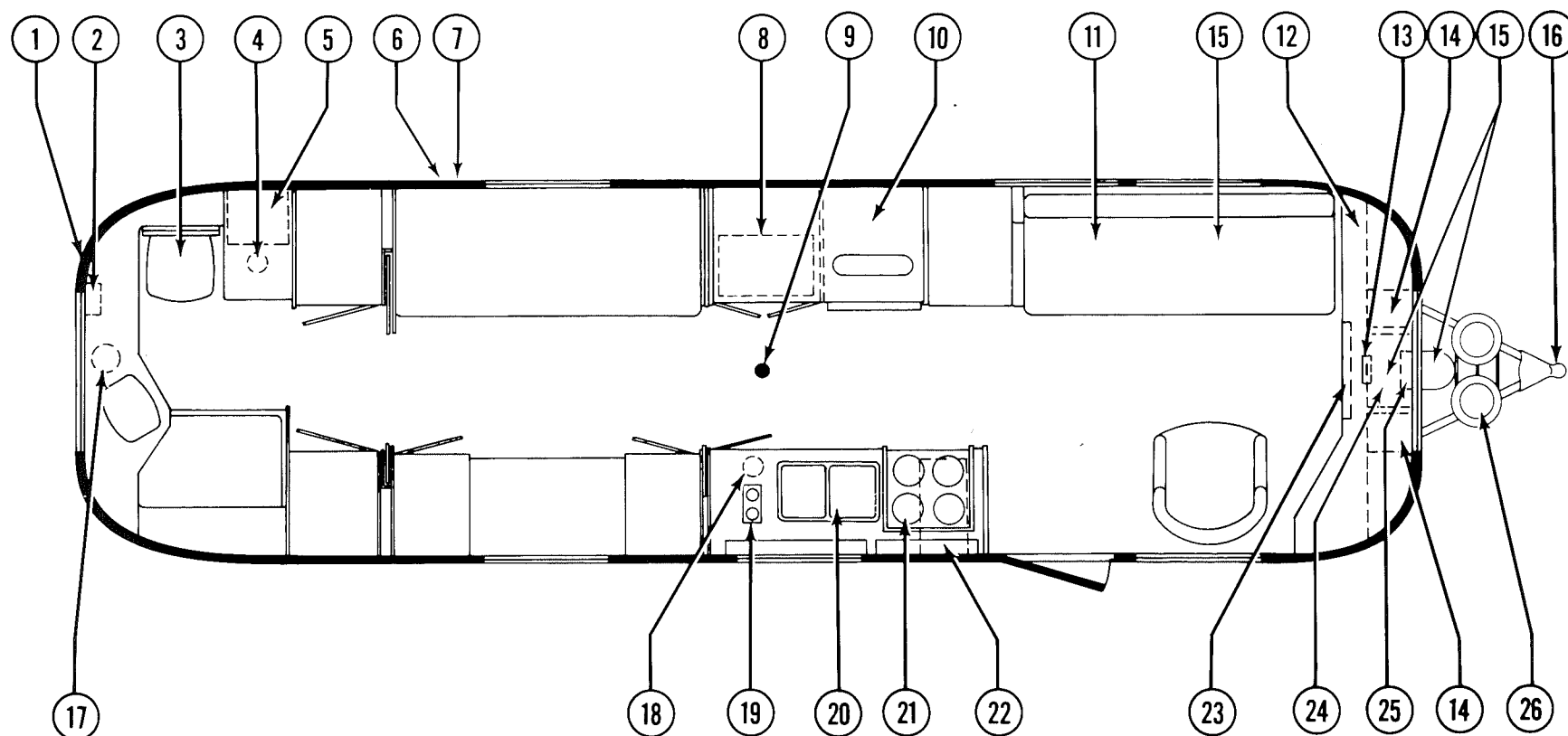


Center Bath (Double)

No. Description

Page No.

1. Water inlet - city	71	10. Refrigerator	61	19. Toilet	75
2. Electrical inlet - city	77	11. Front lounge	48	20. Water heater	70
3. Vacuum cleaner	57	12. Table	52	21. Water purifier	72
4. Waste outlet	74	13. Digital clock	50	22. Appliance center	55
5. 120 volt circuit breaker panel	77	14. Entertainment center	50	23. Sink	53
6. Water pump	71	15. Battery	79	24. Furnace	68
7. Water inlet - tank	71	16. Univolt	77	25. Range and oven	66
8. Air conditioner	53	17. Power brake booster (location varies)	17	26. 12 volt distribution panel	89
9. Microwave oven (optional)	64	18. Hitch	27	27. L.P.G. tanks and regulator	58

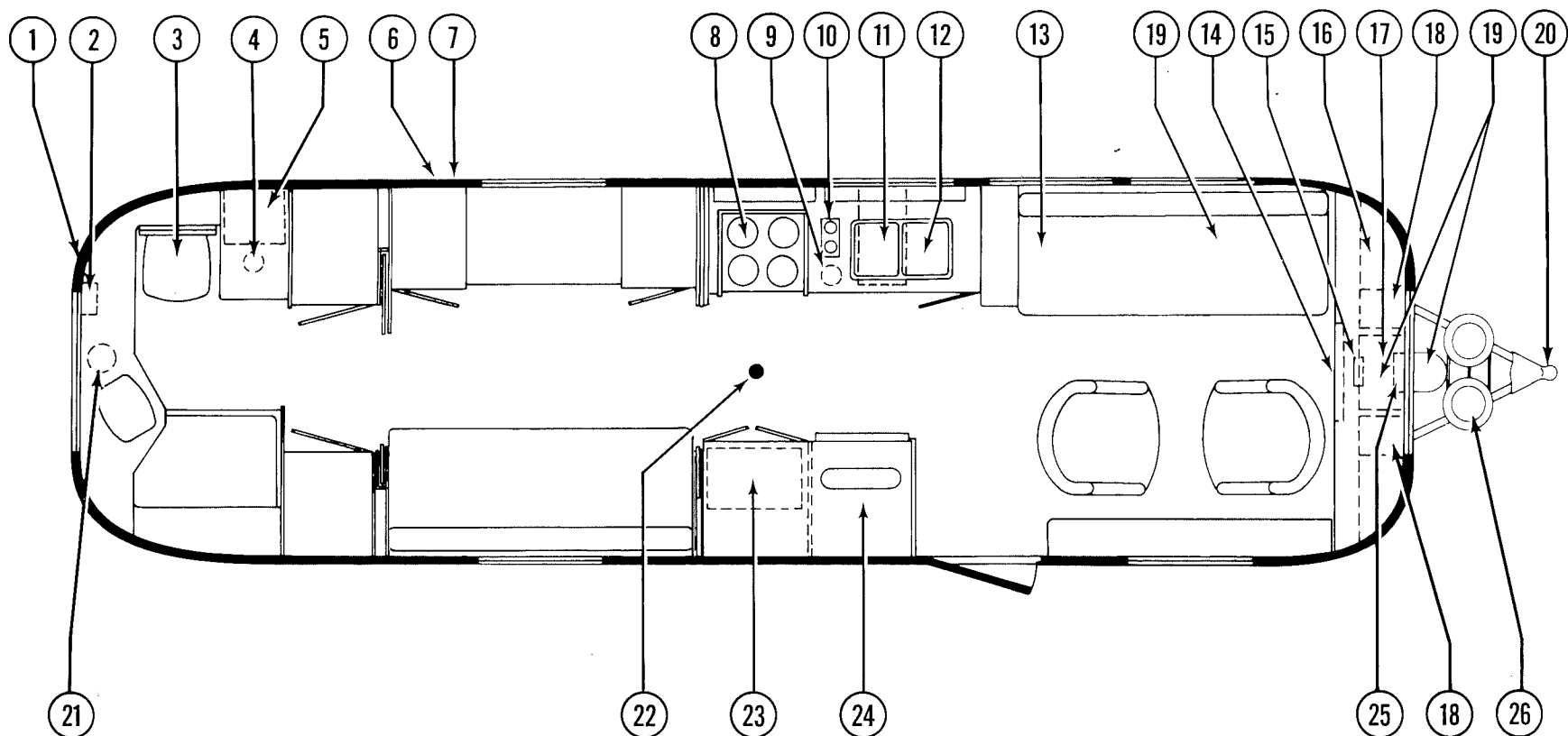


Rear Bath (T & D)

No. Description

Page No.

1. Waste outlet	74	10. Refrigerator	61	18. Water purifier	72
2. 120 volt circuit breaker panel	77	11. Front lounge	48	19. Appliance center	55
3. Toilet	75	12. Entertainment center	50	20. Sink	53
4. Water pump	71	13. Digital clock	50	21. Range and oven	66
5. Water heater	70	14. Battery	79	22. Furnace	68
6. Electrical inlet - city	77	15. Power brake booster (location varies)	17	23. Table	52
7. Water inlet - city	71	16. Hitch	27	24. Univolt	77
8. Microwave oven (optional)	64	17. Vacuum cleaner	57	25. 12 volt distribution panel	89
9. Air conditioner	53			26. L.P.G. tanks and regulator	58



Rear Bath (Roadside Galley) - (G - Twin, H - Double)

No. Description

Page No.

1. Waste outlet	74	10. Appliance center	55	19. Power brake booster (location varies)	17
2. 120 volt circuit breaker panel	77	11. Furnace	68	20. Hitch	27
3. Toilet	75	12. Sink	53	21. Vacuum cleaner	57
4. Water pump	71	13. Front lounge	48	22. Air conditioner	53
5. Water heater	70	14. Table	52	23. Microwave oven (optional)	64
6. Electrical inlet - city	77	15. Digital clock	50	24. Refrigerator	61
7. Water inlet - city	71	16. Entertainment center	50	25. 12 volt distribution panel	89
8. Range and oven	66	17. Univolt	77	26. L.P.G. tanks and regulator	58
9. Water purifier	72	18. Battery	79		

Interior

The Airstream interior has been designed for comfort, convenience, durability and appearance. An understanding of the operational procedures and maintenance techniques of the interior appointments will add to your pleasure as well as the long life of your trailer.

Drapery, upholstery and mattress covers must be professionally dry cleaned with a mild, pure, water-free solvent. Frequent vacuum cleaning is recommended.

Following is a list of upholstery materials used in 1979 Excella trailers. 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.

Fabric Name	Cleaning Code
Bengal #337	S
Whitney - Mocha	SW
Sonnet #373	S

Cleanability Codes

Code SW

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.



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. Pre-test small area before proceeding. Use a professional furniture cleaner when an overall soiled condition is reached.

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.

Professional carpet cleaning methods should be used for heavy carpet cleaning. However, you can clean your carpet more frequently with a broom or vacuum cleaner. Consult a professional carpet cleaner for hard to remove stains.

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 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 mild household detergent with water. But, again, no abrasives.

The **Woven Wood** window shades installed in Excella models require routine maintenance to insure lasting beauty. Dust build-up is the major cause of soilage so the fabric should be vacuumed periodically. Should the fabric become soiled, a solution of lukewarm water and mild detergent should be used to sponge off the fabric, taking care not to soak the material, particularly any fringe trim. Very stubborn or ground in stains can be touched up with a household stain remover. Bleach or strong household cleanser should not be used.

Operation and Adjustment:

Should cords become difficult to pull, check alignment in pulley mechanism. Do not force the mechanisms as they will bind even more. Should one side of a shade raise more than the other, simply adjust the cord equalizers. They are set at the factory but may get out of alignment with use. Should a yarn slip off the edge of the fabric, remove the yarn completely. The weaving technique used allows removal of yarns without affecting the strength of the material or causing it to unravel.

Treat your parquet **wood galley floor** just as you would any fine hardwood floor in your home. Clean the surface with a mild detergent and warm water, dry thoroughly, then coat with any good floor wax. Never use abrasive type cleaners on your floor.

The high-pressure laminate wood 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.

To convert the lounge into a bed, grasp the front edge of the seat, lift up slightly and pull lounge assembly out until it stops and the lounge back is in a horizontal position.

To return bed to lounge position, push lounge back toward wall until seat back is in upright position.

To make fixed twin beds, lift mattress slightly, pull it away from the wall and then tuck bedding in along wall. Note: Please do not launder mattress ticking; it has to be dry cleaned to prevent shrinkage.

The **Central Control Panel**, located in the galley roof locker of your unit, monitors your Airstream systems.

The **panel display** button lights up the indicator lights. The AC power light indicates that you are operating on 120V AC.

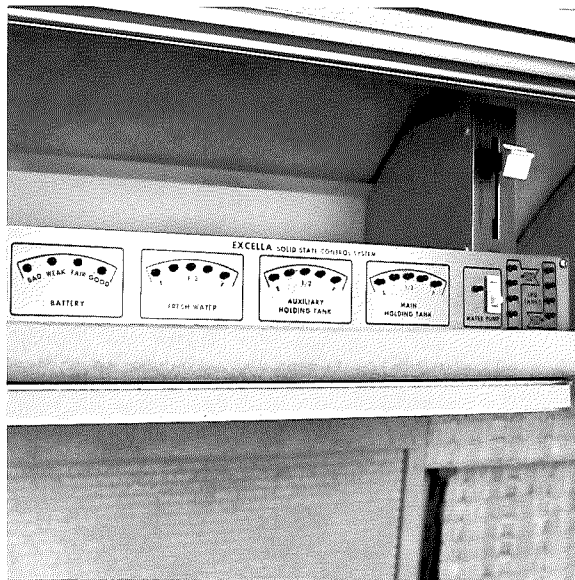
The **battery condition tester lights** indicate whether the trailer batteries are in good, fair, weak or bad condition. When they show weak or bad condition, you should take every reasonable step to conserve power by using as few lights as possible and switching off appliances. The battery should be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



Lounge Into Bed 1.



2.



Central Control Panel



Woven Wood Shade

The charging system in your trailer is much like the charging system in your car. The univolt package performs a similar function to the car alternator by constantly recharging your battery as power is used. It is important to remember, however, that if the total current draw is greater than the univolt's capacity to recharge, your battery may become discharged even though the univolt is attempting to keep it charged. In this event, it will be necessary to reduce current usage.

The **water pump switch**, when on, also lights the indicator light. For more information on the pump, please refer to page 71.

The **water tank, main holding tank and auxiliary holding tank gauge lights** show the amount of liquid in their respective tanks. Measurements are made by means of a series of electronically controlled probes located at various levels in each tank. The gauge lights will indicate in one of the five positions (see diagram).

Accumulation of oxides, dirt, etc. on the probes may result in inaccurate readings. In this case remove probes from the tank and scrape clean. Apply sealant to thread area only and replace probes. Care must be taken to keep the probes free of sealant.

The **L.P.G. gauge lights** indicate the amount of liquid in each tank. To check the level, press the test switch near the L.P.G. gauge on the Central Control Panel and read the amount of liquid in either the roadside or curbside tank.

The **power-on light** will glow automatically when you are hooked up to city power. This light and the polarity warning light are your checks on a proper 120 volt connection.

The **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.

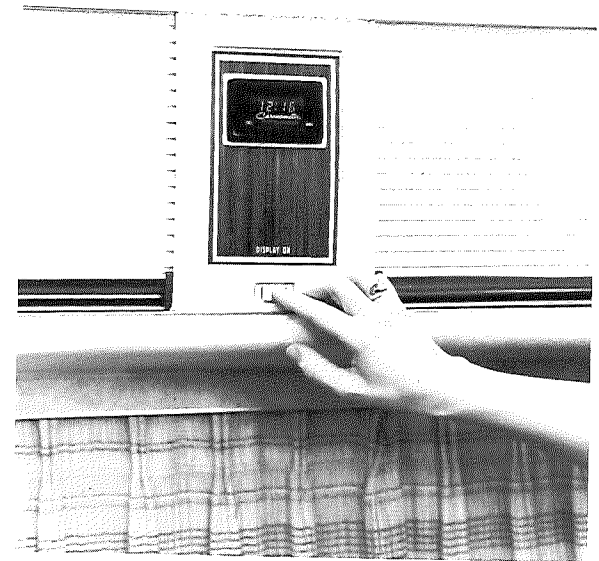
To conserve electricity, the display switch may be turned OFF. (See Fig. 1) The correct time is held in memory until the display is turned back on. If, when the display is turned back on, the time shown is incorrect, there has likely been a power interruption.

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.

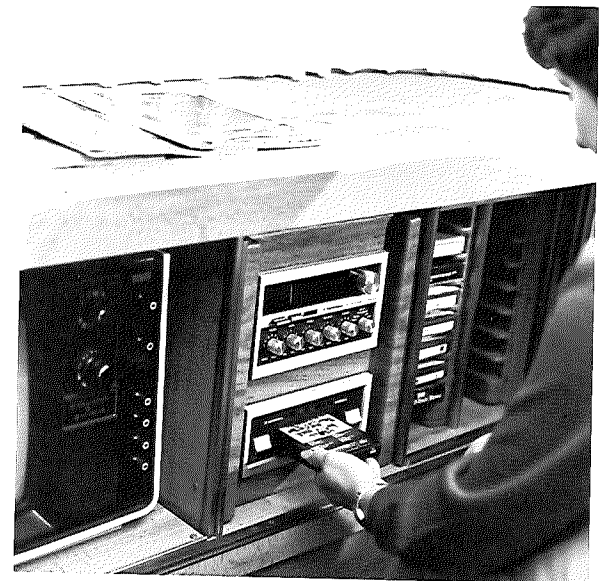
A combination Motorola Stereo AM-FM radio with separate 8 track stereo tape player is available. The "fader" control allows the front speakers to be turned on by themselves, or the rear speakers by themselves, or any combination of front and rear speakers.

Operating Instructions

1. Switch power on by pressing POWER button to "in" position. Switch power off by pressing POWER button again, releasing it to "out" position.
2. Turn SELECT control to desired mode of operation (AM, FM, FM STEREO, FMLC, or TAPE) NOTE: FMLC position is useful only in strong FM signal areas, especially where many FM stations may tend to interfere with each other. FMLC position minimizes this type of interference. For best FM reception under normal conditions the "FM STEREO" position should be used. The "FM" position is useful in fringe areas to lock receiver into monaural mode, thus eliminating stereo threshold noise.
3. Turn TUNING control to select desired station.



Electronic Digital Clock



Stereo Tape and AM/FM Radio

Stereo Operation

The indicator light will go on automatically when selected FM station is broadcasting in Stereo. The light is not on when monaural broadcasts are being received, or when a stereo signal drops below a predetermined level. The radio is designed to reproduce weak stereo signals monaurally to provide more noise free reception. When the signal increases beyond the threshold level, the stereo indicator will light again.

Tape Deck Operation

Insert tape cartridge into slot (behind hinged panel, see Fig. 2) to a fully seated position to switch tape deck on. Receiver SELECT switch must be in TAPE position to operate tape deck. Retracting tape cartridge approximately one inch from seated position or removing tape cartridge completely switches tape deck off.

The program indicator lights indicate which tape program is playing.

When REPEAT button is in "IN" position, the tape deck will continue playing the same program that is playing until another program is selected or button is released to "OUT" position.

Press and release PROGRAM button to position tape deck pick-up head to the next program on the tape. NOTE: If PROGRAM selector feature is not used the four programs will

play in sequence except when "REPEAT" button is in "REPEAT" position. The tape deck will play continuously in this manner until tape cartridge is pulled out from its seated position.

In time, oxide from recording tape will accumulate on the tape head and capstan shaft which can cause tape hiss and erratic operation. The more often the tape player is used, the more often it should be cleaned.

Clean the head with a cotton swab moistened with isopropyl alcohol. **Do not use carbon tetrachloride.**

To clean the capstan shaft, first turn on the motor by depressing the motor switch (next to the capstan shaft) with the eraser end of a pencil. Use a cotton swab moistened with alcohol on the shaft.

The fuse for the radio, or radio/tape is located behind the unit. To gain access to the fuse, carefully pry off the metalized plastic front bezel of radio unit. Remove four attaching screws and slide unit out.

On models equipped with a front credenza and side pull out lounge, the table compartment forms the forward lounge arm rest when the table is not in use. **To use the table**, slide the moveable compartment along the floor track to the desired position. **To set up the table**, all models, lift into a horizontal position and pull the folding leg down until it locks in position. **To extend the table** pull the extension frame and leg out as far as they will go. Release the catch on the forward curbside edge of the extension table leaf and rotate the leaf over onto the extended frame. **To stow**, simply reverse the above procedures.



Table Opening 1



2.



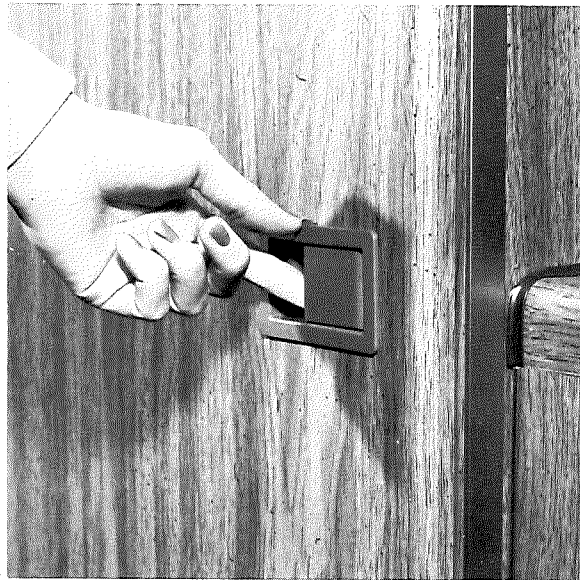
Beverage Cabinet



TV in Credenza



Air Conditioning Ducts and Filters



Wardrobe Catches

The **Armstrong air conditioner** can be used for cooling or heating your trailer or for air circulation only.

To operate for cooling:

1. Make sure you are connected to 120V supply.
2. Close doors, windows and ventilators.
3. Set to "Hi-Cool" position to start unit. Set thermostat indicator to desired position for your particular comfort level. On "Hi-Cool" fan will run continuously.
4. Set to "Lo-Cool" position for night time operation or if air conditioner cycles on or off at close intervals. On "Lo-Cool" the fan will also run continuously.
5. Do not use "Lo-Cool" or "Hi-Cool" settings below 60°F outside temperature.
6. For air circulation, use "Fan" position. During the heating season, the fan can help circulate warm air from the furnace.
6. To shut off, set switch to "off" position.

Note: The air conditioner will not operate until speed selection is made. The recommended cooling speed for various outdoor temperature ranges are:

Hi—Cool	70—120 F
Med—Cool	60—110 F
Lo—Cool	50—100 F

To operate for heating:

1. Set wall thermostat to "HEAT" position and set thermostat indicator to your desired comfort level.
2. Set system switch to your preferred speed setting.

Note: The heater will not operate until speed selection is made.

To use for air circulation, set wall thermostat to "OFF" position and system switch to any of the three speed selections. To shut unit off, set system switch to "OFF" position.

Shut unit off to clean or replace filters. Clean both filters with vacuum cleaner once a week. Once a month remove filters and wash in warm soapy water.

Stainless steel sinks are not 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.

For further information on galley equipment refer to page 61 for the refrigerator and page 66 for the range and oven.

All the **drawers** are removable allowing you storage flexibility and ease of packing and unpacking. Wardrobe catches are self-locking and they may be opened by lightly pulling the cover plate toward you.

The **below bed storage** is provided for added storage of bedding and linen or fishing and hunting gear.

When **attaching wall hung improvements**, like hooks for clothing, bookshelves and extra towel racks, secure with half-inch No. 8 sheet metal screws ~~(1/4")~~ with flat binder heads. Make holes in the aluminum inner walls with a small hand drill (No. 30 drill bit).

Bed lights are operated by a switch centered on the underside of the light mounting frame. Access is provided through the opening in the underside of the lamp to replace bulbs. Pull bulb from socket and replace. Replacement bulbs are available from your Airstream dealer.

Galley and vanity lights, gently squeeze lens and pull down to remove. These lights are operated by a remote switch on wall.

Bath Lights are operated by a switch on the rear wall above and just roadside of the sink. For bulb replacement remove screws attaching lens to frame, remove lens.



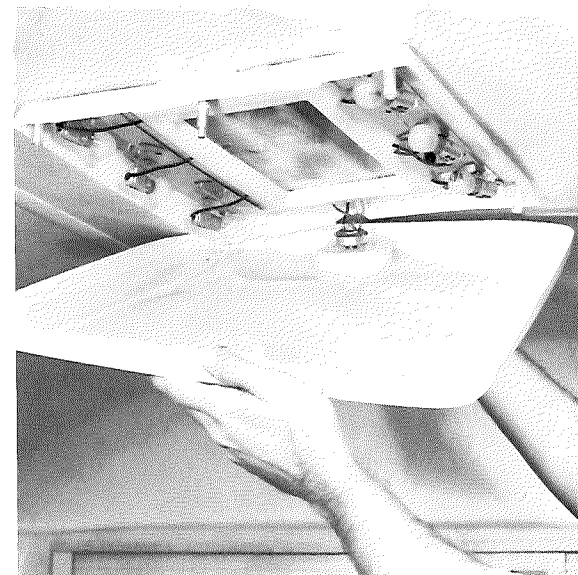
Rooflocker



Bed Lights



Galley Light



Ceiling Light Fixture

Ceiling light fixtures are incorporated with the ceiling fresh air vents. To operate the lights turn the forward control knob clockwise; first position 2 lights, second position 4 lights, third position 6 lights, fourth position off.

To remove the lens and replace the bulbs, pull knob from light switch shaft and remove nut. Remove the screw from the vent control handle. Remove 4 screws attaching lens to lamp base. This will release the lens.

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 counter-clockwise will close the vent.

Airstream vents are designed to allow air circulation while still keeping out rain and can be used in any weather. Screens should be removed for periodic cleaning.

The **NuTone Food Center** allows you to operate several appliances with just one built-in power unit. Your Excella is equipped with three attachments, mixer, blender, and knife sharpener. Other appliance attachments are available.

Your power unit was oiled at the time of manufacture but a storage period may have permitted oil to drain back into the reservoir. Before using it for the first time, please run the power unit for one to two minutes to insure lubrication . . . before attaching an appliance. At intervals of from one to two months, depending on the amount of use, a few drops of ordinary household oil should be placed around the motor shaft opening.

The unit will warm up in proportion to the length of time it's run and the load it carries. If you run it unusually long or hard, give it a rest before putting it to work again.

The **mixer** was designed for convenience and efficient operation. The bowl rests on a turntable directly connected to power unit. The motor, not the beater, turns the bowl — automatically keeps it revolving during mixing, regardless of the consistency of the batter. This feature eliminates hand-turning the bowl. And, while the bowl revolves automatically, the beater turns in the opposite direction. This 'counter-motion' feature helps prevent lumpy, incomplete mixing.

To operate the mixer:

1. Place turntable in position on the power unit.
2. Lock the turntable in place by pressing the locking lever clockwise.
3. Place the mixing bowl on the turntable.
4. Push the beater blade into the beater head. Blade will 'click' when it's locked in position.



Nu-Tone Appliance Center

5. Insert beater head shaft into center tube of bowl. Place it in one of six positions until it snaps into turntable.
6. Turn dial to desired speed.

Note: To remove beater head, turn counter-clockwise, and lift it out of mixing bowl. If the turntable should become locked to power unit and cannot be easily removed, insert beater head and turn it counter-clockwise.

The **blender** makes meal preparation and entertaining less work and more fun. It performs, quickly and easily the time consuming and tiring tasks of grating, chopping, shredding and mincing; it even liquefies solids and blends them to perfection.

To operate the blender:

1. Place blender in position on power unit, and turn clockwise to lock securely in place. Never attempt to place blender in position while power unit is running.
2. Put food in blender. Cover. Turn dial to desired speed. Or . . .
3. When adding solids, cover, then turn dial to desired speed. Remove insert from lid. Add food through opening while blades are in motion.
4. To remove contents from blender, use a long-handled rubber bottle and jar scraper or a wooden spoon or fork. Don't use a metal spatula or spoon.

The **knife sharpener** will allow you to sharpen your knives in just seconds.

To operate the knife sharpener:

1. Place sharpener in power unit; turn clockwise to lock in position. Be sure sharpening stone is on left as you face the knife sharpener.
2. Turn control dial to speed 3. Be sure knife is clean and dry.
3. Place heel of knife blade into guide slot next to sharpening stone (left or right). Hold knife firmly by the handle and draw it slowly toward you with cutting edge against stone. Allow weight of the knife and the guide slot to apply necessary pressure and positioning.
4. Repeat operation, alternating to left and right side of stone with each stroke, until desired sharpness is obtained.

Caution: Don't test blade edge with fingers. Don't place hands, fingers or other objects on spinning sharpening stone.

Don't sharpen knives with an irregular edge such as serrated, scalloped, fluted, corrugated or hollow edges . . . and don't sharpen scissors. **Don't clean sharpener while attached to power unit.** Be sure speed control dial is turned "off" before attaching or removing sharpener.

The area above the refrigerator and refrigerator cabinet incorporates a **built-in china cabinet** for the handy storage of dishes and glassware. Decorative translucent by-pass sliding doors provide easy access and their design compliments the overall interior decor.



China Cabinet

A **12 volt two-tone door bell button** is installed on the forward side of the main door as an integral part of the outside assist handle. The chimes are located under the credenza.

The **bathroom exhaust fan** is in the bathroom ceiling and is operated by a switch on the rear bathroom wall above the roadside of the sink.

The **lavatory bowl, tub or shower pan** in your Airstream bathroom are made of a special ABS long-wearing, light weight, high strength plastic material. The lavatory counter top is marble patterned plastic laminate. When cleaning either plastic surface, use soap or detergent only—never use scouring powder.



Bath



Bathroom Outlet



Vacuum Cleaner

Always re wax 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.

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. When using the shower head, it should 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 push button at the shower head. Apply soap, lather thoroughly, then rinse the soap off. The shower can be turned on and off without disturbing the hot-cold adjustment. The telephone shower head is also used to fill the tub for taking a bath.

The **120 volt and 12 volt outlets** in the rear bath are located on the under surface of the rooflocker near the window. In the center bath, the 120 volt and 12 volt outlets are located behind the mirror.

The **Vacuum Cleaner dust canister** is located in the center of the rear trunk (exterior access only) on both rear bath and center bath twin bed models. The dust canister on the center bath double bed model is located in an exterior roadside compartment behind the

forward nightstand. To remove the canister for cleaning, release the two latches near the top of the canister and lift out. You will see a filter on the air inlet to the vacuum motor, this should be checked and cleaned, if necessary, each time you empty the dust canister (about every three months under normal use). The **vacuum outlet** is below the center of the rear bathroom cabinet on the rear bath model and in a like location in the rear nightstand (between beds) on the center bath twin bed model. The outlet for the center bath double bed model is located in the forward roadside nightstand next to the bed.

A remote **Vacuum Cleaner Switch** is located inside the undersink lavatory cabinet on rear bath models. The switch is located on the vacuum cannister in the rear nightstand on the center bath twin models, and inside the roadside nightstand on center bath double models.

L.P.G. System

Your Airstream is equipped with two tanks for LPG (Liquid Petroleum Gas). LPG burns with a clean blue flame. There are two basic types 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 where subfreezing temperatures are common, since Butane freezes at 32°F as compared to -40°F for Propane. **All of the orifices in your Airstream 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 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 three weeks from each 30-lb. tank.

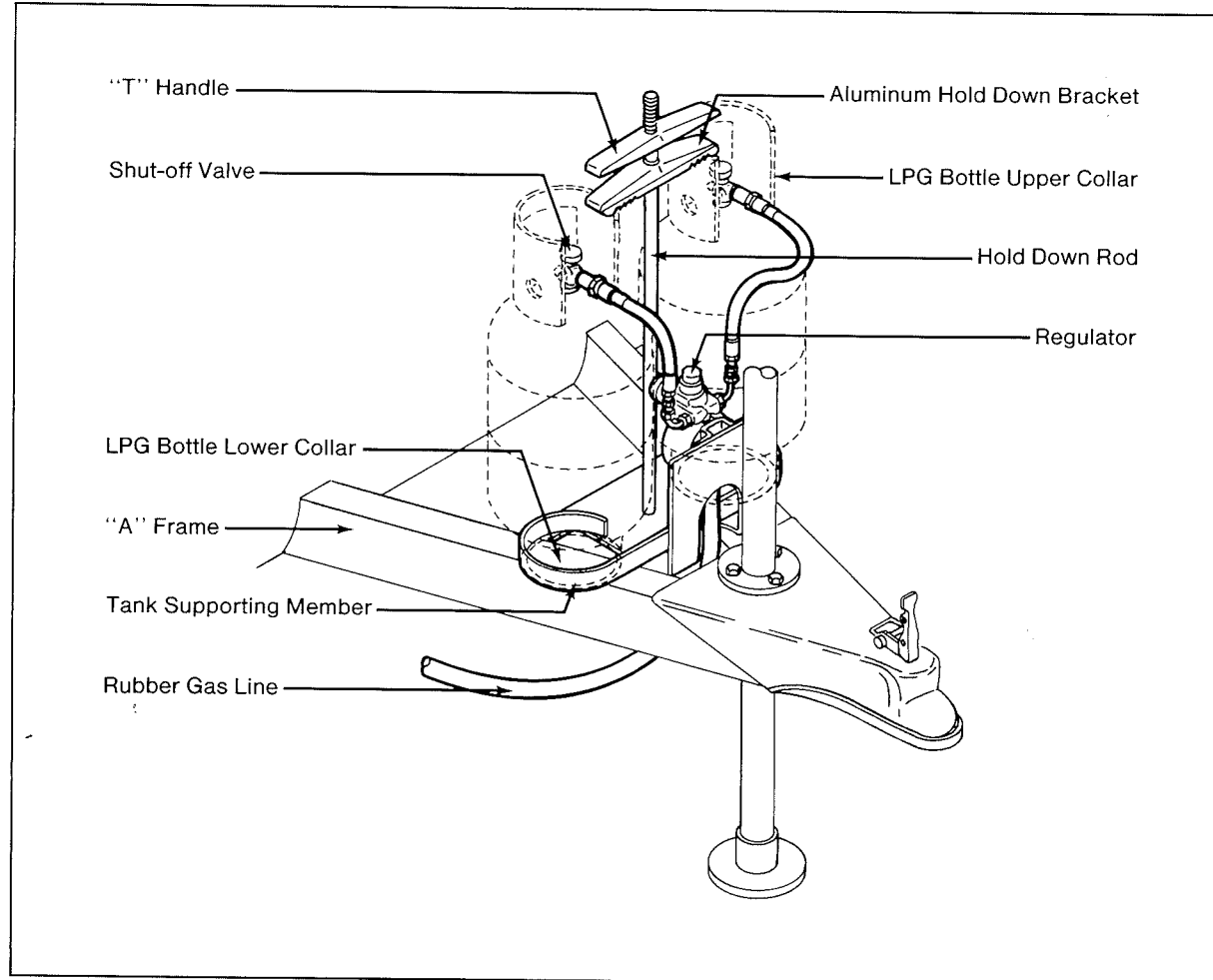
The Excella is equipped with an **automatic gas regulator**. Both tanks are connected to this regulator and when turned on, gas is drawn from only one tank at a time. When the tank being used is depleted the regulator automatically switches to the full tank. An indicator on the regulator points toward the tank 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 remove "T" handle, then remove the outer tank protective shroud, close the tank valve, disconnect tank, remove from "A" frame, have it refilled and reconnect. The step by step procedures from tank removal and installation follow.

The vent at the bottom of the regulator must be kept free of any obstruction. Inspect the vent opening regularly.

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 rein-

Fig. 1 - LPG - Bottle Installation



stalled correctly in order to prevent any possibility of the tanks 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. Remove "T" handle, then remove protective shroud. Remove tank hold down bracket.
2. 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.
3. 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).
4. Remove bottle from "A" frame.

**DO NOT REMOVE THE CENTER
HOLD DOWN ROD.**

To install:

1. Place the bottle in position on the "A" frame so that the lower collar fits down inside the circular shaped bracket. The open gap in the upper collar faces the front of the trailer (see Fig. 1). 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.

3. Turn on gas, shut off valves and test all fittings for leaks. To test, paint fittings with a soap suds or detergent solution and watch for bubbles.
4. Replace protective shroud. Replace the "T" handle and tighten.

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. For complete appliance operating instructions, refer to page 61-70.

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.

Note: In some states it is illegal to leave gas tanks turned on while towing a trailer.

Additional information on the LPG system will be available in the Excella Service Manual.

Refrigerator

Your Airstream is equipped with an **A.G.A. approved Dometic 3-way gas electric refrigerator** which operates on either LP gas, 12V or 120 electrical current. These are the finest refrigerators available for trailer use and will give you many years of faithful service.

For best operation of this refrigerator it is important to level your trailer. When parking try to avoid having a strong wind blowing directly against the vent outlet for most efficient operation.

Controls for both gas and electric operation are located inside the food storage compartment, at the bottom of the unit, and in the Outside Access Compartment. (See photo.)

For gas operation, follow these instructions:

1. Open refrigerator door, all controls for gas operation are located at bottom of unit.
2. To start the refrigerator turn the valve knob (A) to gas position. The gas valve is now open and the electric circuits are not in use. Set thermostat knob (C) to setting No. 4.
3. Pull knob (D) of the automatic pilot, and keep it out for 15 seconds. Press in knob (E) of the piezo lighter. The pressing may have to be repeated.
4. After the burner is lit, which will be seen through reflector window (F), keep the knob (D) pulled outward for an additional 15 seconds.
5. Release the knob (D) and check that the burner is operating.

If the burner is not operating, repeat the lighting procedure.

After a replacement of a gas bottle or a long shut-off period the gas lines are likely to be filled with air. In such cases the lighting procedure has to be repeated until the air is pushed out of the lines and the gas has reached the burner.

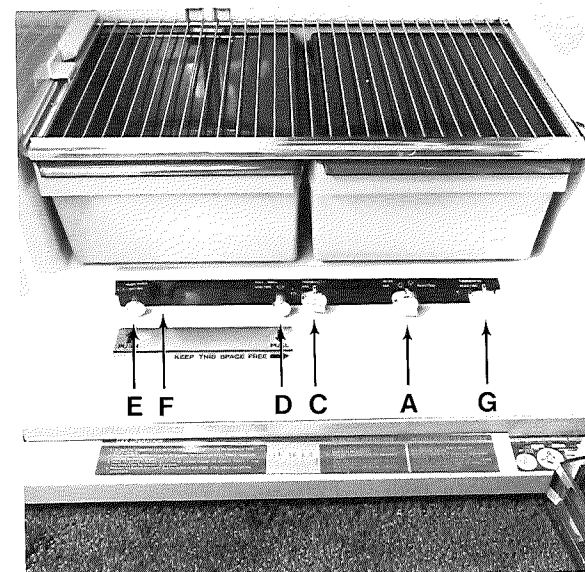
As soon as the required cold temperature inside the cabinet is reached, the thermostat cuts the burner main flame to the by-pass flame sufficient to keep the safety valve open during gas operation. During electric operation the thermostat cycles the flow of the electrical current to maintain the set temperature.

Incorporated in the burner bracket is an automatic flame failure device which allows gas to pass only when the burner is lighted, keeping the thermocouple hot. Should the flame be blown out, the thermocouple will cool and the device will cut off the flow of gas to the burner.

The refrigerator is fitted with a piezo lighter which does not require flint.

For 120V Electric Operation, follow these instructions.

1. Open refrigerator door and outside access compartment door. Outside access doors are opened by turning the latch handle 1/4 turn to the open position. Controls for electric operation are located in both areas.



Controls Inside Refrigerator

Caution: The upper edge of the door is not hinged. It is held by a locking flange, and is secured to the flange with a single sheet metal screw. The screw must be taken out before unlatching the door. The door can then be completely removed.

2. To start the refrigerator turn the valve knob (A) to the off position.
3. Plug the electrical cord into the 120 volt outlet (B) located on the back wall of the storage compartment below the microwave oven.
4. Press knob (A) in, until it stops, then turn to 120V electric position.
5. Turn the electric thermostat knob (G) to setting No. 4.

12V Electric Operation

Your refrigerator's 12V mode is intended for use while traveling, in order to hold temperatures previously established while operating on gas or 120V electric modes. When not traveling, and operating self-contained, you should switch to the gas mode. When 120V is available, you may operate on either 120V or gas mode.

Note: Your 12V circuit has its own power cord separate from your main 7-way connector cord. Always make sure that this cord is plugged in before you start to travel.

To Operate on 12V:

1. Open refrigerator door, turn valve knob (A) to off position.
2. After a few moments, press knob (A) in and turn to 12V electric position.
3. If you had been operating on 120V just prior to changing to 12V, do not change the setting of the electric thermostat knob (G).
4. If you had been operating on gas just prior to changing to 12V, turn the electric thermostat knob (G) to the same setting as that on the gas thermostat knob (C).

For best operation even during extended stays in parks your unit should be periodically run on gas.

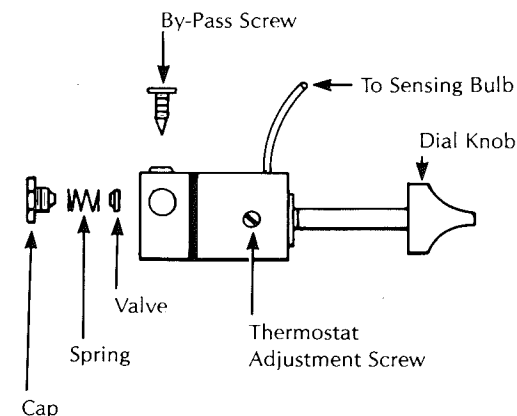
The refrigerator has automatic thermostatic control of the temperature in the food storage space. The gas thermostat (C) controls

the temperature during gas operation, while the electric thermostat (G) controls the temperature during electric operation. **Be sure to make the temperature setting on the correct thermostat.**

Your Dometic incorporates a unique, **fully automatic defrosting device** for the general food storage compartment, which eliminates the necessity for manual defrosting at frequent intervals normally associated with most conventional refrigerators in the medium size range. Furthermore, the time interval of each defrosting cycle, and the frequency, have been so arranged that during defrosting there is no noticeable effect upon the temperature of the foods stored in the refrigerator, and the frozen food storage conditions can be maintained at all times in the frozen storage compartment.

When cleaning, remove all food and clean the interior and all other plastic parts with warm water, and mild detergents. Never use abrasive or caustic cleaning powders, polishes, cleaning paste, gasoline, turpentine or other solvent type cleaners. Use a damp cloth for cleaning and finish with a soft dry cloth.

When the refrigerator is to be out of operation for some time, always leave the door slightly open or place a pie tin of barbecue charcoal on the shelf.



Thermostat

The following are some trouble shooting tips for emergency use only. They relate to gas operation and should normally be done by the dealer.

Problem: Flame goes out. The thermostat is out of adjustment. To adjust it, turn the dial to "zero". If the flame does not go down to the "low" by-pass setting, follow this procedure:

1. Unscrew the large cap screw at the rear of the thermostat and remove the valve. Clean the seat and valve, and replace.
2. If procedure (1) does not correct the problem, adjust the set screw out (in counterclockwise direction) until the flame goes down to the "low" position.

If the flame keeps going out when the dial is turned to (O), remove and clean the by-pass screw which is located as shown in the thermostat diagram.

Problem: Burner does not light. Remove and clean the burner barrel, and/or check the gas supply.

On gas refrigerators, the flue will require cleaning at least every six months. To do this, it will be necessary to gain access to the back of the cabinet. When cleaning the flue proceed as follows:

Unscrew the burner housing, then lift out the baffle on its support wire from the top of the boiler tube. From the top, clean the flue with a suitable flue brush. Also, clean the baffle, before putting back in place. An obstruction in the flue will reduce or stop flue draft. Flue obstructions will cause odors outside refrigerator, slow freezing and higher cabinet temperatures.

Additional information on the refrigerator is available in the Excella Service Manual.

Microwave Oven

The Litton Industries **portable microwave oven** is available as an option in your Excella. Airstream dealers cannot service or make adjustments to the oven. This must be done by an authorized Litton Industries service agency. If you ever have problems with the oven check the list of authorized service agents. This list is packed in your microwave oven.

To operate your Litton microwave oven:

1. OPEN DOOR by pushing down door release.
2. PLACE FOOD IN OVEN
3. SELECT COOK* OR DEFROST**
4. CLOSE DOOR — cooking or defrosting cycle begins when oven door is closed. Microwave oven may be opened at any point to check food even if time is left on the dial.
5. ALWAYS turn timer back to "OFF" when food is taken out.

Please read your cooking guide carefully. It will help you learn about your new Litton Electronic Oven quickly.

* For fast cooking of food when recipe calls for "MICROWAVE".

** Provides convenience for defrosting frozen foods. When microwaves first contact the outer section of the food, heat is created and conducted toward the center. Without automatic defrosting there is danger of overheating the outside of the food before the center is hot. In extreme cases, the outside of the food could be cooking before the center is defrosting. Automatic

defrosting alternates "defrost cycles" and "rest cycles." The rest cycles allow heat to be conducted toward the center providing an evenly defrosted food.

Your microwave oven is portable and can be removed for use in your home when your trailer is not in use.

IMPORTANT

Safety and Maintenance Instructions

Litton microwave ovens are one of the safest kitchen appliances. Each Litton microwave oven meets all safety standards set by the U.S. Dept. of Health, Education and Welfare. Look for the safety seal and UL tested label on your oven. However, it is important for you as a user to observe certain precautions and care in utilizing your Litton oven for maximum performance and safety. The door on your oven has been carefully designed to contain the microwave energy; therefore, it is important that you observe the following:

1. Do not attempt to operate this oven with the door open since open-door operation can result in harmful exposure to microwave energy. It is important not to defeat or temper with the safety interlocks.
2. Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
3. Do not operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no



Microwave Oven

damage to the: a. Door (bent). b. Hinges and latches (broken or loosened). c. Door seals and sealing surfaces.

4. The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

Your new oven requires very little maintenance except for cleaning. Do not allow grease, soil or splatter to build up on the door seal to the oven cavity. Use only mild detergent, water and soft cloth to clean the door surface and the interior surfaces. Odors can be eliminated by boiling a solution of one cup of water and several tablespoons of lemon juice in the oven for 5-7 minutes. Litton maintains trained service technicians in all principal metropolitan areas. It is suggested that

these authorized service agencies be utilized for proper repair and adjustment of your oven.

NOTE: Never operate the microwave oven unless the shelf is in place. The steam that is present during cooking and the moisture on the inside of your microwave oven are normal and nothing to worry about. The moisture is caused by the steam from the cooking food hitting a cool oven surface.

Range and Oven

Your Airstream is equipped with a Magic Chef **gas range and oven**. The following are some hints on how to keep them operating at their best.

Note: The range gas line shut-off valve, located on the lower exterior of the trailer below the range, must be turned off when towing the trailer, when changing the gas tank, or if the gas supply is turned off for any reason. Be sure oven and top pilot lights have been re-lighted as soon as range shut-off valve is turned on. If the range has not been operating for a long time, a longer waiting period for ignition of the pilot may be necessary due to air in the gas lines.

To light the pilots:

1. Be sure all valves are in the "OFF" position. The oven thermostat dial should be in the "PILOTS OFF" position.
2. Turn on main gas supply to range.
3. Depress and turn the thermostat dial to the "OFF" position.
4. Lift main cook top panel and light top burner pilot with a match.
5. Open oven door and light pilot with a match. A small flame will be noted at the top of the pilot burner.

The oven thermostat control knob (see illustration) is combined with the constant oven and top burner pilot shut-off. For normal use: turn only between "OFF" and "BROIL". When traveling, turn to "PILOTS OFF". Re-

light only when you want to use the range, by turning from "PILOTS OFF" to "OFF" and lighting oven and top burner pilots with a match.

Range Top Section

The range is equipped with orifices for use with L.P. gas only. The flame will be approximately $\frac{1}{2}$ inch long. Do not attempt to adjust gas to burner. The orifices have no readjustment.

Air shutters

Top burners have pre-set air openings and need no adjustment.

Top burner pilot adjustment:

Adjust top pilot so that tip of flame is just over the edge of inner cone. Top burner pilot adjustment screw can be reached by removing the thermostat knob (see illustration). Burners should light within 4 seconds. If lighting is difficult, check height of pilot.

Warning: Never allow the top cover to be closed while the range is in operation, as this could extinguish the flame and permit gas to escape into the trailer.



Range and Oven



Range Exhaust Hood

Oven Section

The thermostat on your oven does not have a by-passing setting. It will cycle off and on at all temperature settings except broil. No by-pass adjustment is necessary. There are no oven pilot adjustments on the thermostat. Control has been factory preset for use on L.P. gas. No field adjustment is necessary. The air shutter has been adjusted at the factory, however, it may require additional adjustment when used at high altitudes.

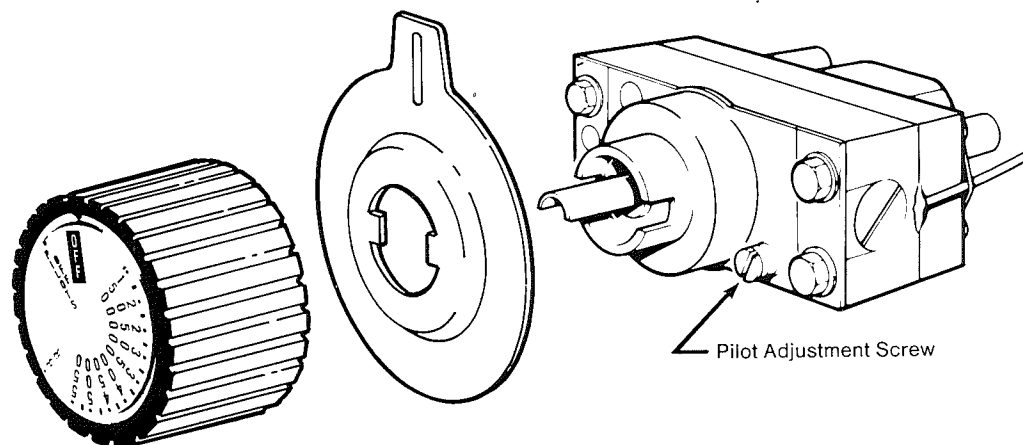
To adjust main oven burner air shutter:

Open air shutter to the full open position where you have a blowing condition. Begin closing the shutter slowly. When you reach the correct adjustment, blowing will stop. Burner should have a sharp blue flame approximately 3 inches long.

Important: Your oven is equipped with a **safety ignition** that requires a minimum of 30 seconds to operate after turning the oven control knob on. The oven pilot may be slow in lighting due to air in the gas lines.

Cleaning Instructions:

1. The main top has been hinged from the back so that it can be raised or removed for cleaning around the top burners.
2. When cleaning the top burner heads, care should be taken that all ports are opened up with a toothpick afterwards.
3. Spill-over or spotting in the oven or broiler are more easily cleaned when removed promptly after they occur.



Oven Thermostat

4. An orange flame indicates dirt or dust getting into burner—clean burners.

Never wash porcelain when warm. Never use cleaning powder containing grit or acid. When oven bottom is replaced after cleaning and servicing, be sure that it is locked in place.

The range exhaust hood vents cooking heat and smoke from the trailer. To operate, pull down on lever located to the right of central control panel. This will open the shutter and turn on the switch for the power fan. Clean the filter at least every six months with warm water and detergent. To remove the filter, remove the two screws that secure it to the

housing and let it drop out while supporting it with your hand. Keep the vent housing clean of grease and dirt by frequent washing.

Additional information on the Range and Oven is available in the Excella Service Manual.

Furnace

The Airstream furnace is an American Gas Association approved Suburban unit with an electronic ignition designed specifically for travel trailers. It has a sealed combustion system with a dual blower for maximum air circulation. One blower circulates room air while the other draws in air for combustion. The adjustable louvered heat registers control warm air flow while cold air returns through the galley cabinet toe kick opening.

The heat duct system also circulates warm air around the holding tank and water tank, a vital feature when operating in below freezing weather.

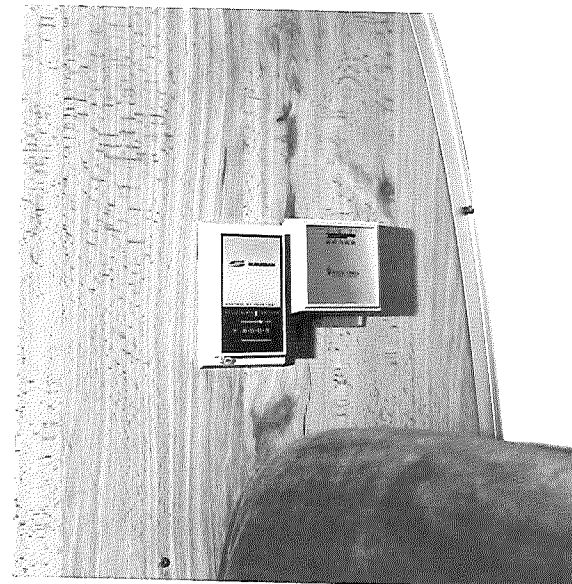
The Suburban furnace is thermostatically controlled. When the thermostat calls for heat, the blower starts and only after it has reached nearly full speed will the burner light. After the temperature set on the thermostat is reached the blower will continue to run for a short time removing most of the remaining heat from the furnace as well as forcing the combustion gases from the heat exchanger. To turn the furnace off for an extended period of time turn the thermostat and the gas valve to their "OFF" positions. The gas shut-off valve is outside the trailer below the furnace. Operating instructions are printed inside the furnace door.

Trouble-free operation of the Suburban furnace will depend on your adherence to recommended operating procedures and precautions. Regular preventive maintenance is important.

Recommendations and instructions are covered under "Maintenance and Cleaning" on page 69. Corrections of possible malfunctions presented here will be helpful in an emergency situation, but servicing should be done by a dealer. One note of caution regarding flue gases: they are vented from the furnace to the outside of the trailer through a vent in the outside wall. **Do not in any way obstruct this vent by placing clothing or other flammable material on the vent assembly.** Check it often to make certain it does not become clogged.

To start the furnace:

1. To light the furnace, turn the manual valve to the "off" position and wait 5 minutes with blower running. (Set thermostat above actual temperature to operate blower.)
2. After 5 minutes, set the thermostat to the "off" position.
3. Open manual valve. (Correct operating characteristics depend on this valve being positioned fully open. Never attempt to operate with valve partially closed.)
4. Set thermostat on desired temperature.
5. If burner does not light, set thermostat on "off" and repeat steps 1 thru 5.
6. If after 3 tries and no ignition, go to shut down and determine cause. Do not attempt to light burner with matches.



Furnace Thermostat

To shut down

1. Turn manual valve to the "off" position.
2. Set thermostat on "off".

Caution: The air shutter adjustment cover must be tightly secured for proper operation of the heater.

If your fuel supply is depleted the main burner will go into lockout. To reset the lockout, turn gas valve to "OFF" and set thermostat to "OFF". Wait 5 minutes and return to operation.

Adjustment of Main Burner (Primary air): Set the furnace into operation by advancing the thermostat and allow to run until it reaches near-maximum operating temperature. Observe the main burners through the burner observation window. The flame should be without a trace of yellow and be "sitting" on the burner. As the furnace was tested at the factory before shipment, it may be found that the primary air is already in proper adjustment. However, adjustments may vary from one location to another due to differences in elevation and in characteristics of the fuel gases.

If the flame burns yellow or "lifts" off the burner, it needs adjustment. Take out the screws retaining the rectangular cover plate and lift the plate off.

Inside the opening is a threaded rod with the visible end slotted to receive a screwdriver. By turning the rod you will adjust the position of the main burner air shutter. This air shutter should be adjusted to the point where a hard blue flame is present at the burner. Replace the cover and check to be certain that the flame is still hard blue. **Caution: The primary air adjustment cover plate must be in place for proper operation of the furnace.**

Note: If burner is allowed to operate in yellow condition, "soot" will accumulate on vent cap and in radiators. This should not be allowed to occur.

When the humidity is high inside and you wish to remove moisture, open a roof vent and turn on a vent or open a window slightly for cross ventilation.

Additional information on the Furnace is available in the Excella Service Manual.

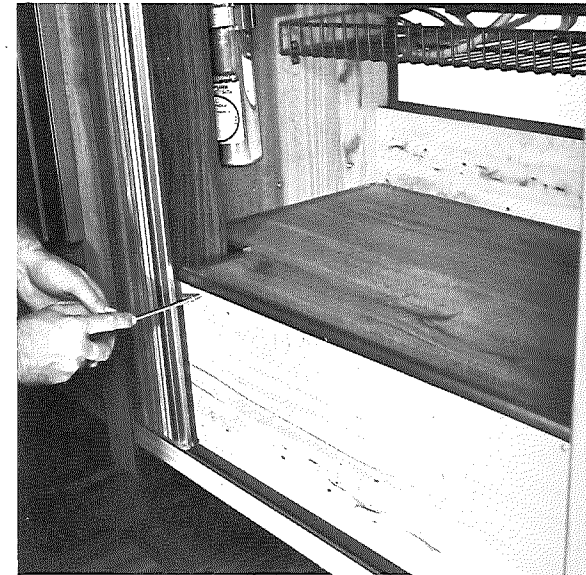
Maintenance and Cleaning

We recommend that the furnace be inspected and thoroughly cleaned by a qualified service agency before each heating season. This would include the combustion chamber, the main burner, the blower assembly, and all control parts. A careful inspection of all gaskets should be made and if any gaskets show signs of leakage or deterioration, they should be replaced.

Cleaning of the chamber and main burner will be required if the unit has been allowed to operate with a high yellow flame. The yellow flame is due to incomplete combustion (lack of air) and will deposit a soot formation inside the chamber and on the main burner.

To clean the chamber, main burner, blower assembly and controls, the chamber assembly must be pulled from the furnace.

The furnace is equipped with an oiled, sealed motor and requires no oiling.



Removing Furnace Access Door

Water Heater

The Atwood-Bowen Gas Water Heater is equipped with a Robertshaw LP gas pressure regulator control with a 100% shut-off safety valve which shuts off the gas supply if the pilot flame is extinguished or the water temperature becomes excessively hot. It is lighted and serviced from the outside through an access panel at the roadside rear, of the trailer on rear bath models, curbside rear center on center bath models.

Procedure for lighting or relighting:

1. Be sure the water heater is filled with water. Open the hot water faucet at the sink and when the water flows, the heater is full.
2. Turn manual gas valve, on the lower exterior of the trailer below the water heater, to the "ON" position.
3. Turn the gas valve knob (A) to the "OFF" position and the temperature indicator dial (B) to the lowest temperature position.
4. Wait sufficient length of time to allow gas, which may have accumulated in the burner compartment, to escape (approximately five minutes).
5. Turn gas valve knob (A) to "PILOT".
6. Depress and hold the red reset knob (E) and push the lighter (D) in and turn until the pilot flame ignites. This may take several turns of the knob. Or you may light it with a match. **Note: use cigarette lighter flint for flint replacement in pilot lighter.**
7. Keep the reset knob depressed for one-half minute after the pilot flame ignites.

8. Turn the gas cock knob to "ON".
9. Set the temperature indicator dial to the desired water temperature.
10. To shut down the water heater, turn the gas cock knob to the "OFF" position.

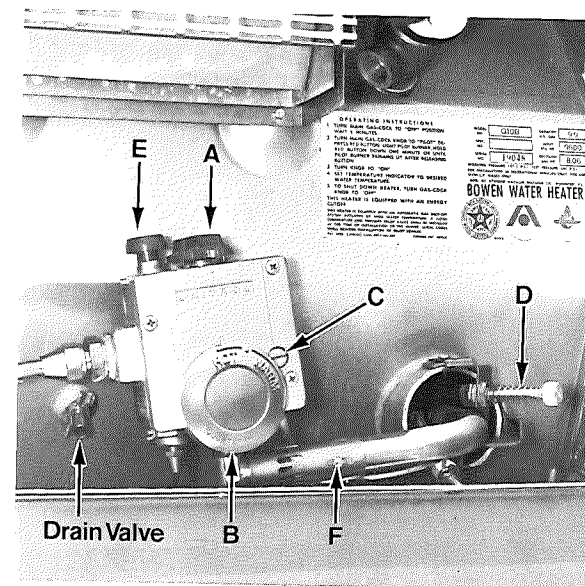
Pilot Flame Adjustment

If the pilot flame does not have a small orange tip, the pilot is not getting enough gas. The flame should be about $\frac{1}{4}$ inch in vertical height when the water in the tank is cold and the burner is off, $\frac{1}{4}$ to $\frac{3}{8}$ inch in horizontal length when the tank is warm.

A large orange flame indicates excessive gas supply, which will result in short pilot life and early replacement. The pilot has been properly adjusted at the factory and should operate with a blue, orange tipped flame enveloping the pilot thermocouple. Removal of the pilot adjustment cap (C) in the lower right corner of the control will reveal the pilot adjustment screw. Turning this screw clockwise reduces the flow of gas to the pilot (blue flame) and counter-clockwise, the gas supply will increase (orange flame). Replace the pilot adjustment cap.

Air Shutter Adjustment

All fuels depend upon air (oxygen) to give them proper burning characteristics. A yellow, smoking flame indicates a lack of air and a noisy hard blue flame indicates too much air. The air shutter slides back and forth along the burner tube and is held in place by a small shutter adjustment screw (F). Loosen the screw for adjustment. A good method of



Water Heater Controls and Drain Valve

adjusting the air shutter is to slide the shutter to the right until yellow tipping occurs on the main burner flame (not the pilot) and then slowly slide the shutter to the left until all signs of yellow tipping are gone. When proper adjustment has been obtained, tighten the screw holding the air shutter. The outside access door must be kept locked for proper operation.

Additional information on the Water Heater is available in the Excella Service Manual.

Water System

The Airstream 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 50 gallons of 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 in the galley roof locker of your Airstream. The water pump will run whenever a faucet is opened, and will shut off when the faucet is closed. It will deliver 3 gallons per minute under constant pressure.

Note: The water pump must be turned off and the pressure in the system relieved prior to hooking up to city water supply and when you leave your Airstream unattended.

The **water pump and filter** are in the bathroom cabinet on rear bath models and bedroom wardrobe on center bath models. The filter screen should be checked periodically for accumulation of dirt and sand. To clean the screen disconnect the rubber hoses from both ends, separate the screen housing, remove the screen, clean and replace, taking care that all connections are air tight.

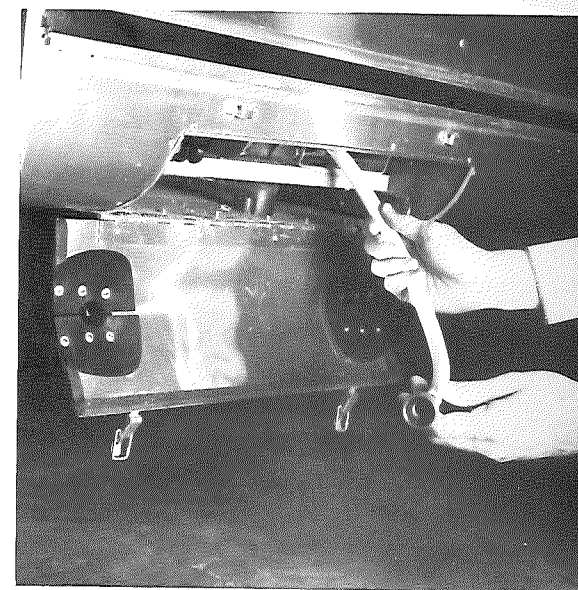
For city water supply, use the standard hose reel or connect a $\frac{1}{2}$ " minimum high pressure hose to the water inlet fitting located on the rear roadside corner of the trailer, just forward of the bumper, rear bath models or just back of roadside wheel well on center bath models. Turn the hose 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, drain the water storage tank. To drain the tank, open a drain valve or faucet and turn the water pump switch on until the tank is empty. Be sure to refill the tank with fresh water before departing. The system has check valves in the water lines to protect the water tank while you are connected to the city water supply.

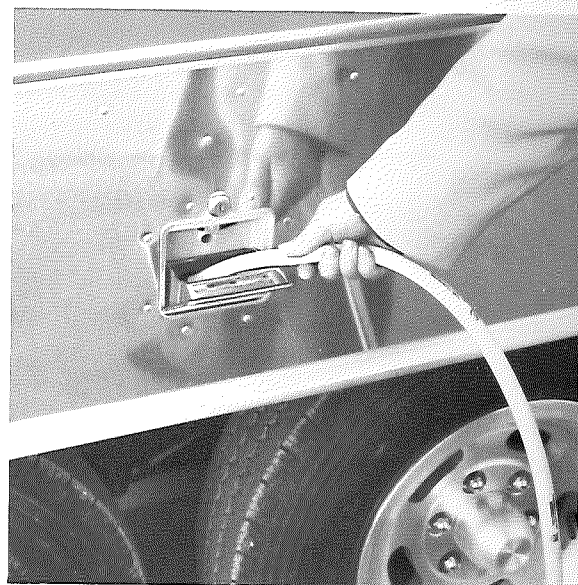
The **water tank** is located under the floor between the axles. To fill the water storage tank, open the filler spout (see photo) on the exterior roadside wall between the wheels, and fill with a hose or a bucket. Close and lock the spout and the water system is ready for use.

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 refill with fresh drinking water. If the water tank must be cleaned further, the following procedure is recommended.

1. Prepare a sodium hypochlorite solution using potable water and household bleach ($5\frac{1}{4}$ to 6%) in the ratio of $\frac{1}{4}$ 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.



Water Supply Inlet and Water Hose Storage

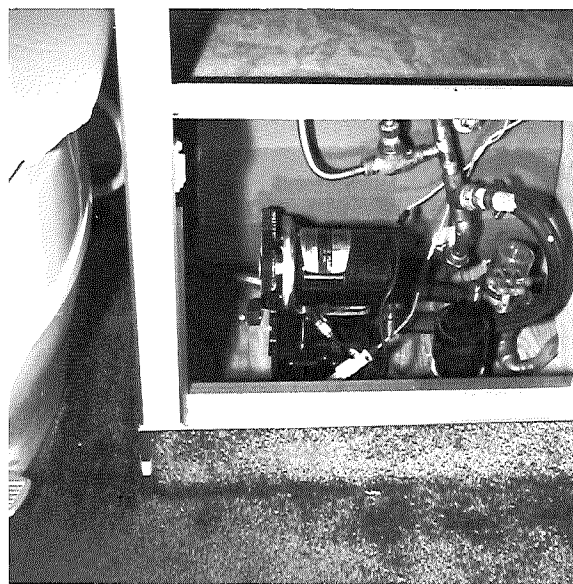


Water Tank Fill Spout

3. Add enough potable water to completely fill the water system.
4. Allow closed system to stand for three hours.
5. Drain the hypochlorite solution from the system and refill with potable water.
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 **Everpure QC-2 Water Purifier** is located under the galley. It will remove dirt and colloidal matter, and eliminate most chlorine, phenol and similar 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 is not guaranteed to remove the tastes and odors of iron and sulphur. To remove these tastes, chlorinate the water supply. Super chlorination will precipitate dissolved iron, which will be removed by the QC-2 filter.

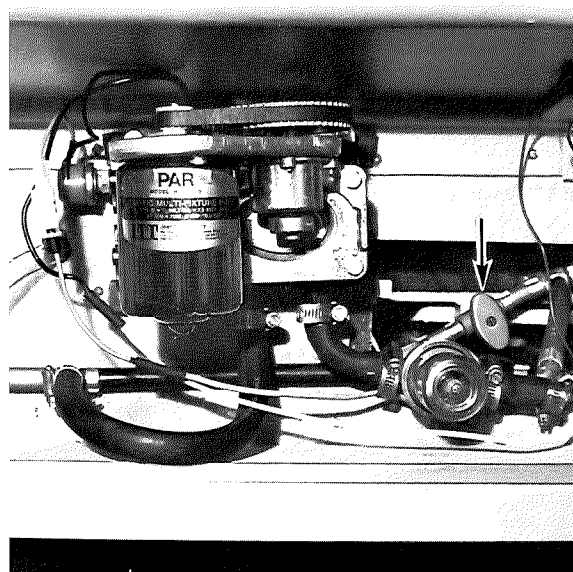
If the bacterial quality of the water is questionable, fill the Everpure chlorine disinfectant dispenser with an ordinary household liquid bleach and add one teaspoon of the same bleach to each 10 gallons of water in the water tank (i.e. 5 tsp. for a 50 gallon tank). The quality of the water never varies even at the



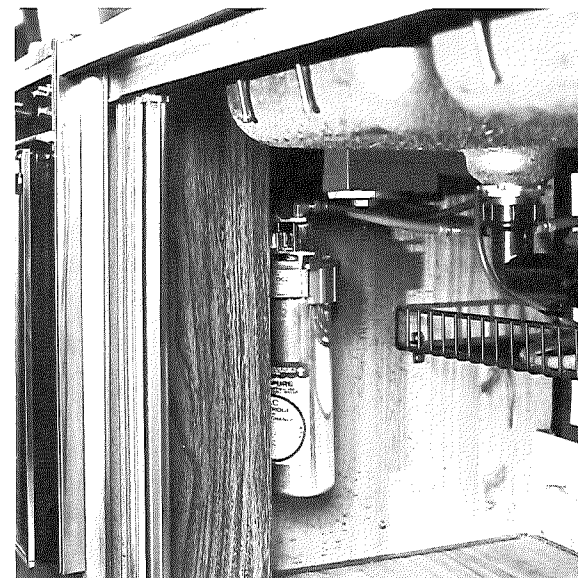
Water Pump and Filter



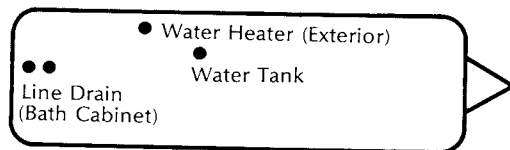
Water Drain Valve (Rear Bath)



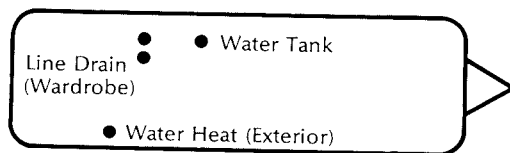
Water Drain Valve (Center Bath)



Water Purifier



Rear Bath



Center Bath

• **Drain Valve Locations**

end of the filter pack life, however as the minute pores slowly fill up with impurities, this will gradually reduce the rate of flow until it is necessary to change the filter. Instructions are in each box and we advise buying two at a time, always keeping one in reserve.

To remove used cartridge:

1. Shut off water by lifting valve handle. Move counterclockwise as far as possible.
2. Turn colored ring all the way to the left. Ring will drop about ½".
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.
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** is on the roadside of the rear trunk in rear bath models, bedroom wardrobe in center bath models. It protects the plumbing inside your trailer, regardless of the variation in city water pressure. The pressure at the faucet is kept constant.

The water system has built-in drain valves to protect it from winter freezing. For complete details see page 37.

Your **Dish-Quik® automatic spray** is designed to use liquid detergents only. Do not use soaps or soap powders.

To fill with detergent:

Remove clear plastic detergent capsule, fill it with detergent and replace on Dish Quik. When suds are no longer produced, refill.

To operate your Dish-Quik:

1. Turn on faucet (a medium stream of water flowing from spout is best). Adjust water to desired temperature.
2. Squeeze "on-off" lever or trigger. Clear water will spray from Dish-Quik. (Some water may continue to trickle from swing spout.)
3. Press round button on top of Dish-Quik. Suds will be added to the water spraying from Dish-Quik. Release button to stop suds.
4. Release "on-off" lever. Spray from Dish-Quik will stop and flow of water will return to swing spout.

Press the round button only briefly when you want suds. Don't hold it down continuously as this wastes detergent. When washing a glass, pan or bowl, fill with sudsy water from Dish-Quik. Then release controls (so flow of water returns to swing spout). Scrub item with Dish-Quik. Then rinse with clear water spray, or under swing spout. The fastest method for rinsing is to accumulate the dishes in rack, then spray rinse all at one time with Dish-Quik.

Additional information on the water system is available in the Excella Service Manual.

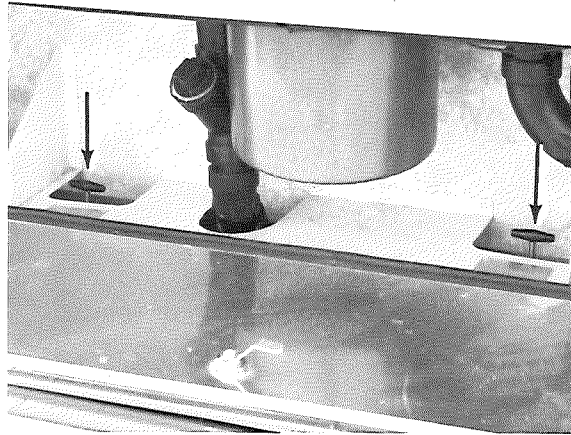
Drain and Waste System

Your Airstream has a drain and waste system. The system includes waste holding tanks made from molded plastic, with virtually 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 into 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.** Check the main holding tank gauge lights on central control panel. The auxiliary holding tank must be emptied when the central control panel lights indicate full.

On rear bath models the **dump valves** are located in the rear trunk compartment. The main holding tank dump valve is located on the roadside and the auxiliary holding tank dump valve is located on the curbside. On center bath models the dump valves are located on the roadside, just behind the rear wheels, on the main frame rail. The main holding tank dump valve is located rear of the sewage outlet.

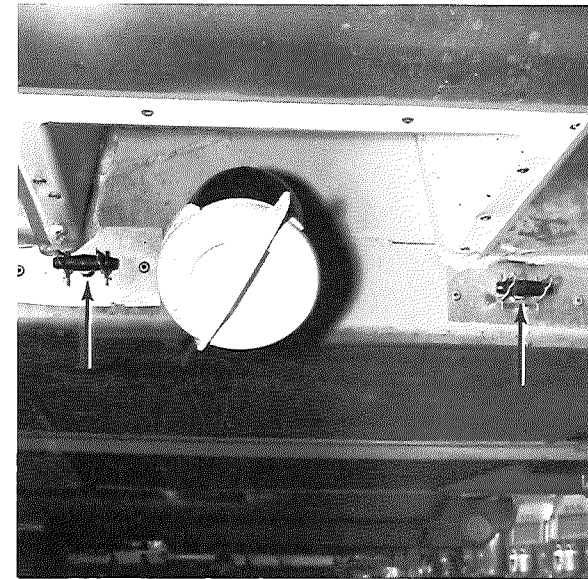
To empty one or both tanks attach the sewer hose by pressing the bayonet fitting onto the outlet adapter and rotate clockwise until it



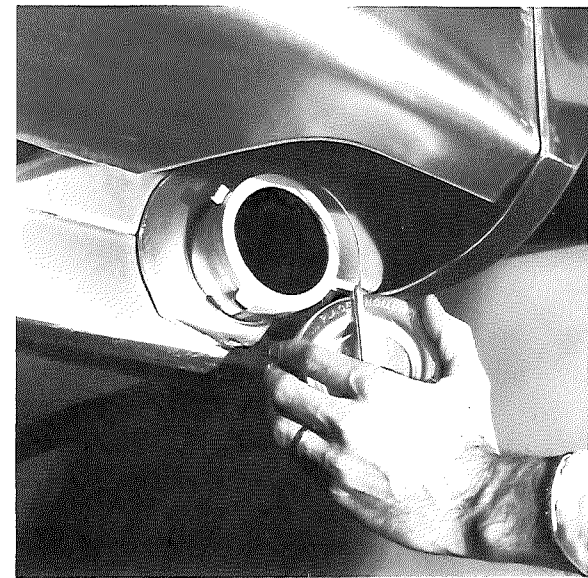
Rear Bath Dump Valves

feels solid and secure. Attach the outlet end of the hose to the sewage outlet, making sure that the hose is placed so that 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. Pull up 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 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 5 to 10 gallons of clean water and repeat until clean.



Center Bath Dump Valves - Center Bath Sewage Outlet



Rear Bath Sewage Outlet

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 and 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. Keep the auxiliary holding tank valve open when connected to a sewer outlet.

The **Aqua Magic toilet** employs a sliding self-cleaning positive seal blade. Odors cannot escape from the holding tank into the trailer. The unit uses less than 2 quarts of water for automatic flush. A special feature is the second pedal attached to the main foot pedal which, when pressed by itself, allows fresh water through either the fill rim or hand spray without opening the slide valve.

When conserving water, use the hand spray in the following way:

1. Hold the hand spray in ready position over bowl.
2. Depress thumb button and step on the foot pedal, which sprays water and dumps the contents at the same time.
3. Spray the bowl clean.
4. Release foot pedal, shutting off water flow.
5. If you wish to refill bowl with water for next use, depress small foot pedal until water reaches desired level.

When using automatic flush:

1. Step on main foot pedal, and this will automatically open the slide valve and drop the waste into holding tank.
2. Hold pedal down until water begins to swirl. This fills rim storage and rinses the bowl.
3. Release the foot pedal. This will close the valve blade and stop fresh water from flowing. The bowl will refill automatically.

If you are certain to empty your holding tank every few days, you can use the toilet on automatic flush. It uses very little water and the tank will provide for the requirements of two adults from 2 to 4 days.

Whenever water is scarce, the hand spray flush makes it possible to stay a week or longer in areas where you cannot empty the holding tank. In flushing for urine only, first, wet the bowl with fresh water, and again after use. Starting with a dry bowl takes more water for the final rinse. To flush for urine and



Toilet Hand Spray

solid matter: spray just enough water in the dry bowl to provide for floating the paper and solids. After use, rinse down the sides with the hand spray and empty the bowl. Hold the slide valve open and spray and rinse the lower surfaces. Even if it appears clean, quickly spray it one more time, then release the pedal and it is ready for the next use.

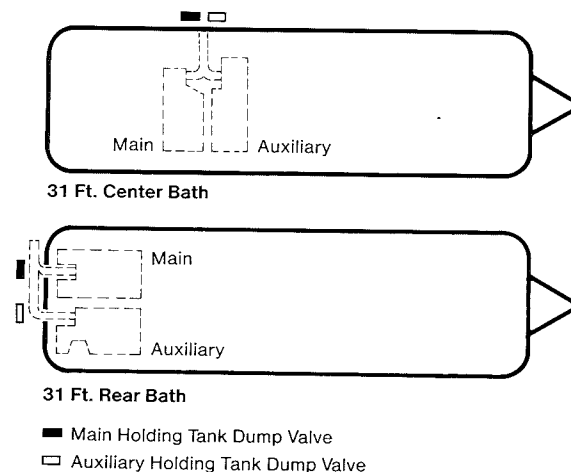
There are certain items that should never be put into the toilet or tank. Facial and other similar tissues: because they have wet strength and do not dissolve easily. Toilet paper, especially white, dissolves well after a period of traveling.

Use only trailer sewage tank deodorizers. Antifreeze, ammonias, alcohols and acetones may cause damage to the tank, valve parts, tank fittings, and drain hose. For protection against freezing, use recommended fluids (see winterizing, page 37).

Some state and federal parks prohibit draining sink and bath waters into the ground, although this is sometimes done in the wilderness. Your auxiliary holding tank will hold this water until you are at a dump area.

The **auxiliary holding tank should be flushed out periodically** to wash away sediments that may accumulate on the bottom of the tank. To flush, close dump valve, fill tank with water and then release dump valve. This volume of water will wash sediment away.

Additional information on the Drain and Waste System is available in the Excella Service Manual.



Holding Tank Dump Valve Locations

Electrical System

Your **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. This combination unit is designed for protection from damage up to and including a dead short. 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 120V electrical operation of the refrigerator.

Convenience outlets for 120 volts and 12 volts are located throughout the interior of the trailer, see diagrams page 81.

Exterior outlets for 120 volts are located on the curbside exterior wall, between the wheels.

Each 120 volt circuit is protected with circuit breakers to prevent damage due to electrical shorts or overloads.

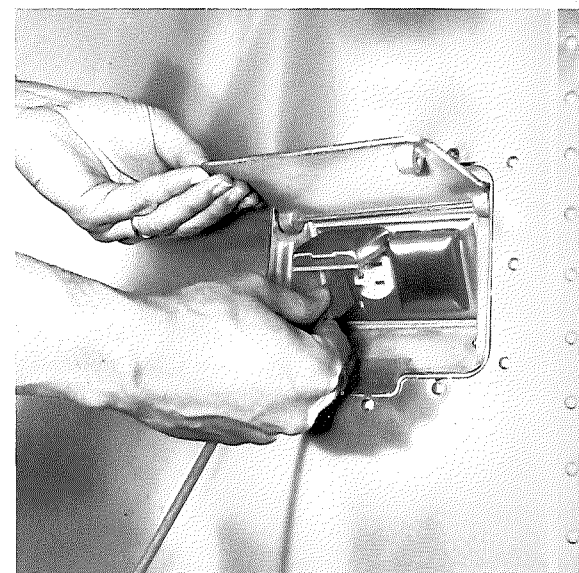
A 30 amp main breaker is provided for additional protection, which will trip should you overload the overall 120 volt system. Example: If you are operating the air conditioner, microwave oven and vacuum cleaner at one time, the trailer's main breaker would trip. The operation of two of these appliances alone in any combination would not trip the breaker.

When operating with city power, make very certain that the service is 120 volt and not 220 volt. Roll out the power cord from the automatic reel to the desired length and plug it into the city power source.

The **Univolt System** has 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.

When the three pronged plug can be used, there will be no problem 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:**

1. Attach the three pronged plug to a two prong adapter. The third conductor line of this adapter has a short wire lead which must be grounded.
2. For proper grounding connect the 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.
3. Check the polarity light located on the rear roadside area.



120 Volt Exterior Outlet



Polarity Warning Light

The **polarity warning light** indicates improper polarity and it should be off when the power supply cable is used with a two pronged adapter. It may occasionally glow when the three wire system is in use, but your trailer is properly grounded, and in this case you may ignore the light.

To **operate self-contained**, unhook electrical cable from its connection, give a slight pull on the cable and it will automatically wind up.

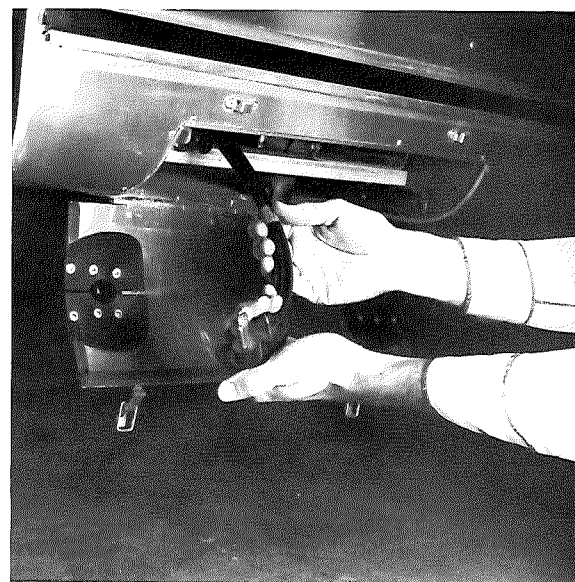
When your Airstream is hooked up to 120 A.C. the **Univolt System automatically charges trailer battery**, and, if it is hooked up to your car it will charge your car battery as well. The speed and degree of charge depends on how much power is used for lights and appliances, as only the surplus goes to charging the batteries. (Please refer to the specifications section for more information on power consumption.) If you are making an extended stay or storing your Airstream, then you should (if it is available) **keep your Motorhome 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 **Univolt Fuse Panel** is behind the front lounge or fixed lounge on models so equipped. On models with a front credenza, it is behind the fold down table, on G & H models it is behind the T.V. compartment in the front entertainment center. While you are connected to the 120 volt receptacle, the wiring is protected by circuit breakers in the breaker panel providing the polarity and grounding are correct. On rear bath models the **120 volt circuit breaker panel** is accessible in the bathroom cabinet to the right of the sink. On center bath models it is located in the roadside wardrobe. In the event of failure of a 120 volt circuit, check your circuit breaker 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 or the factory.

When being towed, the 12 volt battery in your Airstream 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 connection clean: one method is to use "Spra-Kleen".

The **stop and turn signal monitor** mounted on the front roadside of your Airstream, monitors the functions of the rear tail light, stop, and turn signal lamps. The uppermost window



120 Volt Inlet

is for curbside and lower for 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.

Additional information on the electrical system is available in the Excella Service Manual.

Battery

A normal battery will discharge by itself in 30 to 45 days, 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. A fully charged battery will not freeze under any normal circumstances, therefore, it is imperative that you keep your battery charged during the winter. A safe level of charge is a specific gravity reading of 1.225. A fully charged battery has a specific gravity of 1.250 to 1.280. Always use a hydrometer which has a temperature correction scale.

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.

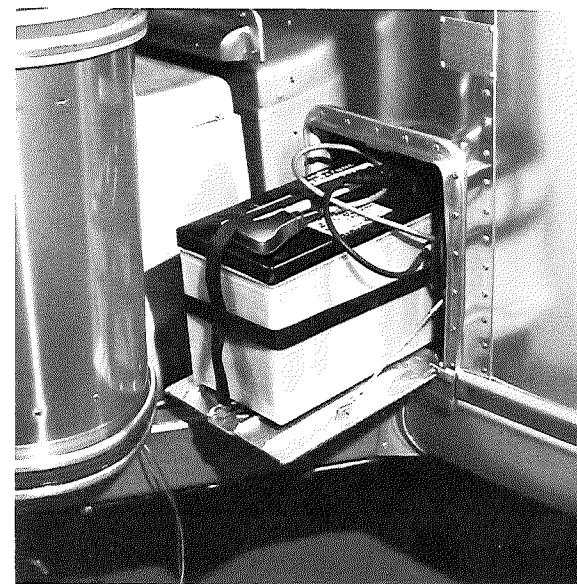
To insure maximum battery capacity on both charge and discharge, the battery terminals and the inside portion of the cable connector should be scraped or brushed until both of these surfaces are shiny bright. The cable connectors should then be reconnected to the battery and tightened. The complete assembly,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

Important: Reconnect the battery cables to the correct battery posts. For example, if negative ground the black cable should be connected to the negative (-) post and the red cable to the (+) post. The polarity may be determined by inspecting the battery post which is grounded to the tow vehicle, since it must always match the trailer. For example, if negative pole of the tow vehicle is grounded, the polarity of the trailer battery is negative ground.

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.

Caution: 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 Airstream and stored in a cool, dry place, 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.

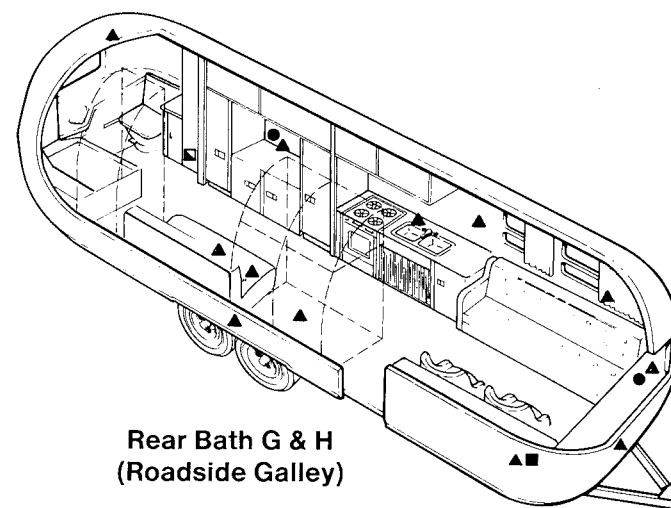
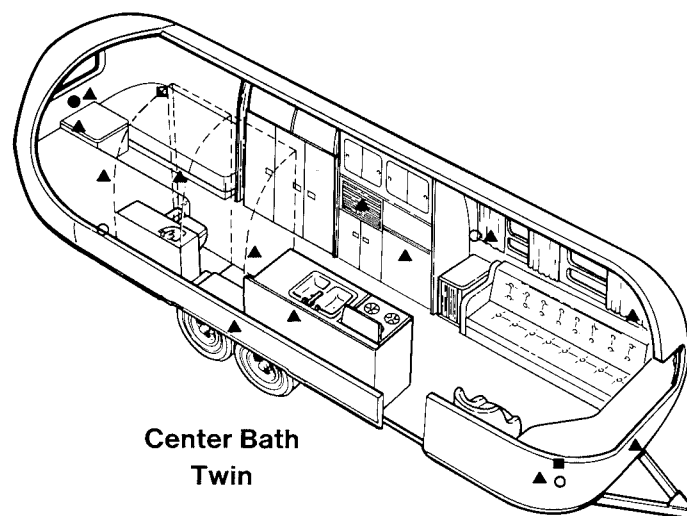
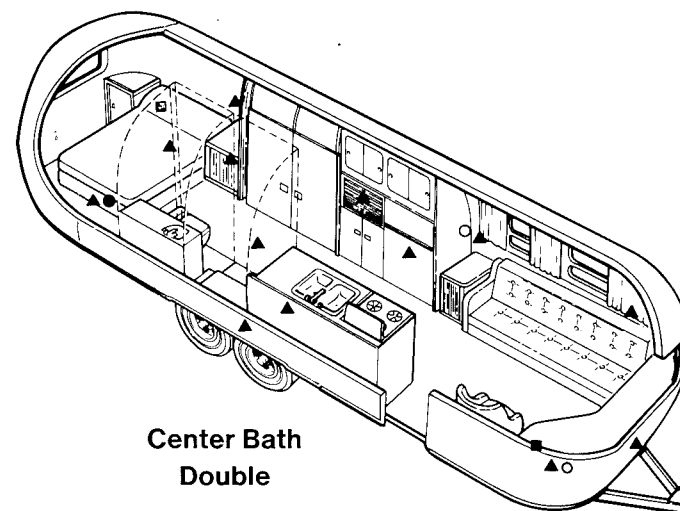
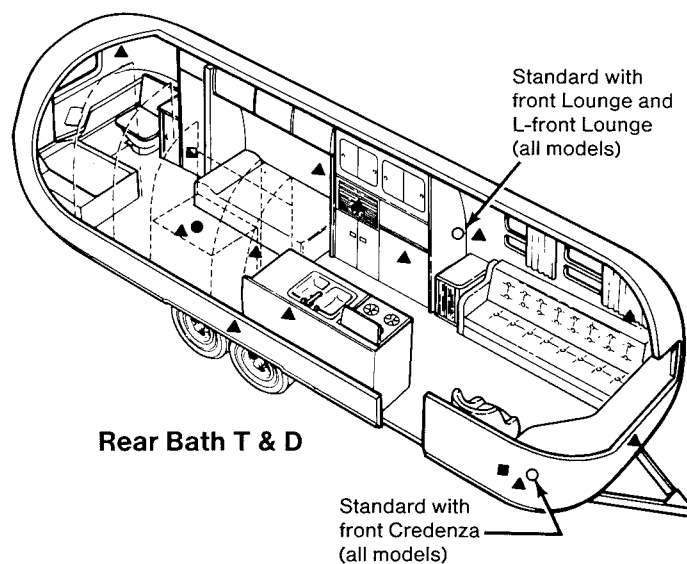


Battery Cable Quick Disconnects

Batteries are located in roadside and curbside compartments adjacent to the L.P.G. tanks. The battery slides out onto the open door for service and removal. For removal it is not necessary to remove cables from battery terminals, just pull quick disconnects apart (see photo).

For battery service or replacement, go to any service station or dealer who sells and services this battery. The battery is rated for 105 amp. hours at 80°F and has a 5 year prorated warranty.

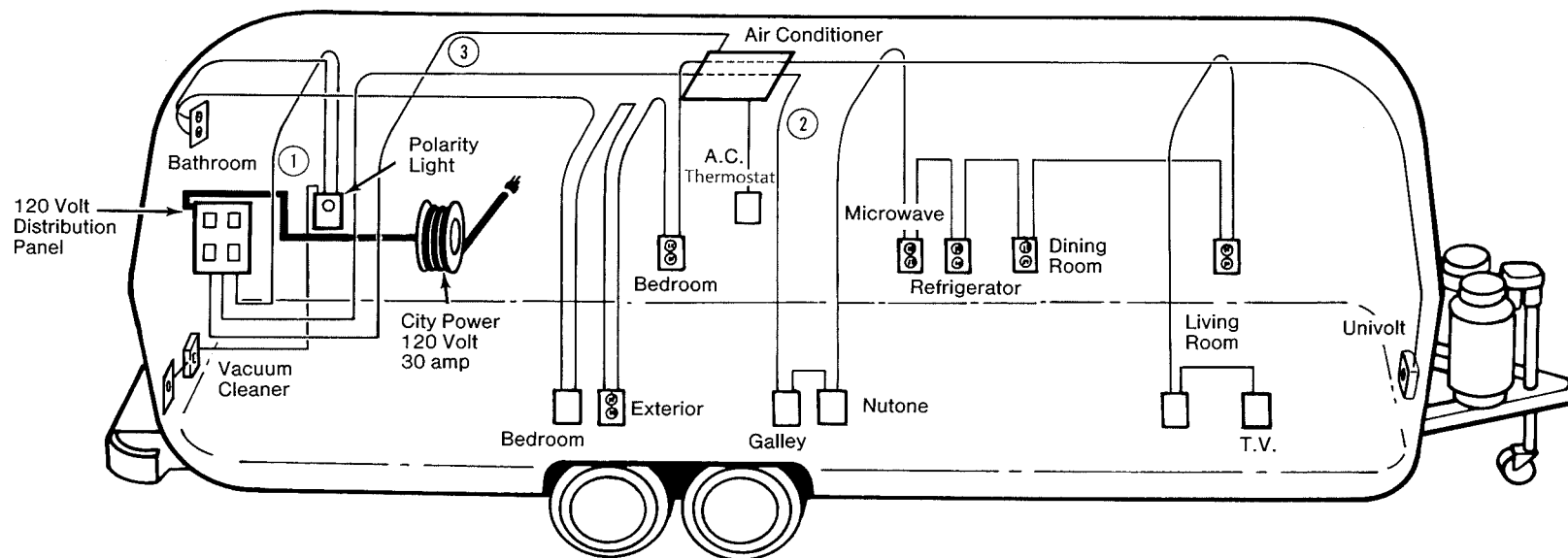
Electrical Outlet Locations



- | | | |
|-------------------|---------------------------------|-------------------|
| ■ Telephone Jack | ● 12V with T.V. Jack (standard) | ▲ 120V (standard) |
| ◻ Telephone Inlet | ○ 12V with T.V. Jack (optional) | |

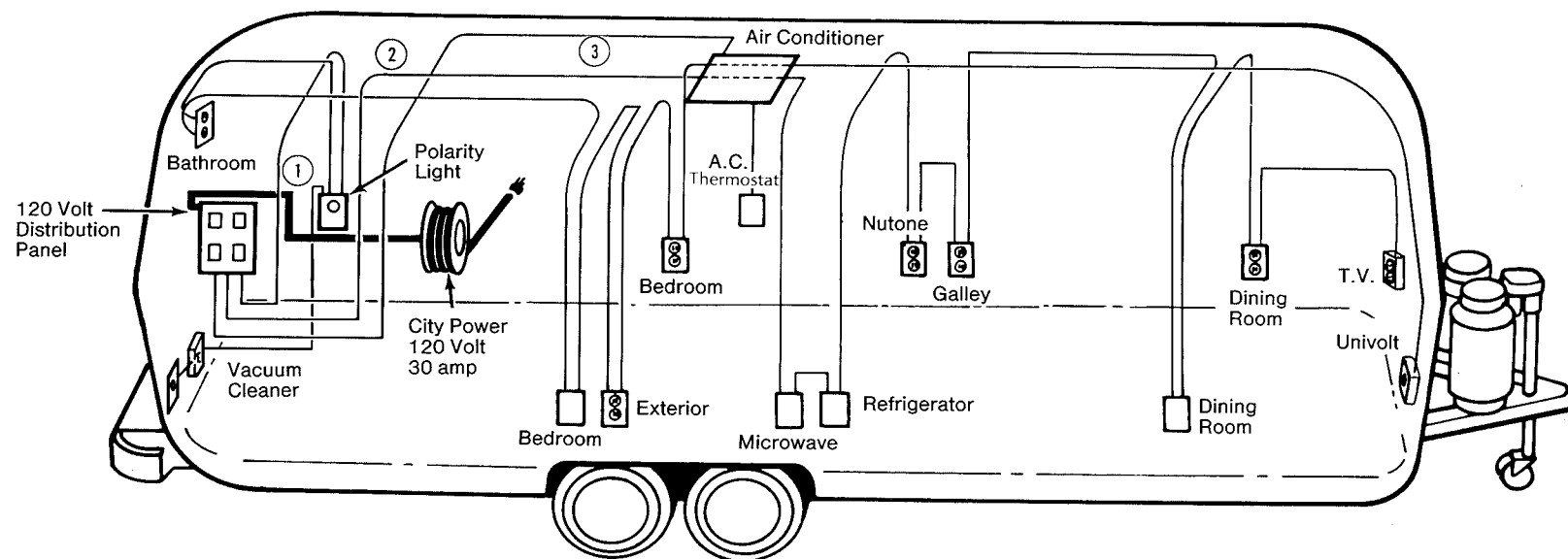
Electrical Wiring Diagrams

120 Volt Distribution System - Rear Bath T & D



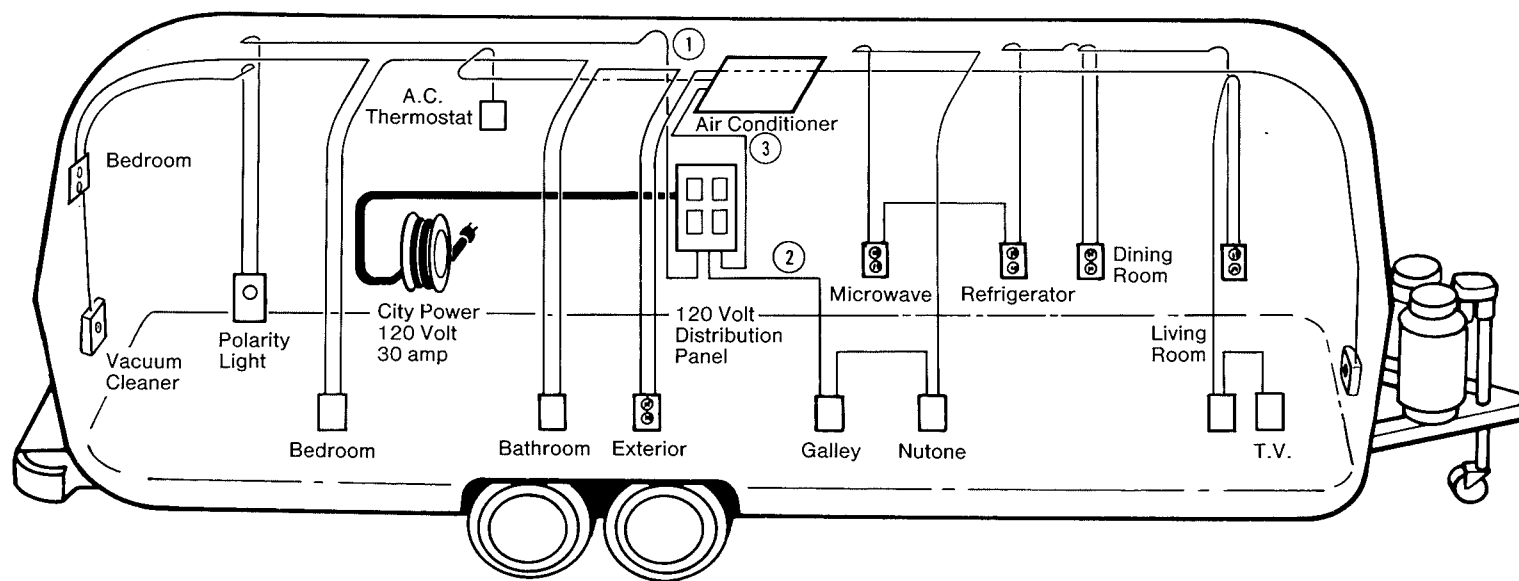
- ① General Circuit - 15 amp (GFI)
- ② Appliance Circuit - 20 amp
- ③ Air Conditioner - 20 amp

120 Volt Distribution System — Rear Bath G & H (Roadside Galley)



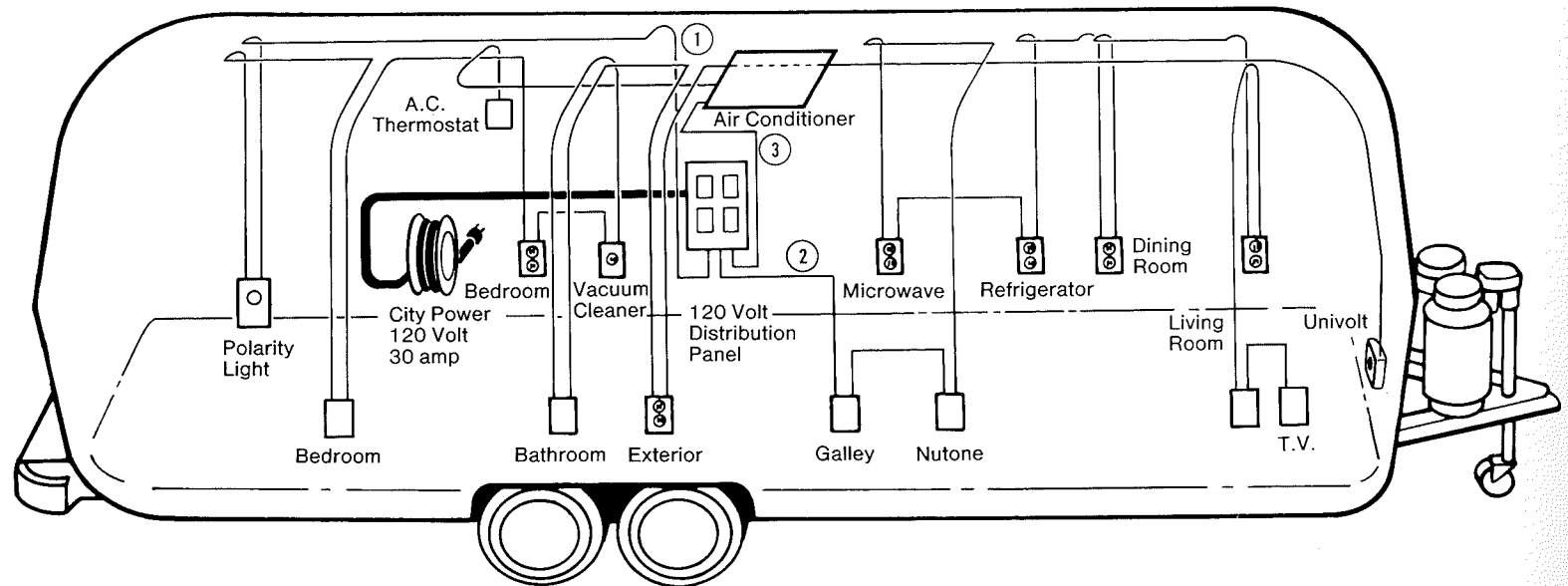
- ① General Circuit - 15 amp (GFI)
- ② Appliance Circuit - 20 amp
- ③ Air Conditioner - 20 amp

120 Volt Distribution System - Center Bath Twin



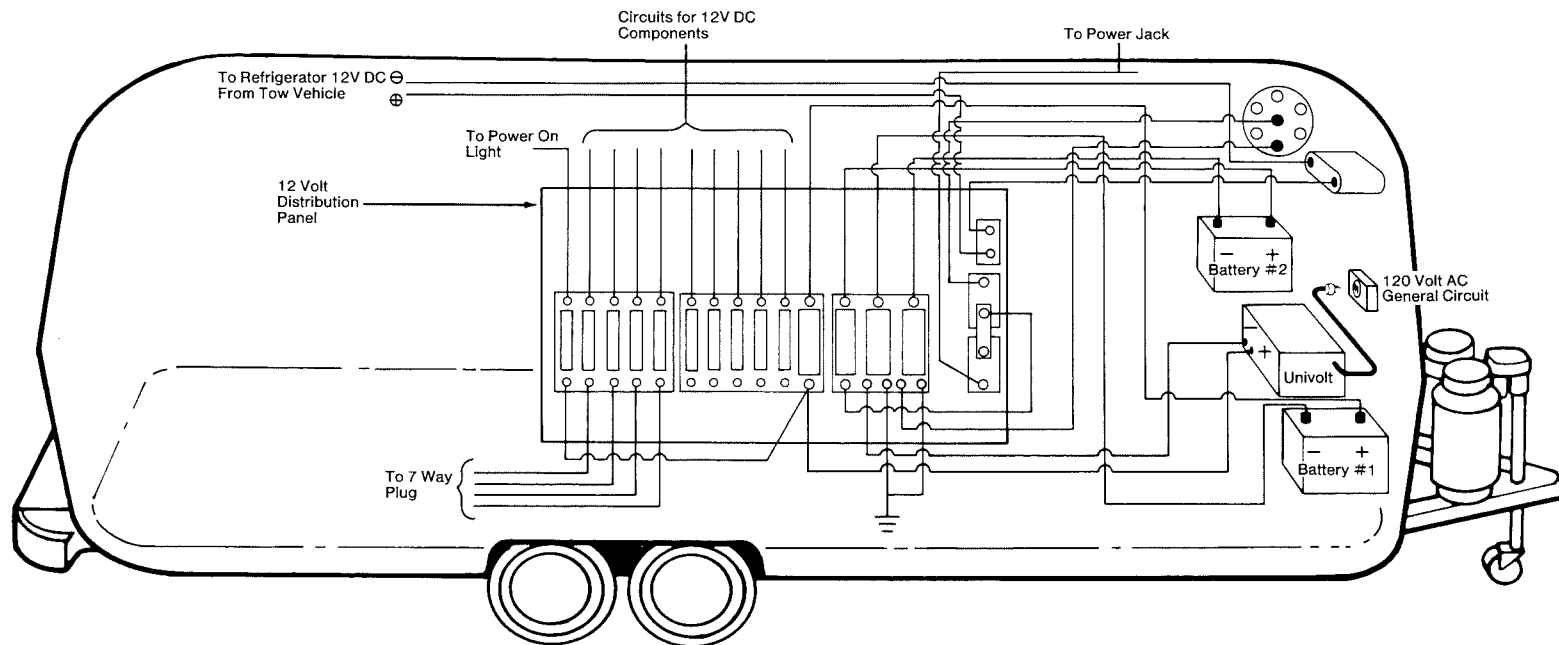
- ① General Circuit - 15 amp (GFI)
- ② Appliance Circuit - 20 amp
- ③ Air Conditioner - 20 amp

120 Volt Distribution System - Center Bath Double



- ① General Circuit - 15 amp (GFI)
- ② Appliance Circuit - 20 amp
- ③ Air Conditioner - 20 amp

12 Volt Interior



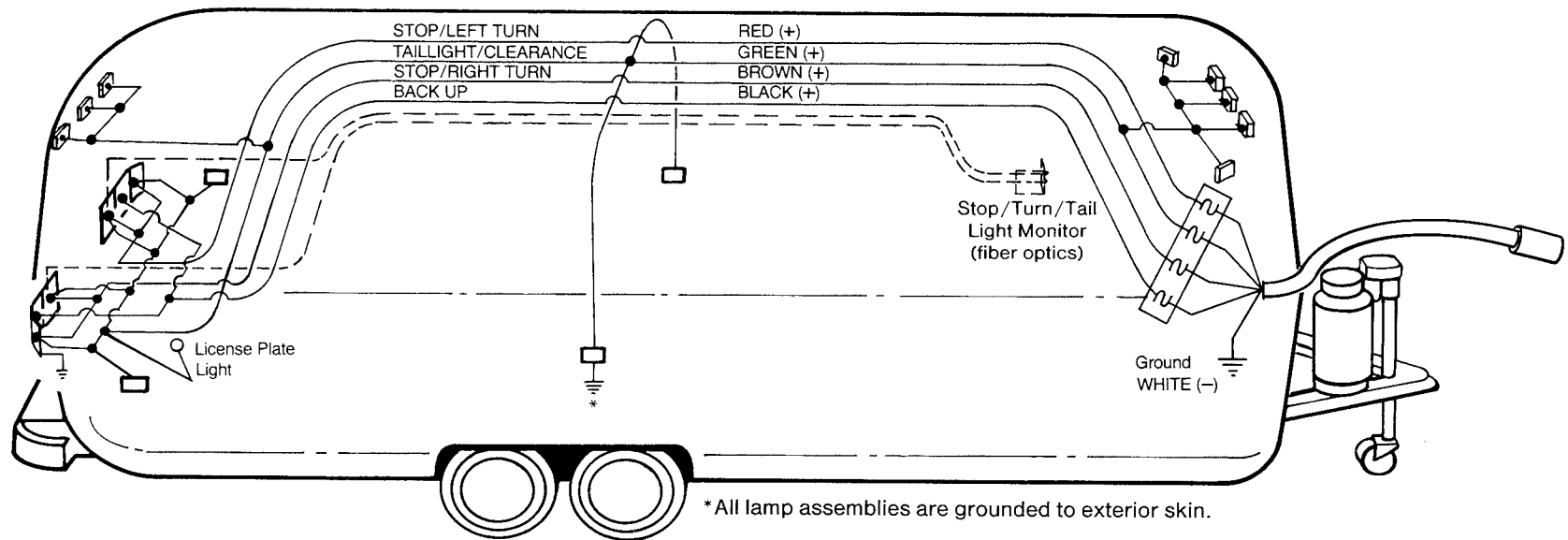
Wiring Color Code

BLUE - Main Charge Line

WHITE - Ground Line

*Univolt converts 120 volts AC to 12 volts DC.

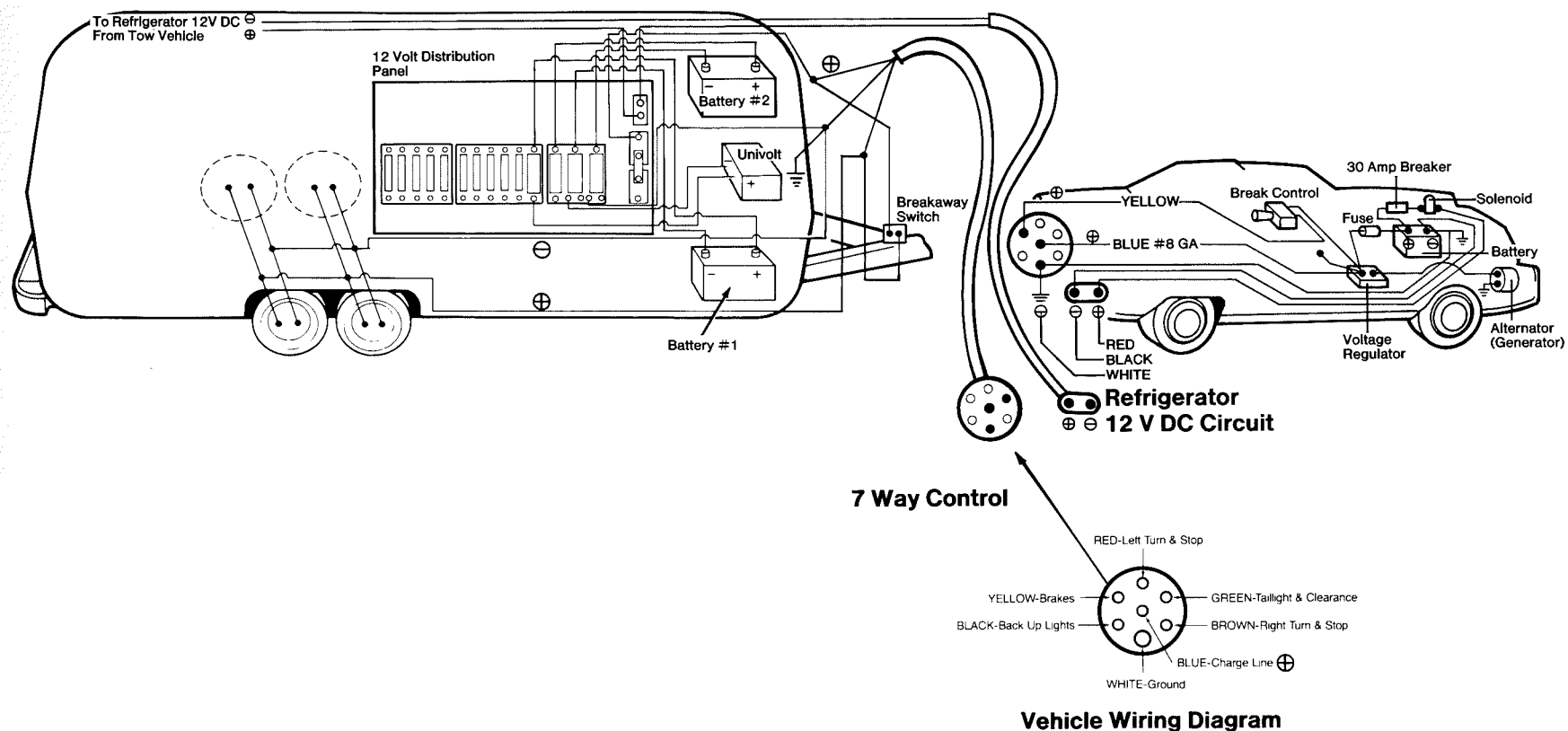
12 Volt Exterior



Wiring Color Code

RED - Stop/Left Turn
GREEN - Taillight/Clearance
BROWN - Stop/Right Turn
BLACK - Back Up
WHITE - Ground

Main Charge, Brake, and Refrigerator DC Circuits



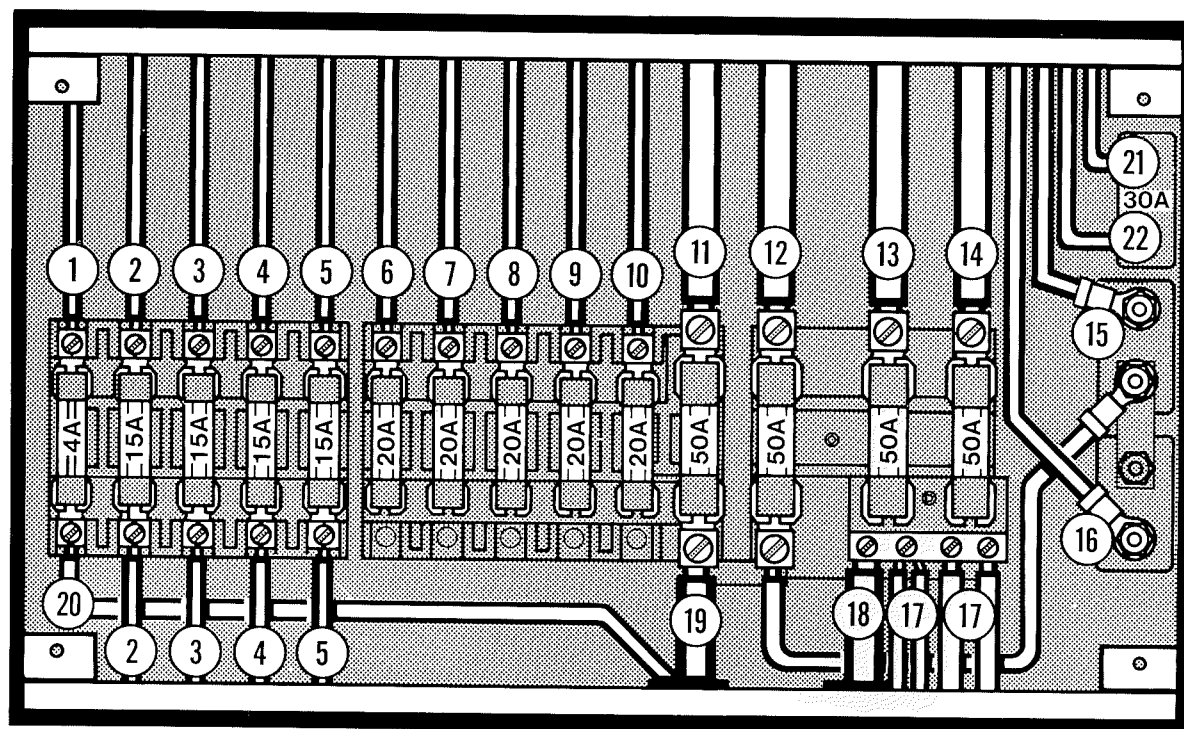
Wiring Color Code

BLUE - Main Charge Line (BLACK - Canada)

WHITE - Ground Line

YELLOW - Brake Line (BLUE - Canada)

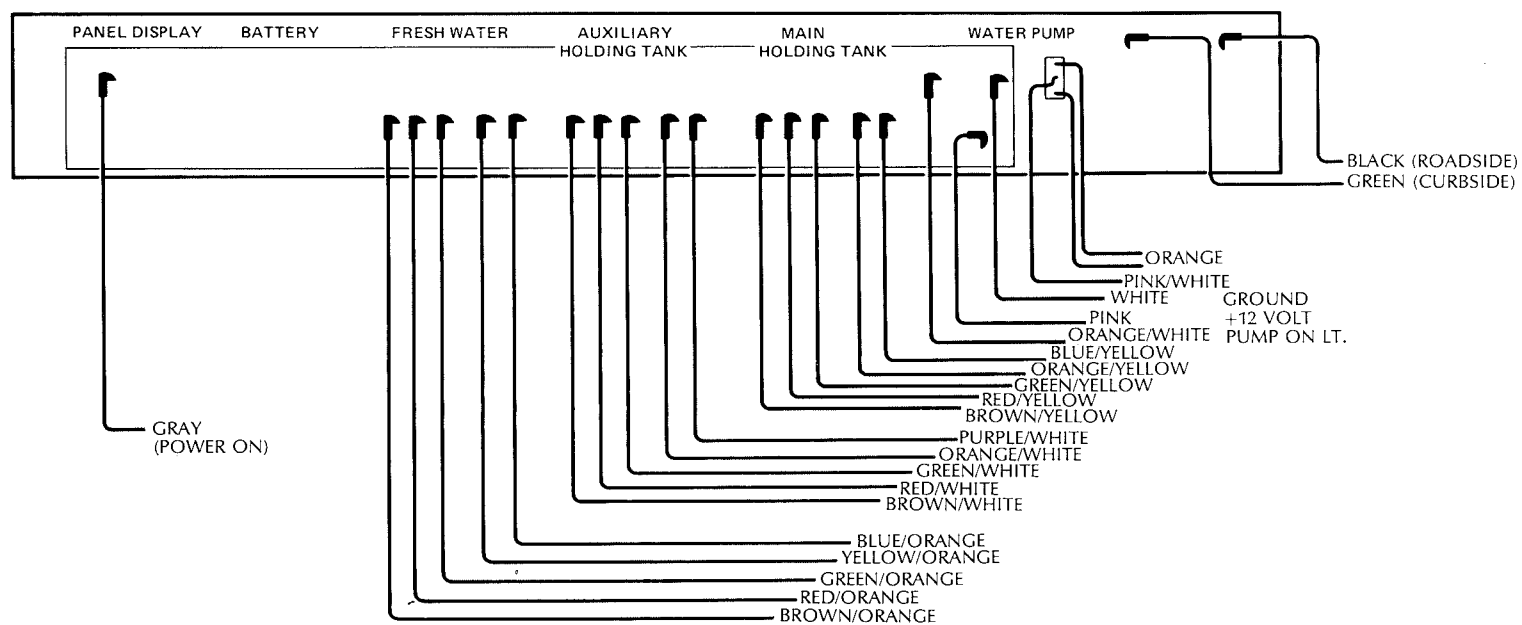
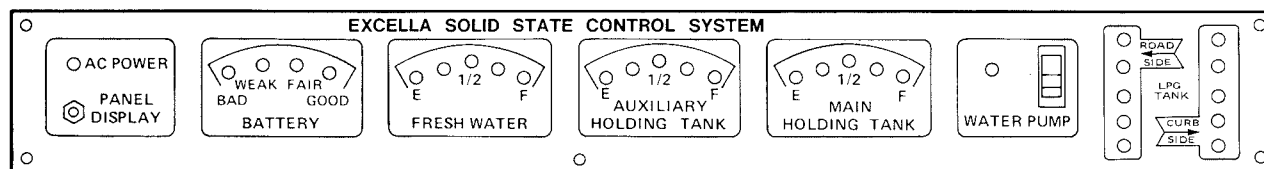
12 Volt Distribution Panel



No. Description

- 1 Power on, Gray
- 2 Back up light, Black
- 3 Clearance and tail light, Green
- 4 Left turn and stop light, Red
- 5 Right turn and 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
- 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, Blue (Black Can.)
- 16 Power jack, Orange
- 17 Ground, White
- 18 Univolt, negative
- 19 Univolt, positive
- 20 Power on, White
- 21 Tow vehicle battery, positive
- 22 Refrigerator, positive

Solid State Central Control System Panel



Electrical Trouble Shooting

Symptom	Possible Cause	Remedy
No 12-volt power (Lights, appliances do not work)	<ol style="list-style-type: none"> 1. Input line and/or battery not connected 2. Discharged trailer battery 3. Trailer battery on wrong polarity 	<ol style="list-style-type: none"> 1. Make necessary connections 2. Charge battery 3. See Item 7
Blown fuse	<ol style="list-style-type: none"> 4. Overloaded circuit (over 50 amps) 5. Electrical short 6. Shorted battery 7. Battery terminals not properly connected to UNIVOLT + and - terminals 	<ol style="list-style-type: none"> 4. Turn off switches to reduce load. Replace blown Univolt fuse. 5. Find blown Univolt fuse and identify circuit. From wiring diagrams, check the circuit for defective wiring, lamps or motors. 6. Replace battery and fuse. 7. Make proper connections; replace fuse.
Dim lights or sluggish fan motor	<ol style="list-style-type: none"> 8. 25 - or 50 - cycle power (some foreign countries) 9. Discharged battery (when operating without 120 - volt line) 10. Battery is low on water 	<ol style="list-style-type: none"> 8. Use 60 - cycle power 9. Charge battery 10. Add distilled water to battery
UNIVOLT will not charge battery	<ol style="list-style-type: none"> 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 blow 	<ol style="list-style-type: none"> 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 Excella Service Manual.

Specifications

Capacities

Appliance	Capacity
Main Holding Tank — Rear Bath	20 gal.
Main Holding Tank — Center Bath	25 gal.
Auxiliary Holding Tank — Rear Bath	16 gal.
Auxiliary Holding Tank — Center Bath	25 gal.
Water Tank	50 gal.
Water Heater	6 gal.

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.

Light and Appliance Amperage

Item	Lamp Number	Amperage
Water Pump	—	9.9 max.
Ceiling Fan	—	4.8
Bathroom Exhaust Fan	—	2.0
Range Exhaust Fan	—	2.0
Furnace Fan	—	5.0
Toilet Exhaust Fan	—	2.0
Reading Lights:		
Living Room	1383	1.6 each bulb
Bedroom	1141	1.6 each bulb
Main Door Light	1141	1.6
Exterior Light	1156	
Ceiling Light (6 Bulbs):		
Living Room, Galley	1141F	1.6 each bulb
Bedroom, Bathroom	1141F	1.6 each bulb
Galley and Vanity Lights		
under Roof Locker	1141	1.6 each bulb
Trunk Lights:		
Service Center, Trunk	67	.6 each bulb
Clearance & Cluster Lights	1895	
Stop & Turn Signal	1156	
Tail Light	1157	
License Plate Light	89	
Backup Lights	1156	
Battery		105 amp hrs. at 80°F.

Fuses and Circuit Breakers

Circuit	Location	Rating
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	12 volt panel	AGU 40 amp fuse
Low Voltage Circuits	12 volt panel	SFE 20 amp fuse
Trailer Battery Fuse (+)	12 volt panel	AGU 50 amp fuse
Trailer Battery Fuse (-)	12 volt panel	AGU 50 amp fuse
Power On Circuit	12 volt panel	SFE 4 amp fuse
Central Control Panel	Main Cen. Ctrl. Pnl.	AGC 15 amp fuse
Radio, Radio/Tape	Radio, Radio/Tape	IAG 5 amp fuse
Water Pump	Water Pump	6½ SLO-BLO

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. Latch 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 step.
13. Stow table lamp.

Exterior

1. Disconnect and stow:
 - a) electrical hook-up cord
 - b) sewer-hose hook-up hose. (flush out)
 - c) water hook-up hose.
2. Turn off gas line shut-off valve to appliances.
3. Remove and stow wheel chocks.
4. Check hitch: it must be properly attached.
5. Check safety chains, breakaway switch cable or vacuum hook-up.
6. Fully retract jack. Remove and stow jack stand.
7. Check clearance and stop lights.
8. Check lug bolts.
9. Check tires, for correct pressure
see page 26.
10. Check that TV antenna is folded down and pointed forward.
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

14. Automobile insurance to cover you and your family fully.
15. Avoid cash. Use travelers' checks and credit cards.
16. Confirm reservations.
17. Have sunglasses for everyone.
18. Pack cameras and films.
19. 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 truck 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 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.

Lubrication and Maintenance

Your Excella is without a doubt the finest engineered travel trailer ever to be mass-produced. Every design feature and component has been chosen with the thought in mind of giving you thousands of miles of trouble-free operation. By adhering to the following minimum maintenance schedule and the additional exterior and interior maintenance

suggestions you will enjoy all of the pleasure you dream of from your trailer . . . and more.

Item	Every 1,000 miles or 30 days	Every 5,000 miles or 90 days	Every 10,000 miles or 6 months	Procedure
All Exterior Door Locks	X			Lubricate by shooting in dry graphite.
Axle		X		None, except wheel bearings.
Battery	X			Check water level — fill with distilled water only.
Brake Fluid		X		Remove reservoir cover. Add Dot 3 fluid.
Brakes				Inspect and replace as necessary.
Entrance Door Hinges	X			Lubricate with light household oil.
Hitch Ball Latch	X			Lubricate with engine motor oil.
Hitch Jack	X			Lubricate with light household oil (put oil can spout up under handle, and allow oil to run down post).
LPG Hold Down Knob	X			Lubricate with light household oil.
Main Door Step	X			Lubricate moving parts.
Range Exhaust Hood				Clean fan blades and wash filter.
Refrigerator Flue Cleaning		X		See page 62.
Roof Vent Elevator Screws	X			Lubricate with light household oil.
Strike Pocket on Main Door	X			Coat with paraffin.
T.V. Antenna	X			Lubricate exterior moving parts with silicon spray or WD40.
Tires	X			Check for foreign objects. Air pressure — page 26.
Water Pump		X		Check belt for wear and proper tension.
Wheel Bearings			X	Clean, repack, and adjust.
Wheel Lug Bolts		X*		Check for tightness.
Window Seals/Door Seals		X		Clean with mild detergent and coat with "Slipicone"
7-Way Plugs and Receptacle		X		Clean contacts and coat with "SPRA-KLEEN".

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.

*Note: On new trailers check lug bolts every 200 miles for the first 1,000 miles.

Maintenance Record

[illegible]

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