

AIRSTREAM

1970 AIRSTREAM OWNERS MANUAL

Welcome to the Airstream Way of Life!
This manual is your key to carefree travel fun... It contains the information you need to avoid problems. Please pass it on, if ever you sell your Airstream.

The table of contents lists right hand pages only. The right margins serve as quick reference for the details covered on facing pages. The right margins also serve as reminders and for important notes, once you are familiar with the details.

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



AIRSTREAM WARRANTY

For the lifetime of the Registered Warranty Holder, or so long as he continues as the original owner of the Airstream Travel Trailer, Airstream warrants the metal shell, frame, axle and axle assembly to and including spindle (excluding shock absorbers) to be free from defects in material and workmanship; all other component parts, including shock absorbers (excluding tires and batteries) are likewise warranted for a period of two years from the date of purchase. Any warranty defects will be corrected without cost upon return of the trailer or defective part, to any Airstream factory or authorized Airstream service center.

This warranty is in lieu of all other warranties of merchantability or fitness expressed or implied, there being no warranties which extend beyond the description on the face hereof and expressly excludes conditions resulting from normal wear, accident, abuse, exposure or overload.

AIRSTREAM

Ohio factory: 177 West Church Street, Jackson Center, Ohio 45334

California factory: 15939 Piuma Avenue, Cerritos, California 90701



AIRSTREAM WARRANTY

ALABAMA

Camper City & Mobile Home Sales
7320 First Avenue, North, Tel: (205) 836-4239
Birmingham, Alabama 35206

ARIZONA

Robert Crist & Company
2025 East Main Street, Tel: (602) 964-1478
Mesa, Arizona 85201

Rovan Mobile Homes, Inc.
3528 North Oracle Road, Tel: (602) 624-8875
Tucson, Arizona 85705

ARKANSAS

Fred & Jack Trailer Sales
6600 Asher Avenue, Tel: (501) 565-2543
Little Rock, Arkansas 72204

CALIFORNIA

Bob Belknap Trailer Sales, Inc.
420 South Harbor Blvd., Tel: (714) 839-2494
Santa Ana, California 92704

Caswell Trailer Sales
950 West Foothill Blvd., Tel: (714) 626-3874
Claremont, California 91711

Central Valley Trailer Center
333 West Fresno Street, Tel: (209) 834-2581
Fowler, California 93625

Coastline Trailer Sales
303 North Ventura Avenue, Tel: (805) 648-1772
Ventura, California 93001

El Camino Trailer Sales
2090 El Camino Real, Tel: (415) 968-6548
Mountain View, California 94040

Mitchell Motor & Trailer Sales
5690 Redwood Highway, North
Tel: (707) 545-0814
P.O. Box 1495
Santa Rosa, California 95403

Valley Trailer Sales
2446 Rio Linda Boulevard, Tel: (916) 925-5815
Sacramento, California 95815

COLORADO

Chisman Trailer Sales
2501 East Boulder Street, Tel: (303) 473-7043
Colorado Springs, Colorado 80909

Denver Trailer Sales, Inc.
11225 West 6th Avenue, Tel: (303) 237-7781
Lakewood, Colorado 80215

CONNECTICUT

Wepawaug Trailers, Inc.
655 Bridgeport Avenue, Tel: (203) 874-2381
Milford, Connecticut 06463

DELAWARE

Richard Rice Trailer Company, Inc.
601 South Dual Highway, Tel: (302) 629-9427
Seaford, Delaware 19973

FLORIDA

Bell's Trailer Park & Sales
R. R. #4, Box 382
Highway 90, West, Tel: (904) 576-2915
Tallahassee, Florida 32310

Cribb's Campers
5408 San Juan Avenue, Tel: (904) 388-9348
Jacksonville, Florida 32210

Indian River Trailer Sales
5855 U.S. Highway #1, Tel: (305) 636-1422
Cocoa, Florida 32922

Jerry's Travel Trailer Sales & Service
2710 North West 36th Street
Tel: (305) 634-7648
Miami, Florida 33142

C. J. Stoll, Inc.
5985 34th Street, North, Tel: (813) 527-2189
St. Petersburg, Florida 33714

C. J. Stoll, Inc.
825 U.S. 301, Blvd. East, Tel: (813) 755-1581
Bradenton, Florida 33505

GEORGIA

C & M Vacation Trailers
9726 South Expressway, Tel: (404) 478-3426
19 miles South of Atlanta
Jonesboro, Georgia 30236

ILLINOIS

Ted Christman Trailer Sales
1200 Bloomington Road, West
P. O. Box 851, Tel: (217) 352-4147
Champaign, Illinois 61820

Robert Crist & Company
9100 South Stony Avenue, Tel: (312) 221-9100
Chicago, Illinois 60617

Deluxe Mobile Home Sales
2800 West Farmington Road
Tel: (309) 674-6131
Peoria, Illinois 61604

Hunter Sales Corp.
415 North Illinois Avenue, Tel: (414) 494-8222
Carbondale, Illinois 62901

Mann's Trailer Sales
1600 North Main, Tel: (309) 452-1520
Normal, Illinois 61761

Ray's Travel Trailer Sales, Inc.
7135-49 West Irving Park Road
Tel: (312) 283-7140
Chicago, Illinois 60634

INDIANA

Berning Trailer Sales
5220 New Haven Avenue, Tel: (219) 749-9415
Fort Wayne, Indiana 46803

Bert's Trailer Sales, Inc.
R. R. #3, Box 17 (East U.S. 20)
Tel: (219) 879-0323
Michigan City, Indiana 46360

Bill's Trailerland Sales & Service Center
12th & Main Street, Tel: (812) 882-2235
Vincennes, Indiana 47591

Draper's Auto & Trailer Sales, Inc.
912 State Road 67 East, Tel: (317) 649-2536
Anderson, Indiana 46013

IOWA

Bill Brown Trailer Sales
3700-3708 East 14th Street, Tel: (515) 262-3700
Des Moines, Iowa 50313

Ace Fogdall, Inc.
Highway 218 at Rownd Street
Tel: (319) 266-4404
Cedar Falls, Iowa 50613

KANSAS

Boulevard Motor & Trailer Company
5617 West Kellogg, Tel: (316) 943-9361
Wichita, Kansas 67209

KENTUCKY

Murphy Sales Company, Inc.
Winchester Road (U.S. 60 W.)
Tel: (606) 498-1168
Mt. Sterling, Kentucky 40353

Murphy Sales Company, Inc.
Benson Road, Tel: (502) 633-1450
Shelbyville, Kentucky 40065

LOUISIANA

Barrow's Inc.
7517 Chef Menteur Highway
Tel: (504) 242-9039
New Orleans, Louisiana 70126

The Camping Store
15838 Florida Blvd., Tel: (504) 926-6668
Baton Rouge, Louisiana 70815

MASSACHUSETTS

Mosher Travel Trailer Center, Inc.
Blue Jay 4 Corners, Tel: (617) 865-4294
Sutton, Massachusetts 01527

MICHIGAN

Bob Frank Trailer Sales, Inc.
1416 West Columbia, Tel: (616) 962-8659
Battle Creek, Michigan 49015

Frontier Camping Post
11111 S. Telegraph at Goddard
Tel: (313) 287-6666
Taylor, Michigan 48180

Kolbe Trailer Sales
5785 East Eight Mile Road, Tel: (313) 536-0265
Warren (Detroit), Michigan 48091

Mid-State Trailer Sales, Inc.
5103 Eastman Road, Tel: (517) 631-5510
½ mi. South of I-75 on U.S. 10
Midland, Michigan 48640

Northwoods Trailer Sales
G-6369 North Dort Highway
Tel: (313) 686-4330
Mt. Morris, Michigan 48458

Warner Trailer Sales, Inc.
3098 West Huron Street, Tel: (313) 682-8830
Pontiac, Michigan 48054

Woodland Travel Center, Inc.
5190 Plainfield Road, Tel: (616) 363-9038
Grand Rapids, Michigan 49505

MINNESOTA

Hart Trailer Sales
Highway 71, Tel: (612) 732-3026
Long Prairie, Minnesota 56347

Pioneer Trailer Sales
Highway 218, South, Tel: (507) 433-4715
Austin, Minnesota 55912

MISSOURI

Kansas City Trailer Sales, Inc.
14815 South 71 Highway, Tel: (816) 345-4775
Grandview, Missouri 64030

Bill Thomas Camper Sales, Inc.
5217 North Lindberg Boulevard
Tel: (314) 731-2217
St. Louis (Bridgeton), Missouri 63044

MONTANA

Oliver Trailer Sales
5124 Laurel Road, Tel: (415) 582-9433
Billings, Montana 59101

NEBRASKA

A. C. Nelson Company
2112 Harney Street, Tel: (402) 344-4000
Omaha, Nebraska 68102

NEVADA

"95" Trailer Sales
4339 Tonopah Highway, Tel: (702) 870-1888
Las Vegas, Nevada 89106

NEW JERSEY

South Jersey Travel Trailer Center, Inc.
Route 47, Tel: (609) 445-1700
Franklinville, New Jersey 08322

NEW MEXICO

Gunns Travel Trailers
7707 Menaul Boulevard, N. E.
Tel: (505) 299-7694
Albuquerque, New Mexico 87110

NEW YORK

Atlantic Trailer Sales
1226 Fairport Road, Tel: (716) 586-2283
Fairport, New York 14450

Callahan's Trailer Sales
R.R. #1, Route 15, Tel: (607) 523-6689
Lindley, New York 14858

Carson Rotary Service
321 Bridge Street, Tel: (607) 748-1534
Vestal, New York 13850

Eddy's Trailer Sales, Inc.
4005 Jericho Turnpike, Tel: (516) 368-4229
East Northport, New York 11731

Maroone Family Travel Center, Inc.
2550 Walden Avenue, Tel: (716) 684-1165
Exit 52, East of N.Y. Thruway
Buffalo, New York 14225

Niblack Trailer Sales
691, McLean Avenue, Tel: (914) 965-5685
Corner N.Y. Thruway
Yonkers, New York 10704

O'Malley Enterprises, Inc.
P. O. Box 116, Tel: (518) 785-6654
Traffic Circle, Rt. 9 & 7
Latham, New York 12110

NORTH CAROLINA

College Park

North Church Street Ext., Tel: (919) 446-9233
US 301 & 301A, North
Rocky, Mount, North Carolina 27803

Faires, Inc.

P. O. Box 5205 - Route 29 & 49
Tel: (704) 333-1195
Charlotte, North Carolina 28206

Out of Doors Mart, Inc.

3686 Reynolds Road, Tel: (919) 924-8175
Winston-Salem, North Carolina 27106

OHIO

Avalon Trailer Sales

1001 West Main Street, Tel: (216) 875-9202
Louisville, Ohio 44641

K & B Airstream Sales

8641 Mentor Avenue, Tel: (216) 255-8030
Mentor, Ohio 44060

Macke Trailer Sales & Rental

1044-1108 East Spring Street, Tel: (419) 394-3417
St. Marys, Ohio 45885

Marine Mart Trailer Sales

8750 Harrisburg Pike, Tel: (614) 877-4443
16 Miles S.W. Columbus on U.S. 62
Harrisburg, Ohio 43126

Murphy Sales Company, Inc.

11526 Chester Road, Tel: (513) 771-5771
1-75 at Howard Johnson
Cincinnati, Ohio 45246

P J Airstream Sales, Inc.

5247 Alexis Road, Tel: (419) 882-4129
Sylvania, Ohio 43560

Richland Travel Trailers

302 Ashland Road, Tel: (419) 522-9362
Mansfield, Ohio 44905

Frank B. Ricketts Mobile Home-Travel Trailers

P.O. Box 583, Tel: (614) 432-4040
Clark Street and Maple Road
Cambridge, Ohio 43725

Sommer's Mobile Homes Sales, Inc.

U.S. 57 at Turnpike Exit 8
1800 Lorain Boulevard, Tel: (216) 324-2404
Elyria, Ohio 44035

State Trailer Sales

1715 North State Street, Tel: (216) 545-3045
Girard, Ohio 44420

OKLAHOMA

Brassfield Mobilhomes

7207 N.W. 39th Expressway, (405) 789-4941
Bethany, Oklahoma 73008

Jack Thurman

11311 East Admiral Place, Tel: (918) 437-1660
Tulsa, Oklahoma 74115

OREGON

Cascade Trailer Sales

1876 Highway 99 North, Tel: (503) 688-8505
Eugene, Oregon 97402

Comrie Trailer Sales

603 S.E. Court Avenue, Tel: (503) 276-1921
Pendleton, Oregon 97801

Spencer Mobile Homes

9341 S.E. 82nd Avenue, Tel: (503) 777-1484
Portland, Oregon 97266

PENNSYLVANIA

Farnsworth Camping Center

Route 54, Tel: (717) 672-2332
Elysburg, Pennsylvania 17824

Turner Airstream Sales

412 Lincoln Highway, West, Tel: (412) 523-6545
Jeannette, Pennsylvania 15644

Walter H. Glasgow

1650 Lincoln Way, East, Tel: (717) 264-9551
Chambersburg, Pennsylvania 17201

SOUTH CAROLINA

Dixie Lee Trailer Sales

Highways U.S. 1 & 78
5 miles N. of Augusta, Georgia
Box 306, Tel: (803) 593-2162
Clearwater, South Carolina 29822

Skyway Mobile Homes

Box 262, Tel: (803) 834-4224
U.S. 25 at 276
4 miles N. of Greenville
Travelers Rest, South Carolina 29690

SOUTH DAKOTA

Capitol City Trailer Sales

801 North Euclid Avenue, Tel: (605) 224-2689
Post Office Box 116
Pierre, South Dakota 57501

TENNESSEE

Bow-Inn Camping Center

5710 Lee Highway, Tel: (304) 252-6121
Chattanooga, Tennessee 37421

Campers, Inc.

1401 Central Ave., North, Tel: (615) 522-0118
Exit 1-75 at Woodland
Knoxville, Tennessee 37917

Cullum & Maxey Sales & Servicenter

160 McGavock Pike, Tel: (615) 889-1600
Donelson (Nashville), Tennessee 37214

TEXAS

Abbott Trailer Sales

408 Avenue Q, Tel: (806) 763-4747
Lubbock, Texas 79401

Baker Travel Trailers

4200 East Belknap, Tel: (817) 834-5131
Fort Worth, Texas 76117

L & H Trailer Sales

611 North Fisk Avenue
P.O. Box 1168, Tel: (915) 646-9632
Brownwood, Texas 76801

Land Yacht Trailer Sales, Inc.

4616 Titanic Avenue, Tel: (915) 751-0591
El Paso, Texas 79904

Lloyd's Trailer Sales, Inc.

350 Twin City Highway, Tel: (713) 727-1666
Port Neches, Texas 77651

Mission Mobile Homes

1306 Austin Highway, Tel: (512) 824-3248
San Antonio, Texas 78209

South Texas Trailers & Supplies

Highway 77, South, Tel: (512) 364-1118
P.O. Box 1051
Sinton, Texas 78387

Sportsman Travel Trailer, Inc.

7935 Gulf Freeway, Exit 12, Tel: (713) 649-2733
Houston, Texas 77017

Texas Trailercocah of Dallas, Inc.

2929 Fort Worth Avenue, Tel: (214) 331-6484
Dallas, Texas 75211

Wallace Land Yacht Sales & Service

2005 Mangum, Tel: (713) 682-7264
Houston, Texas 77018

UTAH

Inermountain Trailer Sales

3776 Wall Avenue, Tel: (801) 394-3405
P.O. Box 1503
Ogden, Utah 84401

VERMONT

Pete's Trailer Mart

4016 Williston Road, Tel: (802) 864-9350
South Burlington, Vermont 05401

VIRGINIA

Travel Trailers of Va., Inc.

P.O. Box 807
2211 South Main Street, Tel: (703) 434-9676
Harrisonburg, Virginia 22801
McGeorge Travel Center
6200 W. Broad Street, Tel: (703) 282-4256
Richmond, Virginia 23230

WASHINGTON

Birch Bay Trailer Park & Sales

Route 1, Box 106, Tel: (206) 332-6680
On Birch Bay

Blaine, Washington 98230

Central Trailer Exchange, Inc.

14433 Pacific Highway, South
Seattle, Washington 98168, Tel: (206) 244-9600

Tveten Motor Company

45th & Pacific Avenues, Tel: (206) 472-1600
Tacoma, Washington 98408

WEST VIRGINIA

Don's Travel Trailers

459 Winfield Road, Tel: (304) 727-2153
U.S. 60 at 17
St. Albans, West Virginia 25177

WISCONSIN

J & M Homes

1360 Veip Avenue, Tel: (414) 494-8222
Green Bay, Wisconsin 54303

Northside Trailer Sales

N56 W 13180 W. Silver Spring Road
Tel: (414) 781-9646

1 mile W. of Highway 100

Silver Spring Road

Menomonee Falls, Wisconsin 53051

Sweet Trailer Sales

U.S. 51 and U.S. 2, Tel: (715) 561-4887
Hurley, Wisconsin 54534

Trailerama of Sparta

West Wisconsin Avenue, Tel: (608) 269-6771
Highway 16

Sparta, Wisconsin 54656

Wisconsin Mobile Homes, Inc.

4201 East Washington Ave., Tel: (608) 244-6228
Madison, Wisconsin 53704

CANADA

Butcher & Son, Ltd.

First Street, North
Highway 1A, Tel: (204) 727-0786
P.O. Box 693

Brandon, Manitoba, Canada

Totem Trailers, Ltd.

85 Plains Road, West
Burlington, Ontario, Canada

Tel: (416) 632-0703

Propane Engineering Service, Ltd.

2301 Centre Street, North
Calgary, Alberta, Canada, Tel: (403) 277-7811

CERTIFIED
SERVICE
CENTERS



Equipment you should carry:

1. A first aid kit (including motion sickness tablets).
2. A tool box of small hand tools, such as: screwdrivers, pliers, crescent wrench, etc.
3. Lug wrench for trailer wheels.
4. A hydraulic jack for trailer axle.
5. 4 stabilizing jacks.
6. A spare tire for your trailer.
7. A fire extinguisher.
8. At least 2 plastic pails for carrying water.
9. 4 Wheel blocks: these should be wooden, about 7" square and 4" thick, slanted at one end, to fit against tires and block the wheels when parked.
10. 100 ft. of $\frac{5}{8}$ " water hose, — a 'Y' connection is useful when you travel with others, it enables two trailers to be hooked to one faucet.
11. One: 4 ft., One: 10 ft. sewer hose and coupler.
12. A 75 ft. electric cord — 30 amp capacity.
13. 2 small spirit levels.
14. A flashlight.
15. A short-handled shovel. (G.I. type, Army surplus)
16. A large funnel.
17. Cleaning equipment: broom, sponges, mop, etc.
18. Road emergency flares.
19. Spare-40 amp-cartridge-fuses.

Because Wally felt it was necessary that we have a complete storehouse to make trailering more enjoyable, there is now a Wally Byam Store at both Airstream factories, and authorized dealers throughout the United States, stocking hundreds of items tested and approved by travel experts. There are 'wheel-lock' stabilizing jacks, axle skids, flare kits and fire-extinguishers, cleaning and lubricating specialties for easy maintenance, many labor saving utensils for the galley, a wealth of books and games to make rallies more fun; even a fold-away bicycle and a newspaper-fuelled charcoal grill! Why not check our lists and order, — or come to visit us, — we are here to serve you.

When attaching wall hung improvements, like hooks for clothing, bookshelves, and extra towel racks, secure with half-inch #8 sheet metal screws with flat binder heads, having made holes in the aluminum inner walls with a small hand drill (#32 drill bit).

As the aluminum construction of your trailer creates a radio-shield, you will need outside antennas for perfect reception.

The TV Antenna must be structurally mounted and sealed to the trailer, and is best installed by your dealer. The interior antenna jack in most models, is next to the electrical outlet forward of the galley on the roadside.

A police-type telescoping whip-Radio-Antenna should also be professionally installed for 12V AM-FM transistor radios. next to the front window roadside, of your trailer, on a swivel mount.

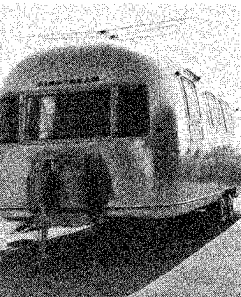
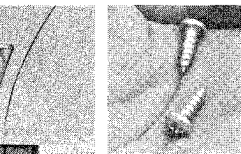
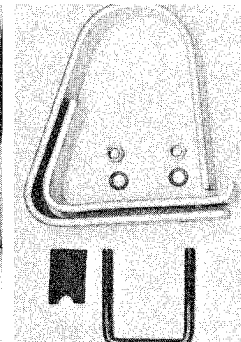
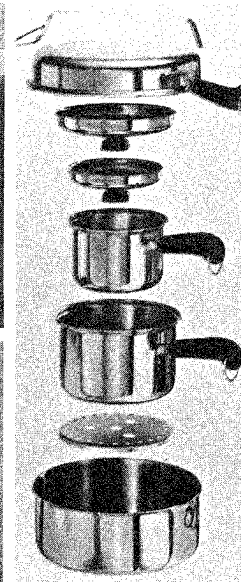
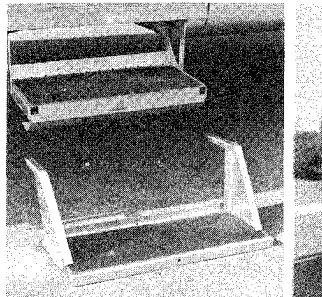
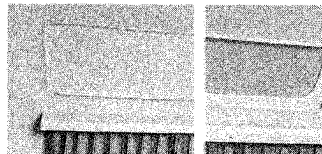
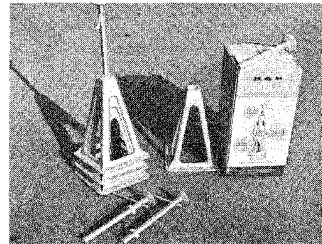
The Bay Breeze Airconditioner requires expert installation. Please let your Airstream dealer or one of our factories install it.

Vistaview Windows are an exclusive Airstream feature, skylight windows equipped with integral shades that can be completely closed.

Awnings give shade during trips and rallies, are easily operated and swiftly installed by your dealer, from a wide selection.

Step Extension: This convenient addition slips easily into place on the standard fold-away step making access easier when the ground causes the trailer hitch to be raised particularly high.

For additional sleeping accommodation, Fold-Away Bunks can be installed in many ways, and stored out of the way when not in use. Let your dealer advise you what is best for your particular needs.



15

EQUIPPING THE TRAILER

There are as many accessories as there are for any home. Ask your dealer's advice, and visit:

WALLY BYAM STORES

Everything suggested in this manual is available. Items briefly described here are comprehensively covered in the Store Catalog, with mail-order form for your convenience.

NECESSARY EQUIPMENT

OPTIONAL ACCESSORIES

Radio & Television Antennas. Your new Airstream is wired for an exterior television and radio antenna.

Airconditioning

Vistaview Windows

Awning

Auxiliary-Step Extension

Fold-Away Bunks

1. Jack the trailer hitch until there is clearance for the hitch ball to slide under. Raise the locking lever of the hitch.
2. The car should be backed now to the hitch connection, — straight back. The easiest way is to put a strip of tape on the rear window of your car and one on the front window of the trailer. By sighting over these two strips, you will be able to line up the ball under the hitch, by yourself. With the help of another person, this can be done by pre-arranged signals.
3. Jack up the trailer to the full height of the jack, before pulling up the leveling bars. The tension on the load equalizing hitch should be adjusted, so that the hitch and the car are slightly high. This will give you the best towing characteristics. A little practice with your hitch will teach you how far to pull up the bars to get the car and trailer level. Always choose level ground for this. Proper and improper hitching up are illustrated. We suggest that the tension on the load equalizing hitch be adjusted so that the hitch and the car rear are slightly high. This will give you the best towing characteristics.
4. Plug in the electrical connector. Check connectors at both ends, check running, directional and stopping lights.
5. Attach the break-away cable to the car. Always attach the safety chain to your car frame or to the hitch at some other point, though never to the ball!
6. Retract hitch jack to its full height for maximum ground clearance. Remove the dolly wheel and jack pad and stow it in your car trunk or some other safe place. Never tow your trailer with the jack down or the dolly wheel on.

Experienced trailer travelers move their rig ahead about 50 feet, then check the ground for forgotten objects. Regularly check the condition of your tires and the tightness of the lug-nuts.

Towing an Airstream is very easy if you first persevere for a few hours on a Sunday in a large Supermarket or empty lot where this is allowed. Line out two corners for left and right turns, also practice backing

HITCHING UP

Information on hitches and adjustments to help you develop your own technique.

TOWING SKILLS

Practice out of traffic and take someone along while you are learning, to watch the right side of the car and trailer.

STARTING

Check the traffic behind you.

TURNING AND

ROUNDING

Wider turns are necessary when turning to the right, and squarer turns when going left. Cutting road curves too closely causes trailer sway. Take all turns at reduced speed.

OVERTAKING AND

PASSING

Remember that in order to pass another vehicle, you will need longer to accelerate.

BEING OVERTAKEN

AND PASSED

Do not apply your brakes.
SLOWING AND STOPPING
 Do not use the break-away switch as a parking brake: it will burn out the brake magnet and drain your battery.

and parking. Observe the tracks made by your trailer as distinct from the car, this will make it easy to correct mistakes.

Start the car slowly, having checked the traffic, and signal that you are about to pull away. Accelerate slowly and evenly. Look often in your mirrors, and also observe the action of your trailer, then move carefully into the proper lane of traffic.

This is where you will feel the basic differences in driving. The trailer wheels will not follow the path of your car wheels.

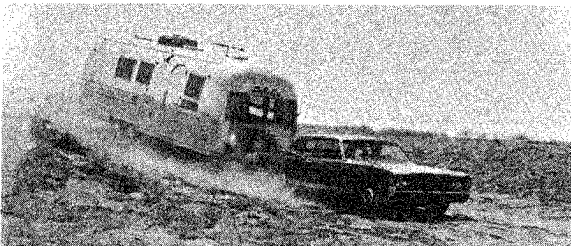
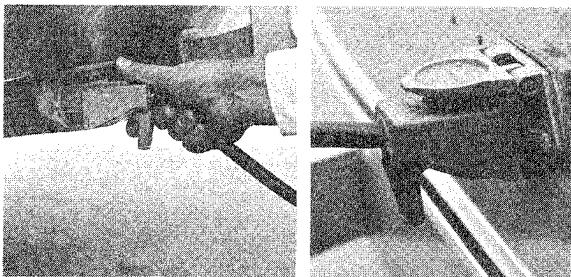
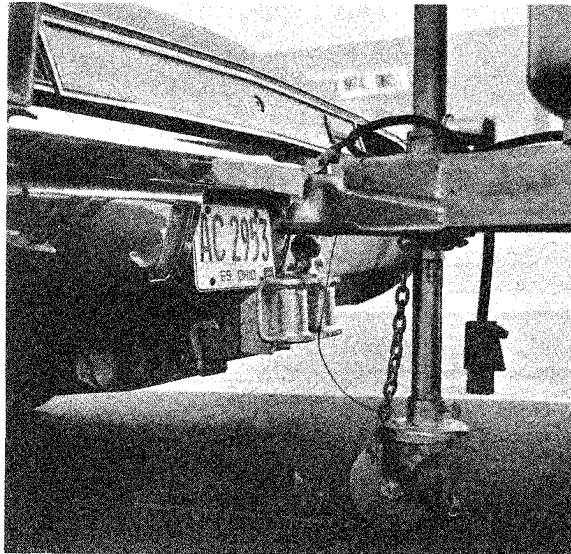
On sharply curving roads, keep well towards the center, away from pavement edges to prevent the trailer from rolling off onto the shoulder. Care must be taken not to overcrowd or cross the center line. Professional drivers slow down before a turn, enter it at reduced speed, then accelerate smoothly as they come out straight.

You must allow for the length of your trailer when overtaking and returning to your lane. On freeways and expressways try to pick the lane you want, then stay in it.

Despite the best hitch, you will notice, whenever a large bus or truck overtakes your rig, that the displaced air first pushes the trailer rear, then affects the front. On a two-lane road, cars will be lining up behind you, because you travel at a lower speed. It is both courteous and sensible to signal, pull onto the shoulder and let them pass.

On slippery pavement do not use engine drag to help you slow down, as this may cause the rear car wheels to skid. Use your trailer brakes slightly ahead of the car brakes. On icy roads take it slowly. If you feel your car skidding, gently apply the trailer brakes. This will straighten both the car and the trailer.

On dry and normal pavement, apply your trailer brakes with your car brakes. This will make you stop as if driving a car alone. When stopping on a hill or slope, leaving the car in gear is not enough for stand-still safety. Chock the trailer wheels with wooden blocks.



13

CHAINS

are useless on trailers.

CHECK BRAKE KIT DIRECTIONS FOR RESISTOR ADJUSTMENT

BACKING

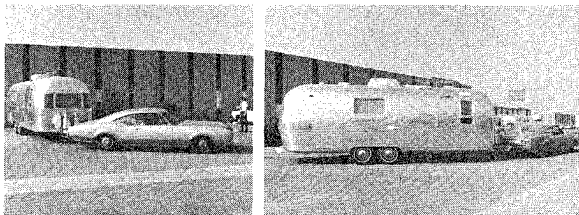
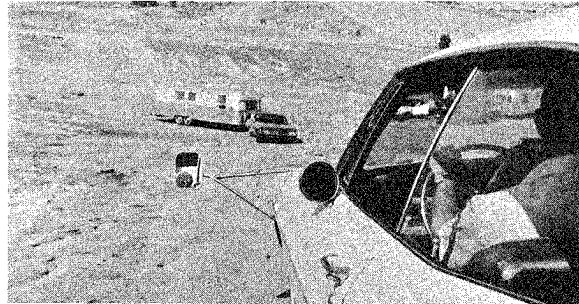
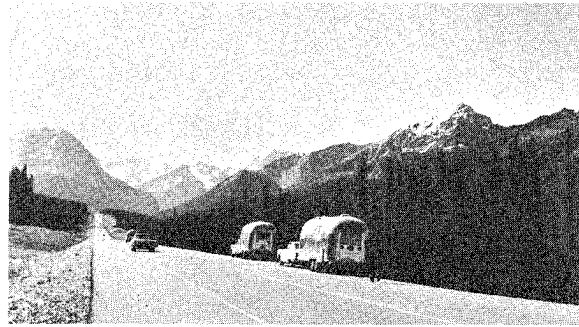
Nothing can replace a few hours' practice, which will also convince you that it is quite easy.

OVERHEATING

Try to anticipate potential overheating conditions. A little practice will teach you your car's limitations, to exceed them means damage to engine and transmission.

IF YOU INTEND MUCH STRENOUS DRIVING:

We suggest you have a temperature gauge installed in addition to the indicator light.



Ensure that your brake resistor is properly adjusted and that your trailer brakes operate smoothly and in timing with your car brakes.

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 trailer rear. With car and trailer straight, back up slowly, turn the bottom of the steering wheel in the direction you want the trailer to go. Watch out of the window or in your mirror, until the rear of the trailer is pointing right. Now turn the 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 wheel. Keep a look out of your left side and use your driving skills.

When driving in the mountains, never let your car labor. Shift to a lower gear or range before it becomes necessary. Turn your air conditioner off, because it will avoid overheating the engine. If ever you do overheat, pull off to the side, keeping your engine running at a fast idle. Never turn the engine off while the red light is on, and then only when it has been out five minutes at least.

Let your momentum carry the tow car and trailer through mud and sand. Do not depend too much on your drive wheels only, stay in the ruts of the car ahead and keep yours in the highest possible gear. Carry a rope or chain so that it can be attached to a passing vehicle in case of need. If you have to tow over long distances on bad roads, the stones and gravel thrown back by your tires will dent and scratch the aluminum finish. To prevent this, use masking tape securing heavy sheets of paper or plastic, to the lower trailer front.

You will increase your gas mileage greatly if you can avoid unnecessary starting and stopping. Before you come to stop signals, time it so that you do not have to come to a halt. This saves gas and tire-wear.

Your Airstream is designed to be towed at any legal speed that is safe for your car. It follows so easily, you may be inclined to forget it is even there after a while. But remember it is there . . . Always maintain a space between yourself and the car ahead, at least the length of your car plus trailer, for 10 miles of speed. Towing speeds are shown under the State Laws on page 23.

Distribute the weight as evenly as possible. The majority of new trailerists carry more food and other supplies than they really need. Remember, every item you take is one more thing to stow and more weight your car must pull.

Leveling jacks, blocks and other tackle related to hitching, should be put in your car trunk, and not in the trailer. Liquids and juices should be transferred to plastic bottles with tightly fitting tops.

It is better to have one full and one empty locker than two half-empty ones. The wisdom of proper loading is soon discovered.

When going up a long grade, shift into a lower gear before the engine labors. Downhill, in dry weather, downshift so the compression of the car engine will slow the whole rig. Take dips and depressions in the road slowly,—do not resume normal speed till you are sure they are behind you.



GENERAL TOWING TIPS
The key to towing any trailer is doing it smoothly. Give yourself time to stop in an emergency. Watch out particularly for cross streets that have gutters through intersections. Be sure to secure the Main Door.

BRAKE RESISTOR
Must be Adjusted

BACKING
OVERHEATING:
REMEDIES

Through Mud and Sand always keep rolling. If you do get stuck, the easiest way out is by being towed. **NOTE:** Protect Aluminum Finish on Bad Roads

LOADING
Keep your trailer as light as possible. Keep fragile things well forward of the axle, stow heavy things low. Never carry pierced containers in your refrigerator. A partially empty space allows the contents to move.

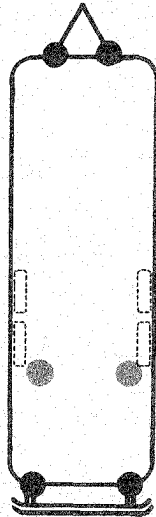
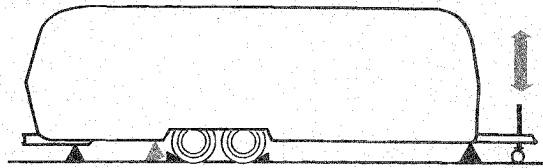
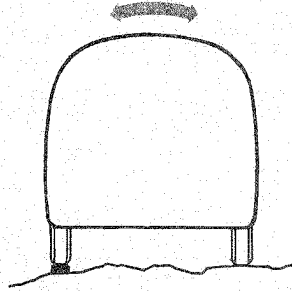
USE THE CHECK LISTS
ON PAGES 72, 73, 74

20

Your Airstream frees you from timetables and reservations and your trailer is safe for parking anywhere on firm level ground. Soon you will be good at spotting off-beat parking places, filling stations, farm land or on private drives.

During overnight and weekend stops, you will hardly exhaust your water supply, the battery, the capacity of your sewage holding tank, nor will you unhitch, unless the car is needed. If you pick a level spot, stabilizing jacks and blocks are probably also unnecessary. Put the pad under the hitch jack. Jack down to take the weight off the car springs for stability.

Whenever the trailer has to be lifted with a jack, always place it under the main frame rail. A 3" aluminum pad is provided to indicate the proper position of the jack.



- Stabilizing Jack Positions
- Hydraulic Jack Positions

If you must park on a slope, park facing downhill. This makes it easier to stabilize the Airstream.

Next, light the waterheater, refrigerator and furnace pilots. Turn on the gas supply to the range and oven and light their pilots, and enjoy the self-contained luxury of your trailer.

Making a long stay is not so very different. For comfort and good refrigeration your trailer must be level.

Use the small spirit levels as follows: Place two on the hitch, mounted at right angles to each other, or on the trailer floor.

First level side-to-side, by running the wheels on the low side up a small ramp of about 3 foot long, tapered from 1" at one end to 4"-5" on the other. Block the wheels to keep the trailer from rolling.

Second, level the front and rear by disconnecting the hitch, putting the pad under the jack and adjusting the screw, up or down.

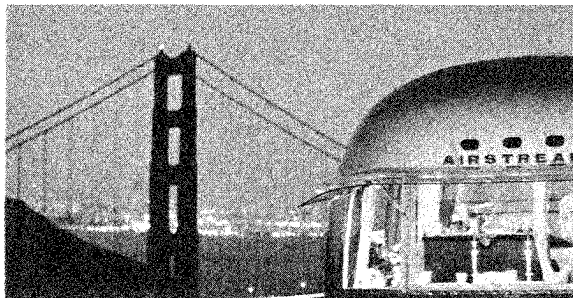
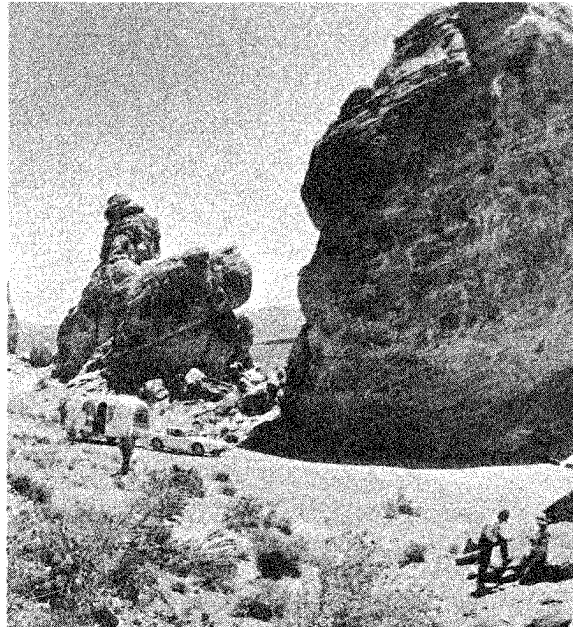
Use stabilizing jacks at all four corners to eliminate the natural spring action of the axles.

Having leveled the trailer, hook up to water by attaching a 5/8" water hose from the city supply to trailer.

Plug in the electric cable to the city power service.

Hook your waste drain hose into the sewage disposal facility and attach the drain outlet in your trailer by removing the drain cap. Push the hose coupler on, and twist till it feels secure. Open holding tank dump valve; drain and flush tank; close valve.

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



OVERNIGHT STOPS— EXTENDED STAY

Everything you can possibly need is right with you. There are many modern private trailer parks, with good facilities, also good Federal, State and County Trailer parks. Directories that list them are available at WB Stores. On a longer trip, stop from time to time to service utilities at trailer parks or service stations. There are booklets listing filling stations with facilities.

When you want to move on, use your check-list.

LEVELING

Do not drop into a hole with one wheel.

Avoid putting great pressure on the stabilizing jacks if they are under the rear bumper.

STABILIZING JACK POSITIONS

HOOK-UP

Be sure you have the proper electrical polarity.

ALABAMA

MSL: 70 mph days, 60 mph nights on open highway.
OS: Parking off highway is permitted.
DOG: Not allowed.

ALASKA

MSL: 50 mph.
OS: Permitted off highway.
DOG: Permitted in state parks at night.

ARIZONA

MSL: As posted.
OS: Permitted at roadside rest areas unless otherwise posted.
DOG: Permitted if leashed in state and county parks.

ARKANSAS

MSL: 50 mph.
OS: Permitted off highway unless posted.
DOG: Permitted if leashed in state and county parks.

CALIFORNIA

MSL: 55 mph.
OS: Not permitted.
DOG: Not permitted in state park system. Permitted in most county parks, and country-run state parks if leashed.

COLORADO

MSL: 60 mph open highway, 40 mph open mountain highway.
OS: Permitted off highway.
DOG: Permitted if leashed in state and county parks.

CONNECTICUT

MSL: 60 mph, 70 mph on interstate or limited access highways.
OS: Generally not permitted.
DOG: Permitted if leashed in state and county parks, one pet per campsite. Not permitted on beaches at any time.

DELAWARE

MSL: 50 mph.
OS: Permitted off highway.
DOG: Not allowed.

DISTRICT OF COLUMBIA

MSL: 25 mph or as posted.
OS: Permitted off highway.

FLORIDA

MSL: On turnpikes, 70 mph. On interstate highways, 65 mph days, 60 mph nights. Other highways, 50 mph days, 45 mph nights.
OS: Permitted.
DOG: Daytime only on leash.

GEORGIA

MSL: 60 mph days, 50 mph nights.
OS: Permitted at roadside park or rest area if not posted otherwise.
DOG: Permitted in state and county parks.

HAWAII

MSL: Set by local ordinance.
OS: Permitted off highway.

IDAHO

MSL: 60 mph, 55 mph nights.
OS: Permitted in roadside parks or rest areas unless posted otherwise.
DOG: Permitted in state and county parks if leashed.

ILLINOIS

MSL: 55 mph. Pickups over 8000 lbs. towing trailer, 50 mph.
OS: Not permitted.
DOG: Permitted in state parks if leashed.

INDIANA

MSL: 65 mph. 70 mph on interstate highways.
OS: Not permitted.
DOG: Permitted if licensed and attended.

IOWA

MSL: Trailer under 4500 lbs., 55 mph. Trailer over 4500 lbs., 40 mph.
OS: Permitted off highways.
DOG: Permitted on 6 foot leash.

KANSAS

MSL: On turnpike, 80 mph. In interstate highway, 75 mph days, 60 mph nights.
OS: Permitted off highway.
DOG: Permitted if leashed.

KENTUCKY

MSL: 60 mph days, 50 mph nights.
OS: Permitted off highway.
DOG: Permitted in state and county parks if leashed.

LOUISIANA

MSL: 35 mph.
OS: Permitted off highway.
DOG: Permitted in state parks if leashed.

MAINE

MSL: 45 mph.
OS: Permitted off highway.
DOG: Permitted if leashed.

MARYLAND

MSL: 50 mph.
OS: Not prohibited.
DOG: Permitted in state forests, but not state parks.

MASSACHUSETTS

MSL: Divided highways, 50 mph. Other highways, 40 mph.
OS: Determined by local regulations.
DOG: Permitted on 10 foot leash. Not allowed on beaches.

MICHIGAN

MSL: 50 mph.
OS: No information available.
DOG: Permitted if leashed.

MINNESOTA

MSL: 65 mph days, 55 nights.
OS: Prohibited except where posted.
DOG: Permitted on 6 foot leash.

MISSISSIPPI

MSL: 50 mph or as posted.
OS: Permitted off highway.
DOG: No information available.

MISSOURI

MSL: On Federal divided highways, 70 mph. Other highways 65 mph days, 60 mph nights. Cities, towns and villages 55 mph unless otherwise posted.
OS: Permitted off highway.
DOG: Regulations vary, inquire at each park.

MONTANA

MSL: 50 mph.
OS: Permitted as posted.
DOG: Permitted if leashed.

NEBRASKA

MSL: Less than 23 foot trailer, same as autos. 23 foot and over, 50 mph.
OS: Permitted off highway.
DOG: Permitted in state parks if leashed. Check at county parks.

NEVADA

MSL: "Reasonable and proper," or as posted.
OS: Permitted off highway.
DOG: Permitted if leashed.

NEW HAMPSHIRE

MSL : 45 mph.
OS: Permitted off highway.
DOG : Permitted in state parks.

NEW JERSEY

MSL : 50 mph.
OS: Permitted.
DOG : Permitted in state and county parks.

NEW MEXICO

MSL : 60-70 mph days, 50 mph nights.
OS: Permitted off highway.
DOG : Permitted if leashed.

NEW YORK

MSL : 50 mph.
OS: Not permitted.
DOG : Permitted if leashed and proof of rabies inoculation.

NORTH CAROLINA

MSL: 45 mph.
OS: Permitted off highway.
DOG: Permitted in state parks on 6 foot leash.

NORTH DAKOTA

MSL : 60 mph, 50 mph nights.
OS: Permitted off highway.
DOG: Permitted on leash.

OHIO

MSL : 60 mph days, 50 mph nights.
OS: Not permitted.
DOG : Not permitted.

OKLAHOMA

MSL: Passenger car/trailer 50 mph. Pickup/trailer 65 mph days, 55 mph nights. 1000 lb. load, 50 mph.
OS: Permitted unless posted otherwise.
DOG: Permitted if leashed.

OREGON

MSL : 55 mph. If not posted, "reasonable and prudent."
OS: Permitted at roadside rest areas.
DOG: Permitted if leashed.

PENNSYLVANIA

MSL: 50 mph.
OS: Permitted off highway.
DOG: Not allowed.

RHODE ISLAND

MSL: 35 mph.
OS: Permitted off highway.
DOG: Permitted.

SOUTH CAROLINA

MSL: 55 mph.
OS: Permitted off highway, but not recommended.
DOG: Check at each park.

SOUTH DAKOTA

MSL : 70 mph days, 60 mph nights.
OS: Permitted off highway.
DOG: Check at parks.

TENNESSEE

MSL : Interstate highways, 65 mph. Other highways 50 mph or as posted.
OS: Permitted at roadside parks or rest areas.
DOG: Permitted in state parks if leashed.

TEXAS

MSL : 60 mph days, 55 mph nights.
OS: Permitted off highways.
DOG: Permitted if leashed.

UTAH

MSL: As posted.
OS: Permitted off highway.
DOG: Permitted if leashed.

VERMONT

MSL : 50 mph or as posted.
OS: Permitted off highway.
DOG: Permitted in state parks on 7 foot leash if there is no beach.

VIRGINIA

MSL: Interstate or four lane divided highways, 50 mph. Other highways, 45 mph.
OS: Permitted off highway.
DOG: Permitted if leashed.

WASHINGTON

MSL: Days, 60 mph in 70 mph zone, 50 mph in 60 mph zone. Nights use posted truck speed.
OS: Permitted off open highways only, not at roadside rest areas.
DOG: Permitted if leashed.

WEST VIRGINIA

MSL: 55 mph.
OS: Permitted off highway.
DOG: Permitted if leashed.

WISCONSIN

MSL : 65 mph days, 55 mph nights.
OS: Not permitted.
DOG: Permitted at state parks if leashed. Check at county parks.

WYOMING

MSL : Four lane divided highway, 70 mph. Other highways, 65 mph.
OS: Not permitted.
DOG: Permitted in state parks if leashed.

Trailer traveling through our United States requires a knowledge of many state regulations. Here through the cooperation of Trailer Life Magazine, North Hollywood, California is a brief summary of three of these regulations.



(1) Maximum Speed Limit of vehicles towing a trailer. (2) Permissibility of making Overnight Stops on highways or roadside rest areas. (3) Permissibility of keeping a DOG overnight in State or County parks.

NOTE: State laws may change after the printing of this manual. Watch carefully for posted signs.

Air conditioner (optional) High and low speed setting.

To operate: 1) close doors, windows and ventilators. 2) Set thermostat to desired temperature (75° is normal). Do not make frequent changes. 3) Push the fan switch (left under thermostat) to HI position. 4) Push main switch (right under thermostat) to 'cool'.

When the inside temperature has reached the thermostat setting and the outside temperature is 90° or less and expected to continue, set speed to LO.

To shut down: push main switch to 'off'.

Shut off to clean or replace the filter. Remove: by letting shroud down & sliding out. Clean: brush off loose lint, run water through filter or move it briskly in soapy or detergent water. Rinse: thoroughly. Dry completely and replace. The unit has a low voltage starter kit, so that it can start at 90 Volt current.

To convert the Lounge into a Bed, pull the back cushion down toward you onto the seat. Grasp the front rail of the seat, lift about ½" and pull out to full extension,—there are built in stops. Fold the rear cushion back and down to form bed. To convert back, reverse the process.

Make Beds in the usual way, using fitted sheets ¾ bed size. To convert back to lounge, remove and store pillows. Fold the ends of bedding neatly to expose about 2" of the mattress, then starting from the edge nearest to you, roll up the bedding as tightly as possible towards the back wall. The space below the shelf, behind the rear cushion is ideal for storing bedding for both front travel lounges and gaucho beds. The fixed twin beds pull out enough to make tucking of bedding along the wall quite easy. Note: Please do not launder mattress ticking, it has to be dry cleaned to prevent shrinkage.

Cabinet Catches: To open, just squeeze the latch; to close shut the door firmly, the catch will engage itself. Doors under the beds and lounges: open by lifting upward on the lower edge and slide back when in the horizontal position.

Carpets: Hard-wearing Herculon yarn construction makes for easy maintenance. Use vacuum for normal cleaning with a good shampoo periodically.

Credenza Table: can either be open or stored while towing. Be certain to secure the lock underneath extension slide when stored, and to fasten the small catch on the table edge.

Front Table: Be sure the table is in the lowered horizontal position for traveling. To open the Table, slide it aside, enough to clear the front lounge, and lift to the horizontal position, hold it there, unlock the folding leg which then pivots into the vertical position. (To unlock the leg, slide the locking collar down about ¼".) The leg automatically locks in open or closed position. To stow, reverse the process.

To extend, unlock the latch underneath (near the leg). Lift the table slightly off the floor, and pull the table frame with the leg as far as it will go. Release the small catch on the shelf side of the table edge, rotate the extension leaf over and lay it on the frame. The entire table can be slid fore and aft for seating comfort, by raising the leg off the floor and moving. Secure the lock to prevent the frame from dropping down and the top leaf falling out during travel.

Drapes: are on tracks at both top and bottom, to keep them close to the window and wall, and to prevent their movement during travel. To maintain the crisp look they should be 'resized' during the cleaning process. (Sizing is the trade term for 'stiffening with gelatine'.)

Drawers: have molded-in-carrying handles for ease of packing and unpacking.

Floor Tiles : should be cleaned with warm water and detergent and coated with a good clear wax.

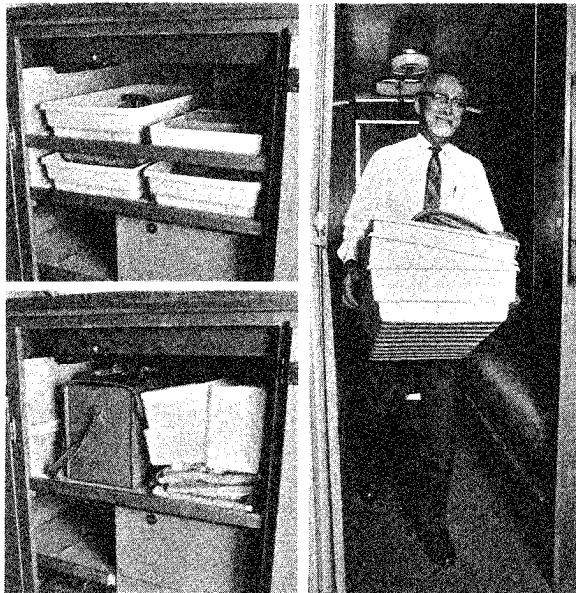
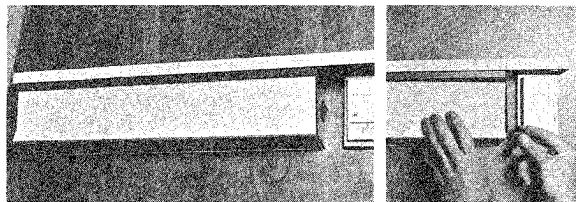
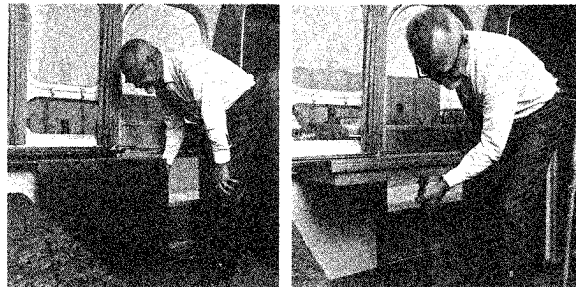
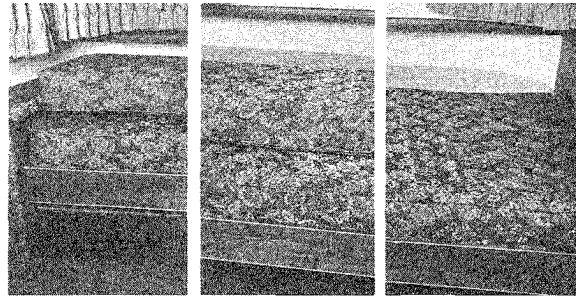
Furnace: Lighting instructions are found on the plate inside the door. Technical details on pages 57.

Lavatory & Tub : are made of strong, light-weight, hardwearing material. Use soap or detergent or recommended creams for cleaning.

Lights: Spotlights have switches on the rim. Ceiling light fixtures are operated by 4-position switches in the fixtures. Starting from off position turning clockwise, the switch turns on first one, then three, then four bulbs then off. To replace bulb : unscrew switch knob and remove retainer nut.

Shelf-lights are operated by a switch on the side and can be tilted for better light distribution. To replace bulbs: remove screw near switch and pull cover slightly forward, the cover will come off, exposing light bulbs. To replace cover: align the hole in the cover with the pin in the side, and replace screw. There is a master switch for Center Lights by the main door in Land Yachts and International models.

Main Door: The latch acts as a deadbolt. Do not slam it when in the locked position. Should you find it difficult to unlock, push in, to release pressure on door latch. The latch handle will be firm only when closed.



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INTERIOR

AIRCONDITIONER

BEDS/CONVERTIBLE
LOUNGES

SIDE-PULL-OUT BEDS

BED-MAKING is easy.
The entire bedroll is under the
shelf.

CABINET LATCHES

CARPETS

CENTRAL CONTROL
PANEL

See page 43.

DRAPES

Must be drycleaned.

DRAWERS AND SHELVES
All are movable allowing you
storage flexibility.

EXTENDING TABLES

FLOOR TILES

FURNACE

LAVATORY & TUB
Never use scouring powder.

LIGHTS

MAIN DOOR
Please secure so that it can-
not fly open.

Medicine Chest: 120V and 12V outlets are in the medicine compartment, so that the shaver and electric toothbrush may be left plugged in while the mirror is closed.

Range and Oven: Cleaning Instructions After Range is in Use

1. The main top has been hinged from the back so that it can be raised for cleaning around the top burners.
2. When cleaning top burner heads, care should be taken that all ports are opened up with a toothpick afterwards.
3. Spill over or spotting in oven or broiler are more easily removed when done promptly after they occur. Never wash porcelain when warm. Never use cleaning powder containing grit or acid. When oven bottom is replaced after cleaning or servicing, be sure that it is locked in place. The front return flange on the oven bottom must hook under the side support angles to prevent warping.

Range Exhaust Hood: To open, flip the cover on the undersurface of the hood. The fan (optional) is turned on by the switch next to the filter cover.

Clean the filter regularly with warm water and detergent.

To remove: open roof locker and slide out. Keep the vent housing clean from grease and dirt by frequent washing.

Refrigerator: Defrost whenever ice has accumulated, as this reduces efficiency. Turn the thermostat (ET or GT) to warmest position and leave the door open. See that the drip tray is in position below the evaporator.

Now is a good time to remove all food and clean the interior and all other plastic parts with warm water and detergents. Never use abrasive or caustic cleaning powders, polishes, cleaning paste, gasoline, turpentine or other solvents.

Use a damp cloth for cleaning and finish with a soft dry one. After defrosting is completed, turn the control knob to its normal position.

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

Sinks: Ordinary soap or detergents are best for routine cleaning. Rinse thoroughly with warm water and wipe dry with a cloth, to avoid streaks and spots.

Stubborn stains will yield to paste made of water and a slight abrasive 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 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 often will prevent build-up of scale and film.

Stainless steel sinks cannot be harmed by boiling water. However, salt, mustard, mayonnaise and ketchup will cause pitting.

The Screen Door: latches with a slide bolt to the main door. To use independently, slide bolt, close the center panel of the screen door, and latch main door to the exterior.

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

Telephone Shower Head: To save water, wet your entire body and turn the water off. Apply soap and rinse while moving the shower head about you.

In International models, the shower can be turned on and off without disturbing the hot-cold adjustment.

In Land Yachts there is a valve in the shower head.

As a fixed shower, use the upper head position.

For filling the tub for a bath, use the lower position.

T.V. Antenna: The controls are on the ceiling directly below the antenna.

To open dipoles, swing arm, see illustration (1) to opposite position. Hold arm in this position (2) and slide lock completely into side of arm (3). Turn on TV set and select a channel.

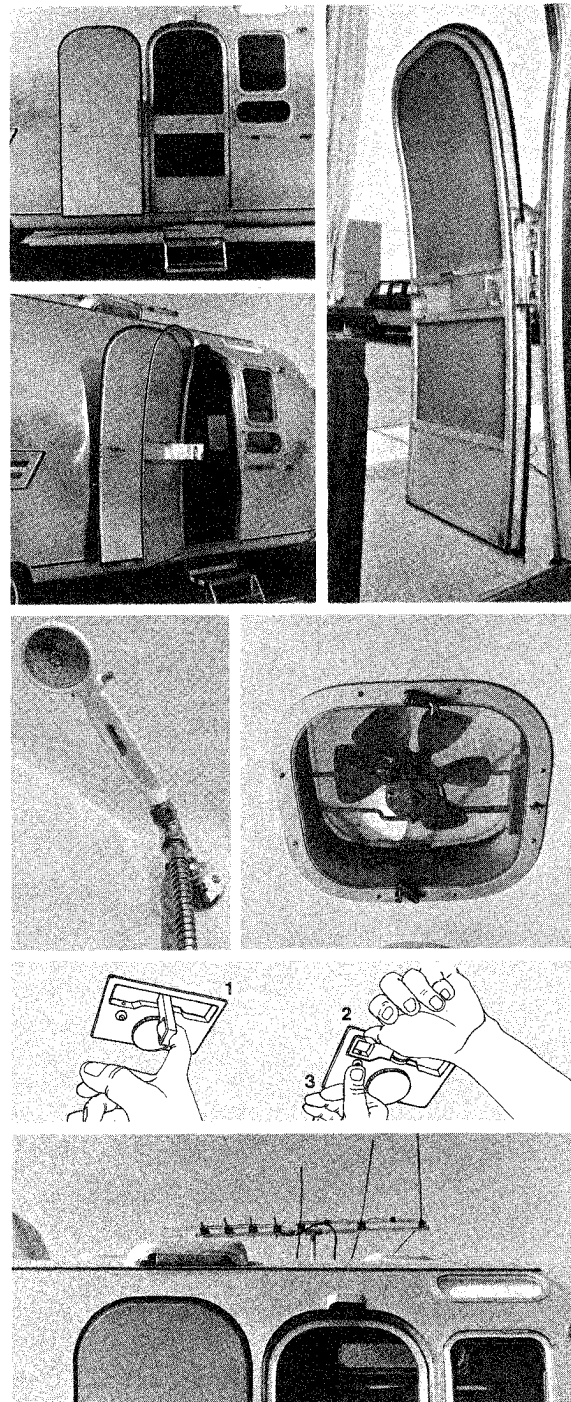
While watching the picture, rotate the large round knob on the antenna control panel counter-clockwise, till the picture is good.

If you hit a stop before the picture is good, reverse rotation. (The antenna rotates full circle.)

When changing channels, you may have to re-adjust again.

To close, rotate the knob clock-wise until it stops. Hold arm in locked position, at the same time slide lock completely out (2) of side arm. Allow arm to return to its position, and the dipoles are closed.

Check that the antenna is folded and pointed straight forward.



27 INTERIOR

MEDICINE CHEST
is behind the mirror in the bathroom.

OVEN & RANGE
Cleaning instructions. Technical Details on Page 63.

RANGE EXHAUST HOOD
provides venting of cooking heat and smoke from trailer.

REFRIGERATOR

DEFROSTING
Lighting instructions are inside the kickplate. Technical information on page 61.

STAINLESS STEEL SINKS
Cleaning Instructions.
Heat sterilizing is safe.

SCREEN DOOR

SCREENS

TELEPHONE-SHOWER HEAD
gives maximum flexibility in use, and helps conserve water when you are not hooked-up to city supplies.

TV ANTENNA
opening, closing and rotating is done from inside the trailer.

Toilet Exhaust Fan: is in the bathroom ceiling, with two-speed-switch in the center. The fan is very silent and therefore easily forgotten.

Vents: keep the rain out while allowing air circulation. To open, rotate hand cranks. For the most air, open front and rear of vents. For less, open one end only. Screens should be removed for regular cleaning: remove hand cranks, screws and pull screen downward.

Water Heater: Lighting Instructions are inside the door, which is to be opened only for lighting.

Walls: clean with suds from a mild detergent, adding a small amount of bleach to the water. A damp bristle brush may be used for scrubbing. Rinse after with clear water and wipe dry.

Woodwork is lacquered for beauty and durability. Use a cloth moistened with plain water for cleaning. Solvents will destroy the finish.

Work Surfaces: are resistant to solvents, stain, acid and scratching. Waxing will help preserve their luster.

Windows: the strong safety glass prevents injury in the event of breakage. A hard blow will shatter it only into dull, small, harmless pieces. No special care is needed, it can be cleaned in the normal manner.

To open: Lift up on the operators on the sides of the frame, until the window is in the wanted position. Push operators into one of the three slots on the sides of the frames.

Clean the seals with a damp cloth or mild detergent every 3 to 6 months. (Strong solvents 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.

To remove a damaged window :

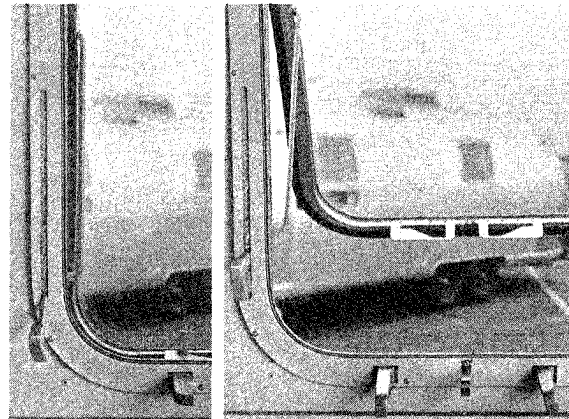
1. Open about half way.
2. Remove retainer from both operator arms.
3. While holding window open, remove operator arm ends from holes in window edge trim.
4. Rotate window upward until hinge on window drops out of hinge portion attached to window frame.
5. Clean the seals and check for damage. Cuts in the seals may cause leaking. Damaged seals should be replaced.

To Install New Window:

Order by part number, which is stamped on the sill, approximately 10" in from the right side (inside the trailer).

1. Hold window in position as shown and insert hinge into window frame. Be sure to rotate glass and frame upwards above the horizontal position. The window must be centered in the window frame. Once the hinge is properly located, rotate window down.
2. Lubricate rubber seals as described.
3. Lubricate the hinge, using the same lubricant as used on the rubber.
4. Place outside ends of operators into holes in window edge trim and fasten retainers.

Note: Do not force the window down, — if the hinge is hooked properly, the window will swing down by its own weight.



29

INTERIOR

TOILET EXHAUST FAN

Turn off, when not needed, or it will drain your battery.

VENTS

The optional fans increase circulation.

WATER HEATER

Full details, on page 5.

WALLS

are finished in vinyl for easy maintenance. Kerosene, naphtha, carbon tetrachloride, lighterfluid, Energine and similar will damage the vinyl. Abrasives may wear off the pattern and destroy the luster.

WOODWORK

Do not use alcohol or any petroleum-based solvents.

WORK SURFACES

are of melamine laminate. Never use abrasive cleaners or put hot pans down straight off the stove.

WINDOWS

are of tempered safety glass. All open outward.

REPLACEMENT

windows come assembled with edge trim and keepers.

Aluminum Shell: Oils, greases, dust and dirt can be removed by washing with any mild non-abrasive soap or detergent. (Do not use automatic dishwasher detergent.) Cleaning solutions are best applied with a large sponge, soft cotton cloth or with a soft bristle brush for stubborn spots. Cleaning should be followed by rinsing with clear water taking care to rinse all detergents from cracks, grooves and crevices. Best results will be obtained by drying the surface with a chamois or soft cloth.

After cleaning and drying, a good grade of non-abrasive automotive paste or liquid wax will increase the life of the finish, protect the shell from minor scratches, and make subsequent cleaning easier. Wax should normally be applied every 3-6 months.

It is important to remove sap, seeds, gum, resin, etc., as soon as possible after they appear. Sunlight and time will bake harden these materials and make them almost impossible to remove without heavy buffing.

If your trailer becomes exposed to unusually severe and corrosive atmospheric or service conditions, or has received improper maintenance, the acrylic coating may be destroyed and the aluminum may oxidize. The oxidation can be removed by using aluminum cleaner available from the Wally Byam Stores. Follow cleaner manufacturer's recommended procedures.

Window Guard: is made of longlasting Butyrate. This material can be damaged by harsh abrasive cleaning agents and should be washed only with soap and water. To open, unlock the latches on the lower frame, then open by turning them inwards until they disengage from the keepers.

Foldaway Step: is lowered into the open position by pulling out the handle below main door, allowing the step to drop fully into a locked position.

If it does not lock, pull out on the step itself until it locks.

To return the step, grasp the lower front edge, then push upwards into the opening sufficiently to engage the lock.

Extension Step: fits into the holes in front of the Foldaway Step. It should be stored in the bracket provided under the trailer, forward of the main step.

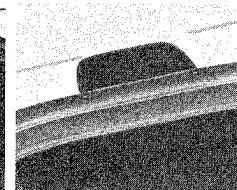
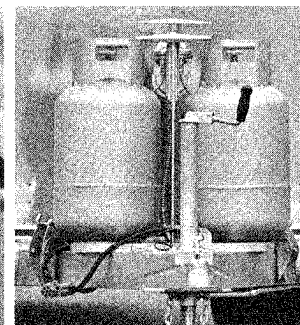
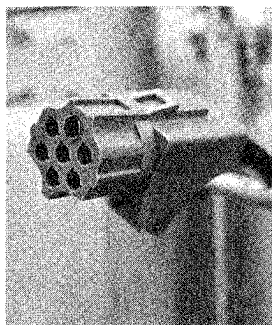
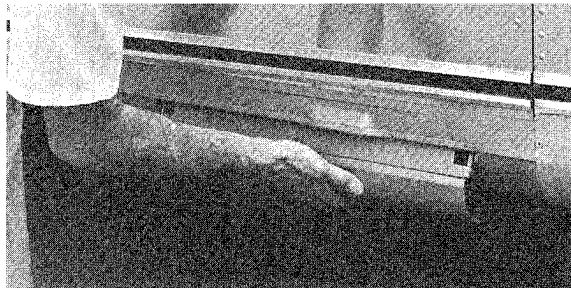
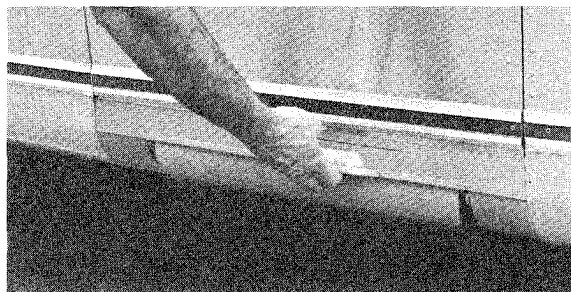
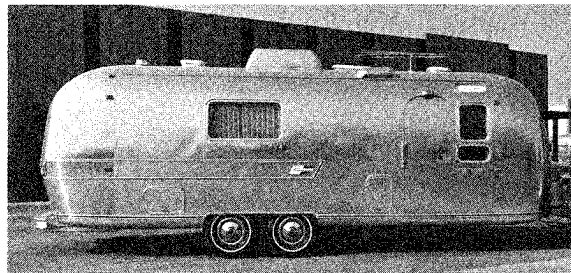
Main Door Light (Standard on Internationals, optional on Land Yachts): Is operated by a switch inside, forward of the door. Replace bulbs by removing two screws and lens.

Chassis: To keep your trailer looking new, paint these portions: chassis, L.P.G. tanks etc., periodically, by brushing on paint, or better still by paint-spraying.

When you are doing the chassis, it is a good idea to repaint also the vent covers of the galley exhaust fan, refrigerator and plumbing vents.

If your trailer has electric airconditioning, also paint its shroud.

Keep contacts of 7-way connector clean with 'Spra-kleen'.



31

EXTERIOR

ALUMINUM SHELL

The exterior surface should be washed periodically and always in the shade or on a cloudy day when the aluminum skin is cold. Under no circumstances use acid etch cleaners. Cleaning should be followed by rinsing with clear water. Protective Wax coating is important in coastal areas where the finish is exposed to salt air, or in polluted industrial areas. If the acrylic coating is destroyed, the aluminum will oxidize.

FRONT WINDOW GUARD

FOLDAWAY STEP

Watch your fingers, keep them off the top...

AUXILIARY STEP

EXTENSION

Do not travel with it inserted.

MAIN DOOR LIGHT

CHASSIS

has been painted with high quality black paint, and the visible areas with aluminum lacquer. Paint periodically.

Check the 7-way electric connector for dirt and corrosion.

The Kelsey Hayes Electric Brakes are operated by the 12V current from your car and should be hooked up so that you have an integral system with your car brake. They should be checked and adjusted by your certified service center. (Never use the break-away switch as a parking brake.)

Neither Airstream nor Kelsey Hayes Co. will assume any responsibility for the brakes on your Airstream if your tow car is equipped with any other brake controller or resistor.

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

2. Jack the wheel up so you can spin it by hand: tighten the brakes (using a brake adjusting tool or a screwdriver that has been bent to a 90 degree angle) until the wheel is locked, then back off until you have a free spinning wheel (which will be approximately 15 notches).

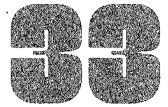
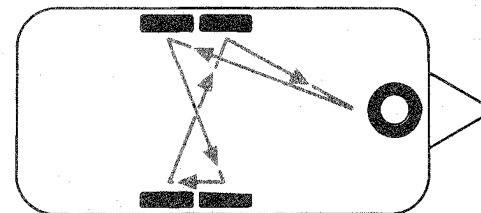
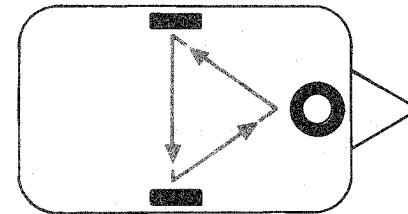
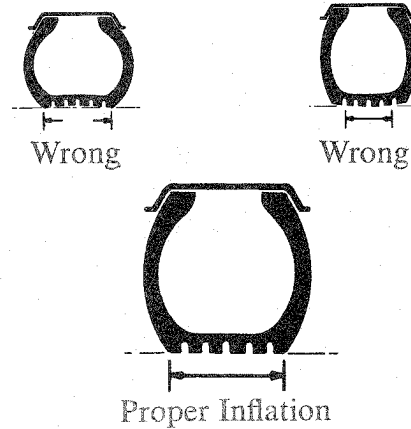
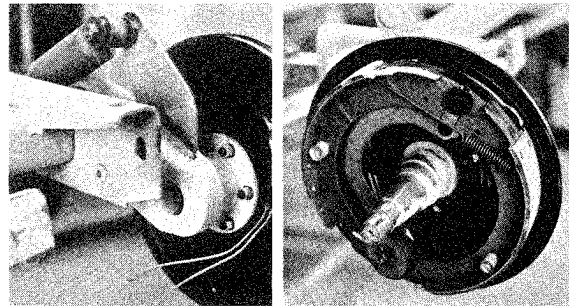
3. Repeat this operation with all trailer wheels.

Tires: Your Airstream dealer cannot make adjustments to them, this has to be done by a dealer who handles that particular brand. If you ever have tire problems, check in the telephone directory for the nearest dealer.

To get maximum performance and life from your tires:

1. Always check air pressure.
2. Whenever possible park out of the sun—in desert regions use tire covers to prevent ozone deterioration.
3. During extended periods of stay, put your trailer on blocks to keep tires off the ground. (In desert regions, if local conditions permit, remove trailer tires and store them in a cool dry enclosure.)

Flat Tires: The independent suspension of the Dura-Torque makes it possible to change tandem trailers, by driving with the sound wheel on a block of 6" thickness, so the damaged tire clears the ground. Four wheel units can safely be driven on three tires, if a spare is not carried.



RUNNING GEAR

DURA-TORQUE AXLE is designed to last the life of your trailer without service, except to the wheel bearings. Under no circumstances must welding be done on or near the axle.

TRAILER BRAKES: The main trouble is caused by improper installation of the controls in the tow car. To prevent problems and insure satisfactory breaking action, install a Kelsey Hayes controller and variable resistor in line with the brake controller in your car.

TIRES: Check cool, never 'bleed' out air after driving.

TIRE PRESSURES

- 40 p.s.i. for 7:75X15 8 Ply
- 45 p.s.i. for 7:00X15 6 Ply
- 60 p.s.i. for 7:00X15 8 Ply

TIRE ROTATION

CHANGING FLAT TIRES on Tandem Trailers: Replace without using a jack.

On Single Axle Trailers: A 3" aluminum pad is provided to indicate the proper jack position.

34

Your Airstream is designed and built for easy towing by almost any car.

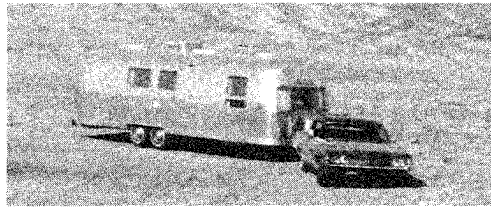
Our ratio guide is based on the experience of thousands of trailer travelers, to help you assess the weight to horse-power ratio.

To work out your own ratios:

1. Add weight of trailer to advertised weight of your car.
2. Divide by advertised horse-power of car.

Example: 27 ft. Airstream:
4500 lbs. + Auto 3829 lbs.
Divide by hp 300 for Auto: re-
sult 31.12 lbs. per hp.

Improper Hitch-Up: Caravan-
ner Insurance Statistics show
that most accidents that occur
are due to a low hitch ball. The
only correction to be made is
to have the hitch changed.
When marginally low, you
may use a slightly higher ball
fitting.



Automatic transmission, will prolong your car's engine life, and does a better job of controlling engine loads than the average driver using manual shift.

The frame-mounted Weight Equalizing Hitch transmits the hitch weight of the trailer via the load bars equally onto all four wheels of the car. Hitchball Diameter $2\frac{5}{16}$ "

Our illustration shows the proper relationship between car and trailer with various hitch conditions. You will note that if the load leveling bars do not have enough tension on them, both the nose of the trailer and the car ride low. When this happens the trailer does not tow well, as excessive load is on rear axle and it is difficult to steer. When the hitch of the trailer and rear of the car are high, you reduce traction on the rear wheels and overload the front wheels.

All adjustments must be made on level pavement.

Make certain the attaching points for the safety chain and the break-away switch are on the welded portion of the hitch or the car frame, and not on the movable ball mount.

Sway Control: Several devices are available, to reduce the tendency to sway while towing at high speeds. Align as follows:

1. Cam type: Park the car and the trailer on perfectly level pavement in an absolutely straight line.
2. Adjust the cam arms so that the mating portion of the cam on the load leveling bars is in perfect alignment with that on the trailing arms.
3. Tighten the nuts on the 'U' bolts securely so that the cams cannot move out of adjustment.

Friction type: The amount of sway control obtained depends on the adjustment of the friction plates. Though this is not as critical

as the cam type, attention to adjustment will give you best results.

If the hitch is welded on the car so that the ball is too low for your trailer, nothing can compensate for the error. A low hitch ball will lower the nose of a tandem axle trailer, thus throwing more weight on the front, which changes the center of support for the trailer, and increases tail-wagging tendencies.

A Seven-Conductor Auto Cord Wiring System is used to connect your Airstream to your car. Through a single locking, polarized connector your trailer battery will be charged, brakes operated, and running and signal lights activated.

Brakes: are the Kelsey Hayes (electrically operated), two shoe adjustable brakes. For proper operation, your car must be equipped with a genuine Kelsey Hayes controller and resistor. Please see page 33. Your Airstream dealer will install or supervise and test.

Accessories: A truck or trailer type left rear view mirror is required by law, but we also recommend an additional right rear view mirror.

If you plan buying a new car and intend keeping it for several years to tow your Airstream, we suggest you include the trailer towing options offered by most car manufacturers in your purchase. These include such things as an oversized generator and radiator, heavy duty springs and shock absorbers, oversized fan and others, depending on the make of car.



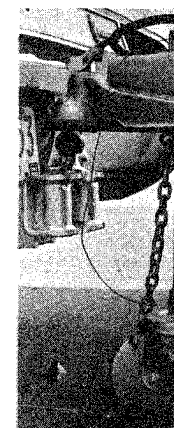
Right



Wrong



Wrong



35

EQUIPPING TOW CAR WEIGHT TO HORSEPOWER RATIO

The practical upper limit for most road conditions is 60 lbs. per hp. Anything between 30-40 lbs. is very adequate.

CAR TRANSMISSION can be manual or automatic. HITCHBALL HEIGHT is (top of ball) 19½"-20½" on your car.

EQUALIZING HITCH. When the hitch is properly installed and adjusted, the car rear and trailer hitch should be slightly high when parked.

SWAY CONTROL There are two equally good types: cam type and friction type.

THE ELECTRICAL CONNECTOR can be removed completely and stored when not in use. When hitching up, check both connectors. Also see wiring diagram on page 47.

BRAKE CONTROLLER
& RESISTOR
ACCESSORIES FOR
YOUR CAR

Liquid Petroleum Gas burns with a clean blue flame and produces more heat than natural gas.

Two types are commonly in use: Butane has a freezing point of 32°F, Propane -40°F, therefore, they will be available according to the year round temperature of the area concerned. With average use you can count on three weeks service from each 28 lb. tank or two weeks from each 20 lb. tank.

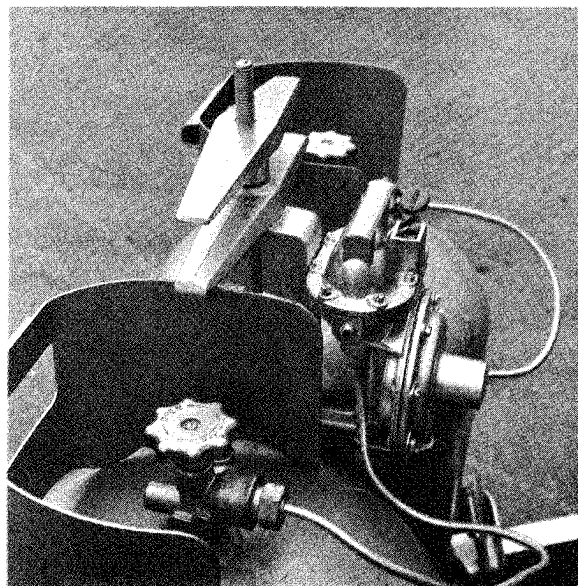
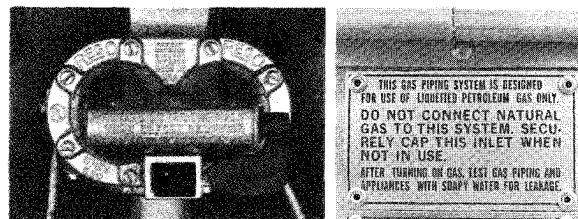
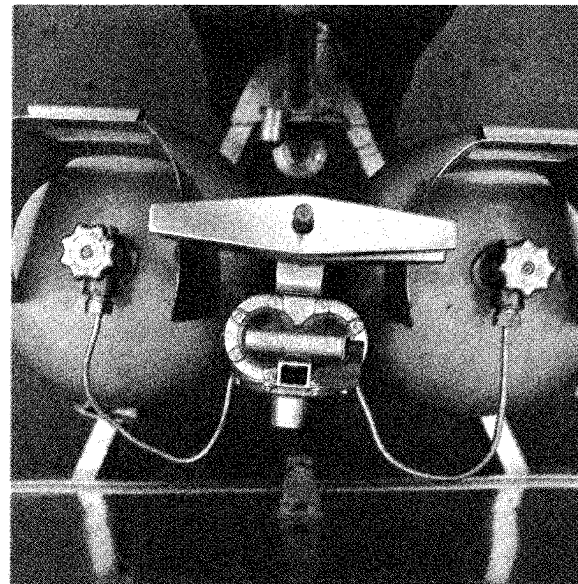
In cold weather, with the furnace going, greater hot water needs and extensive cooking, you will naturally burn more. International models have an Automatic Gas Regulator. Both tanks are connected to this. An indicator on the regulator points towards the tank in use. This also serves as a reminder when one tank is empty. The empty tank can be removed for filling without disturbing the other. Simply close the tank valve, disconnect, fill, reconnect, and reopen valve.

The tubing nut has a left hand thread, so turn it clockwise to loosen and counter-clockwise to tighten.

When replacing tanks, connect and tighten before clamping them in place.

If you have allowed both tanks to empty, air may be present in the lines. This must be forced out by gas pressure before you are able to light your pilots. Light the pilot of the appliance nearest the tanks until it ignites, and repeat by moving to the next closest appliance, and so on, till all the lines are cleared of air.

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



37

L.P.G. SYSTEM

Butane and Propane.

Your Airstream appliance will burn either fuel.

Gas is drawn from one tank at a time, and when one is depleted, the **AUTOMATIC REGULATOR** switches to the full tank, provided both tank valves are open.

MANUAL REGULATOR open only one valve or both tanks will empty at the same time.

Switch to other tank when one is empty.

To Remove Gas Tanks, disconnect the tubing nut with a wrench and loosen the large threaded ball holding the tanks in place.

We advise you always to shut off the tanks during travel.

B.T.U. ratings of appliances are charted under Specifications, on page 69.

The exclusive Airstream Univolt System enables you to use your lights and appliances whether you are operating self-contained on battery power, or hooked-up to 120 Volt city power. This combination unit contains all solid state circuitry and is protected from damage by internal automatic resetting circuit breakers. The 12V light bulbs give the same light as regular household bulbs, and therefore, whether you are on battery or city power, your facilities are not affected, except for the additional 120V AC convenience outlets for TV, toaster, etc. (12V TV Battery sets are available.)

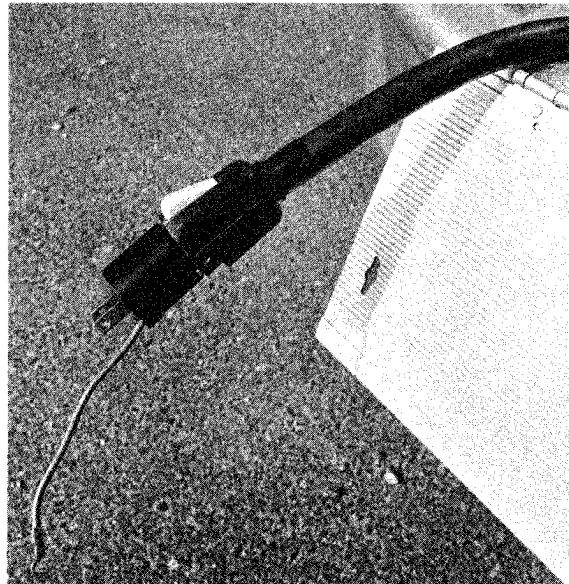
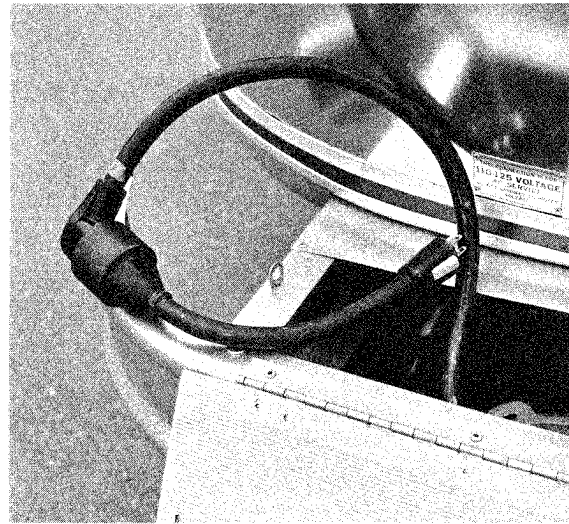
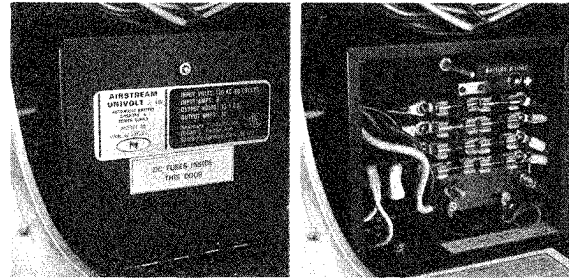
To Operate Self-Contained:

This automatically occurs when the power supply cable is disconnected from the city power receptacle. Store the supply cable in the space provided in the hose storage compartment.

To Operate With City Power:

Plug the power supply cable into the city power receptacle. It is unnecessary to uncoil the whole cord. Open the storage compartment lid, uncoil only the needed amount of power cord, pulling it through the access door on the bottom of the storage compartment, and plugging into city power. Whenever the 3-Pronged plug can be used, you will have no problem with proper polarity or grounding. In older parks and many other locations, When Three-Wire Grounded Service is not Available:

1. Attach the three-prong-plug to a two-prong adapter. The third conductor line of this has a ground lug, which constitutes your ground line.
2. If possible, clamp ground line to the junction box, or to a water pipe, and then insert the two-prong-plug into the receptacle.



ELECTRICAL SYSTEM

When connected to city power, the Univolt system converts 120V AC power, and charges the battery.

When on self-contained battery power, everything works except the 120V convenience outlets, electric operation of the refrigerator, and optional air conditioner.

Whenever your car is hooked to your Airstream, the Univolt system will automatically draw power from your car battery as well as your trailer battery.

SELF-CONTAINED CITY POWER

Make very certain that the Trailer Park Service is 120V not 220V.

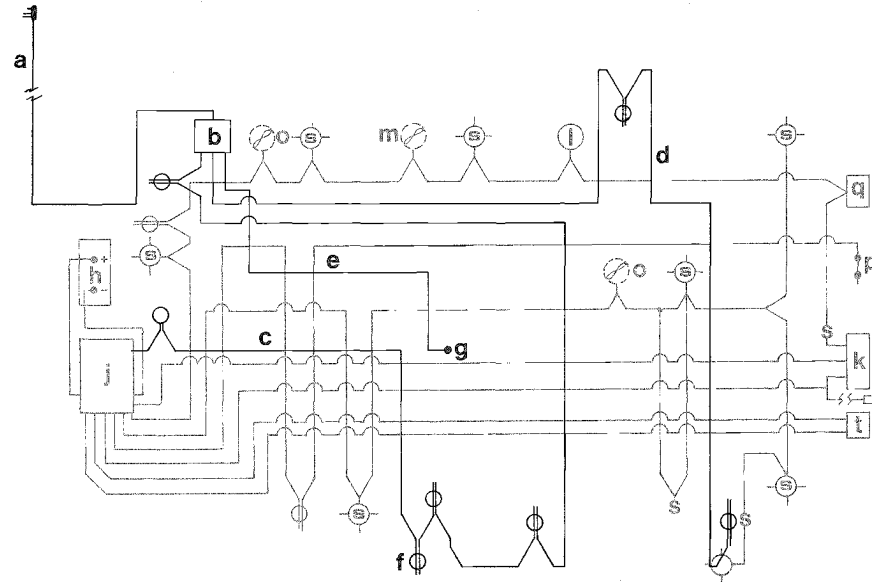
WHEN 3-WIRE GROUNDED SERVICE NOT AVAILABLE

You must ground the service coming into your Airstream to prevent possible shock to anyone touching your trailer.

**SPECIAL LAND YACHT
18D**

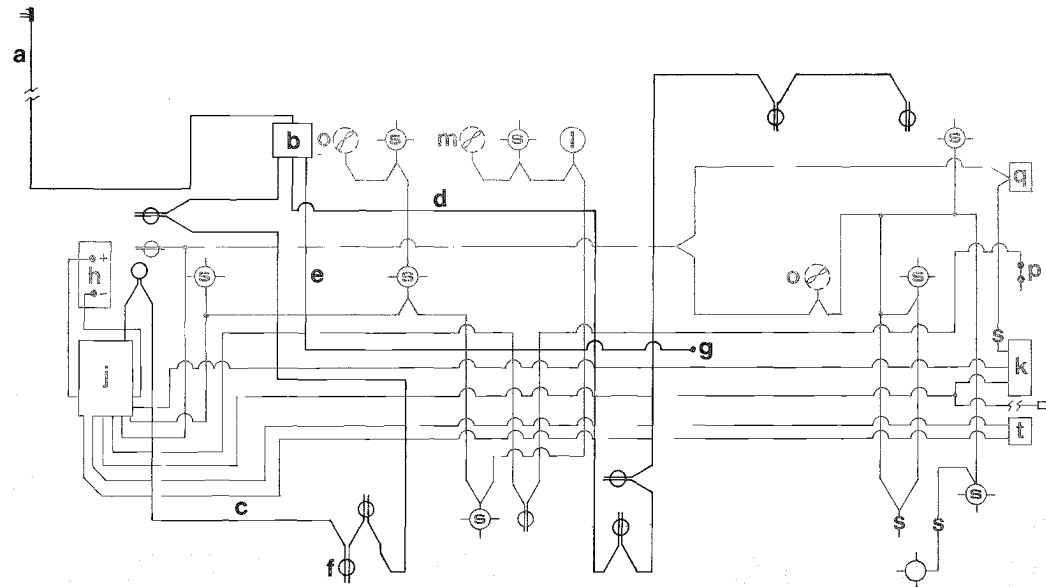
————— 120 Volt.

- a: Power Supply Cord
- b: 120 Volt Panel
- c: General Purpose Circuit
- d: Appliances Circuit
- e: Air Conditioner Circuit
- f: Waterproof Outside Receptacle
- g: Air Conditioner



————— 12 Volt.

- h: Battery
- j: Univolt & Fuses
- k: Central Control Panel
- l: Furnace
- m: Range Exhaust Fan
- o: Ceiling Fan
- p: Radio-Stereo
- q: Water Pump
- r: To 7-Way Connector
- s: Switch
- t: Ammeter



**SPECIAL LAND YACHT
21T**

3. Check the polarity warning light. If it is on, pull out the plug, turn it over and reinsert. The light will now be out, the polarity correct, and your electrical system grounded.

The Polarity Light:

must be off when the power cable supply cable is used with a two-prong adapter. It may glow occasionally when the 3-wire system is in use, but your trailer is adequately grounded and you may ignore the light.

Charging Battery While Towing:

Your Airstream is under constant charge of the towing vehicle's generator or alternator. The charge rate is controlled by your vehicle's voltage regulator.

When Hooked-up to 120 Volt AC:

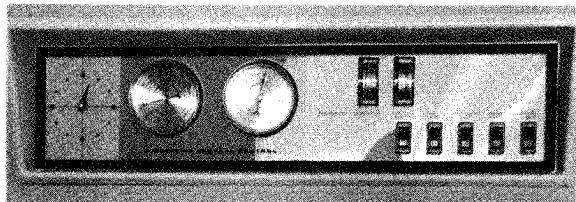
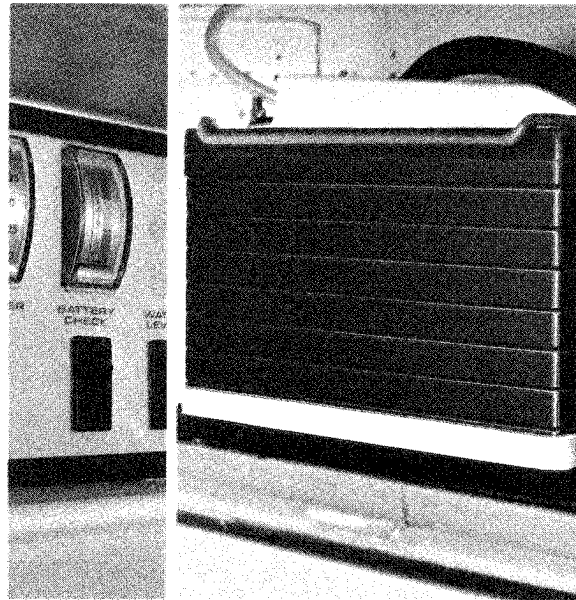
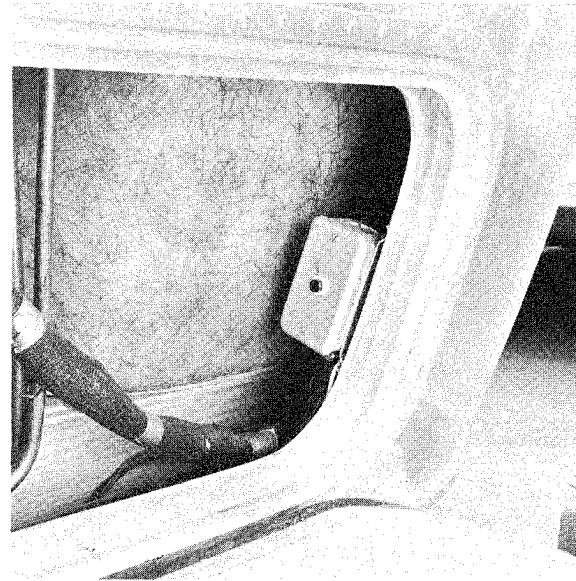
Charging automatically occurs through the Univolt system for the trailer, and if the car is hooked up, also for the car battery. The speed of the charge depends on how much power is used for lights and appliances, as only the surplus goes to charging the battery. Please see Page 69 for more information on power consumption.

The voltage-sensing section in the charger circuit automatically controls the current, shutting off completely when fully charged.

At Service Stations:

Make certain they give your battery a Slow charge. A quick one will drastically shorten the life of the battery, as will allowing repeated complete discharges.

For service or replacement go to any service station or dealer who sells and services this battery.



41

ELECTRICAL SYSTEM

RED POLARITY LIGHT is in the One-Stop-Service Center.

**BATTERY:
CHARGING WHILE
TOWING
WHEN HOOKED-UP
TO 120V**

Whenever possible, we recommend you to use the automatic built-in charger of the Univolt system.

AT SERVICE STATIONS:
Slow charge.
BATTERY WARRANTY
is for 24 months.

**BATTERY CONDITION
TESTER** indicates:
Good condition at 12-13V.

Fair at 11-12V.

Bad at 10-11V.

This tester cannot read accurately while you are hooked-up to 120V city-power.

Test before hooking up.

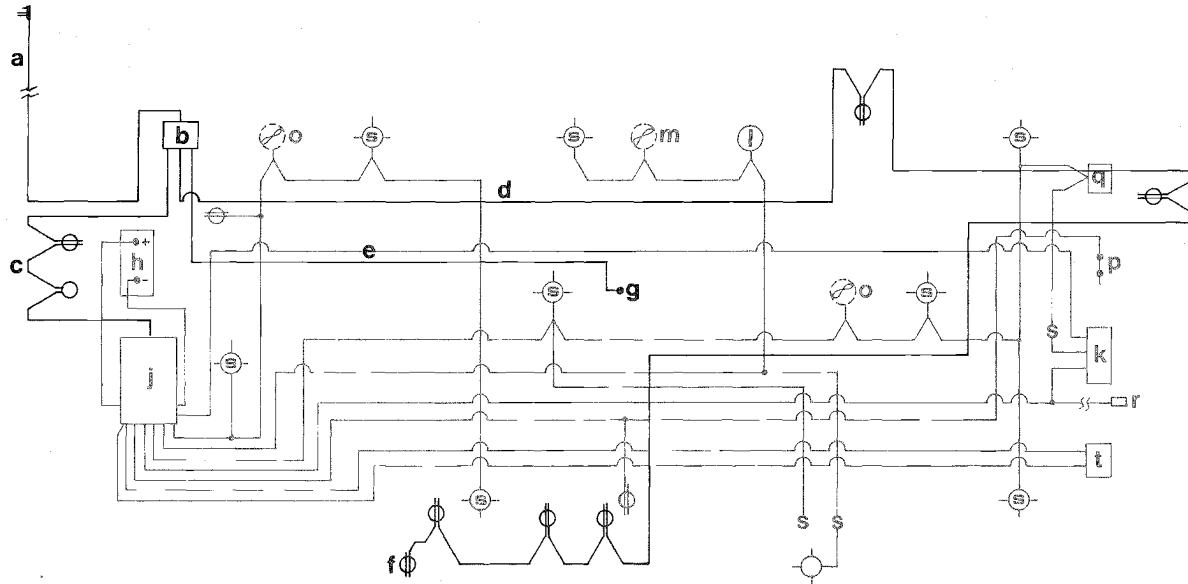
If battery drain is showing on Ammeter, limit further drain.

WIRING DIAGRAMS
18D-21T

**SPECIAL LAND YACHT
23T - 23D**

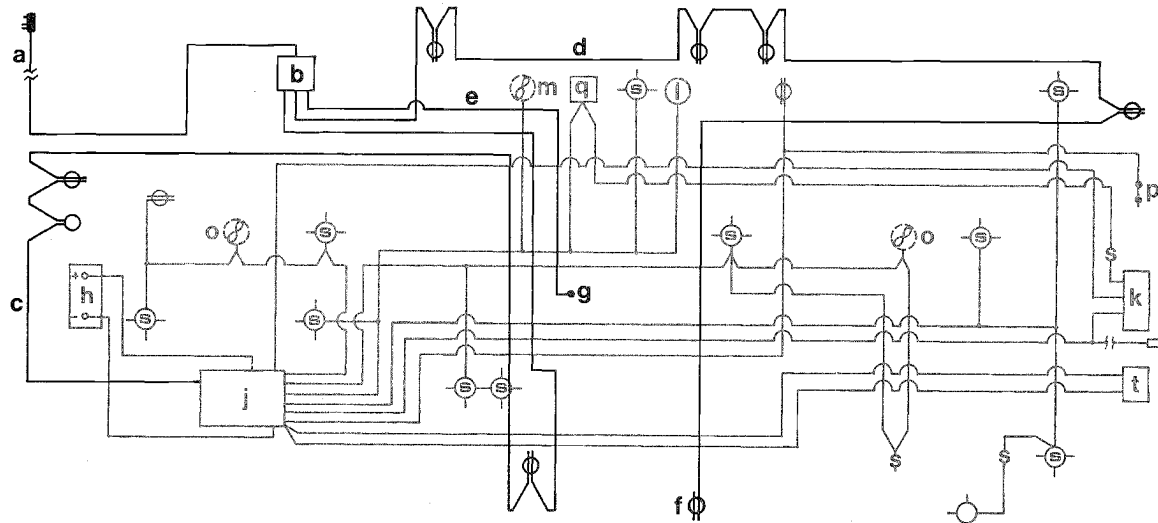
————— 120 Volt.

- a: Power Supply Cord
- b: 120 Volt Panel
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- d: Appliances Circuit
- e: Air Conditioner Circuit
- f: Waterproof Outside Receptacle
- g: Air Conditioner



————— 12 Volt.

- h: Battery
- j: Univolt & Fuses
- k: Central Control Panel
- l: Furnace
- m: Range Exhaust Fan
- o: Ceiling Fan
- p: Radio-Stereo
- q: Water Pump
- r: To 7-Way Connector
- s: Switch
- t: Ammeter



**LAND YACHT
23T - 23D - 25T**

Central Control Panel: To get behind, grasp the center, pull down and swing top of panel out and forward.

Panel Light Switch lights up the panel, and makes an excellent night light.

Clock: Operated by a 'C' cell battery lasting 9-12 months. Re-set time, or replace battery behind the panel.

Battery Condition Tester has a switch, which operates a meter. When it shows bad condition, you should take every reasonable step to conserve power by using as few lights as possible and switching off appliances.

The Univolt system charges the battery to the extent of surplus power while you are connected to city power. We therefore, suggest that you test your battery before leaving.

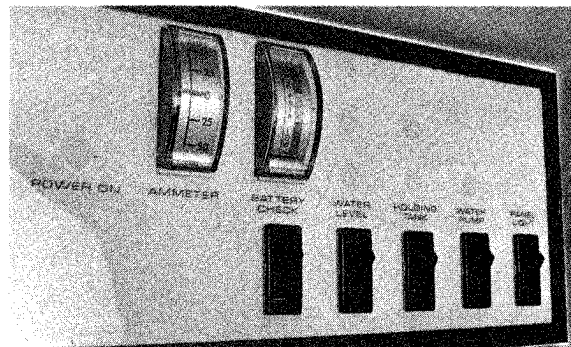
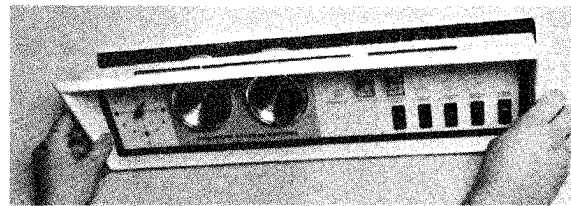
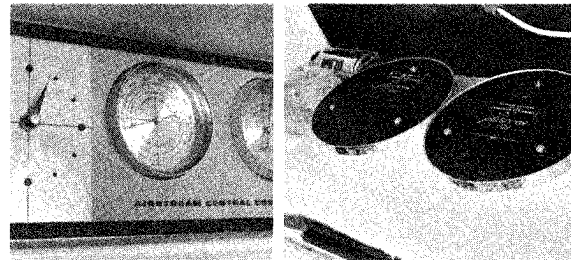
The Ammeter indicates whether the trailer battery is being charged — if discharge is indicated, reduce power usage.

Water Pump Switch when on also lights up the indicator light. On trailers without Central Control Panel, this switch is above galley sink.

Water Level Indicator: Press the button and the light will show the amount in the water-tank: '1/2' and '1/4'. When it reaches less than half, the 1/4 is indicated when less than quarter full the 0-0 light shows. If this does not show, the tank is almost empty. In rare cases, when the tank has been filled with very pure water, as from a mountain stream, the indicator lights may not work at all.

Holding Tank Level indicates '1/2' at half full, and '4/4' when it reaches the three-quarters mark.

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 120V connection.



ELECTRICAL SYSTEM

CENTRAL CONTROL PANEL

- 1) Ammeter
- 2) Battery Condition Tester
- 3) Barometer
- 4) Clock
- 5) Holding Tank Level
- 6) Humidity Meter
- 7) Panel Switch
- 8) Power-On
- 9) Water Level Indicator
- 10) Water Pump Switch

The BAROMETER should be adjusted for your altitude by rotating the small screw within the hole marked 'adjust' to agree with the reported local barometric pressure. See Page 73 for Weather Chart.

You do this behind the panel. Also for:

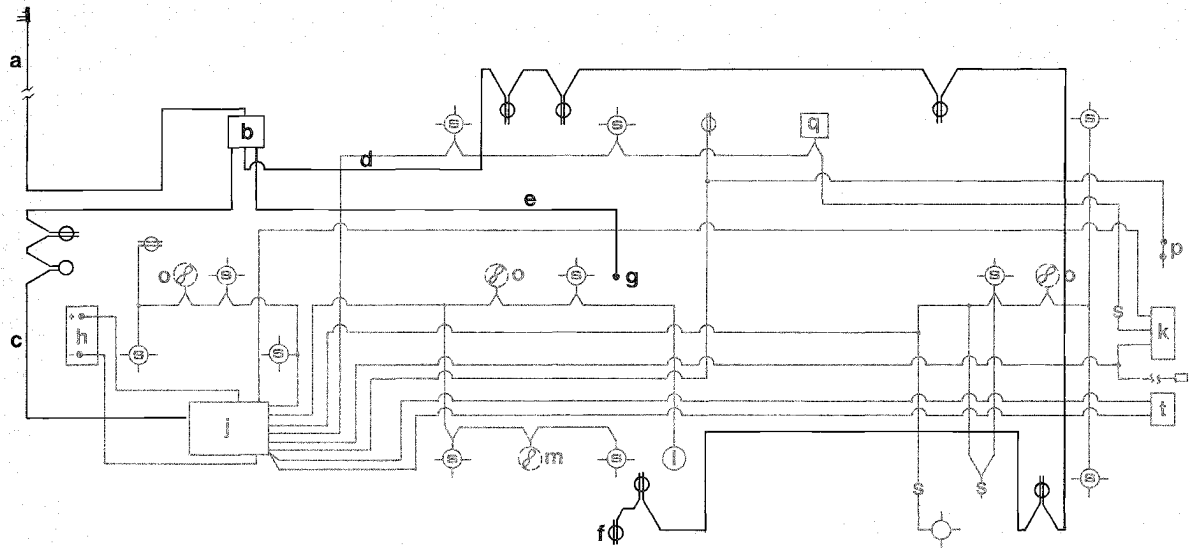
Your HUMIDITY METER: Adjust by rotating the slotted metal piece visible through the center hole with a screwdriver.

WIRING DIAGRAMS
23T, 23D, 35T

INTERNATIONAL
25T

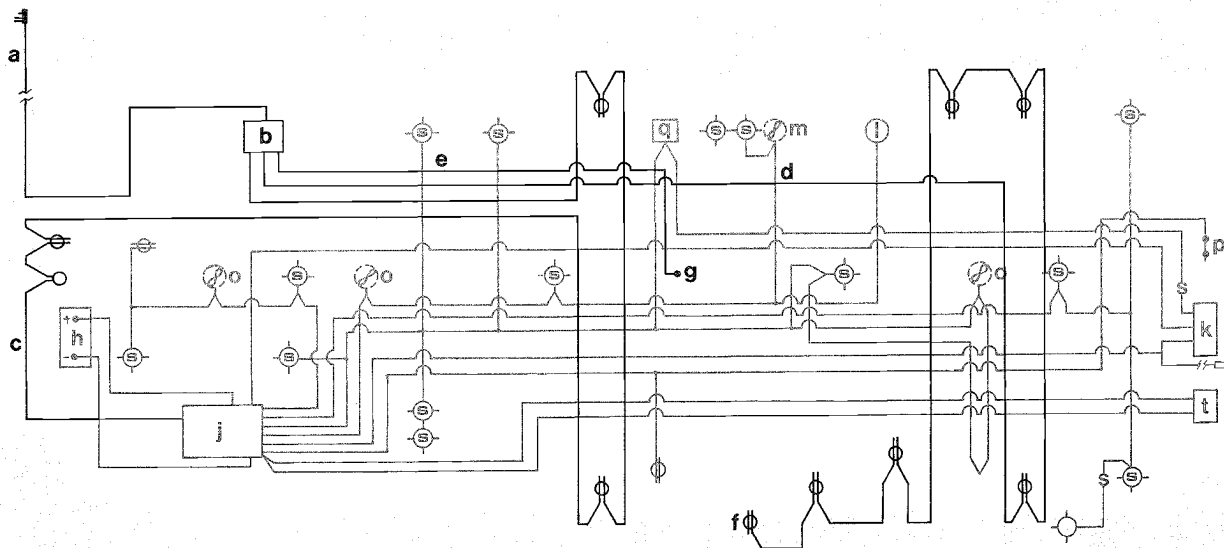
————— 120 Volt.

- a: Power Supply Cord
- b: 120 Volt Panel
- c: General Purpose Circuit
- d: Appliances Circuit
- e: Air Conditioner Circuit
- f: Waterproof Outside Receptacle
- g: Air Conditioner



————— 12 Volt.

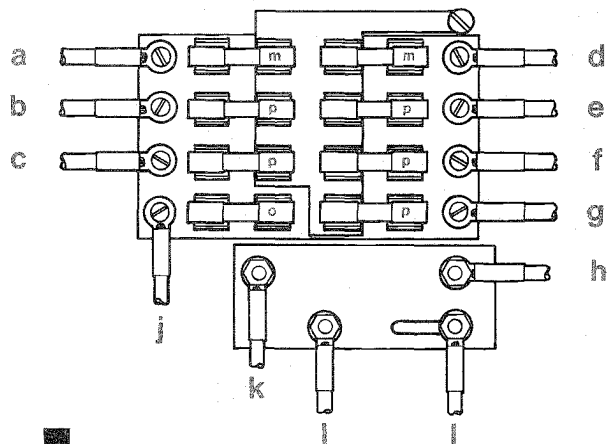
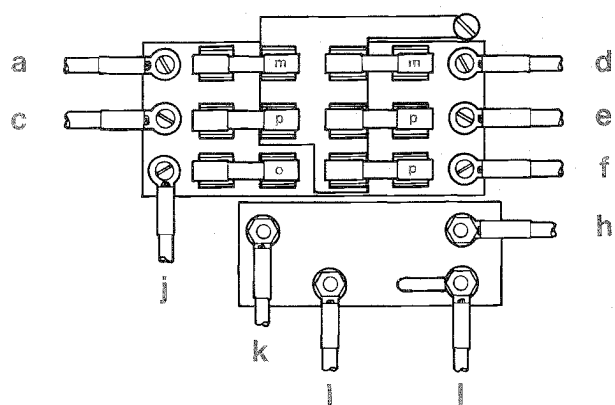
- h: Battery
- j: Univolt & Fuses
- k: Central Control Panel
- l: Furnace
- m: Range Exhaust Fan
- o: Ceiling Fan
- p: Radio-Stereo
- q: Water Pump
- r: To 7-Way Connector
- s: Switch
- t: Ammeter



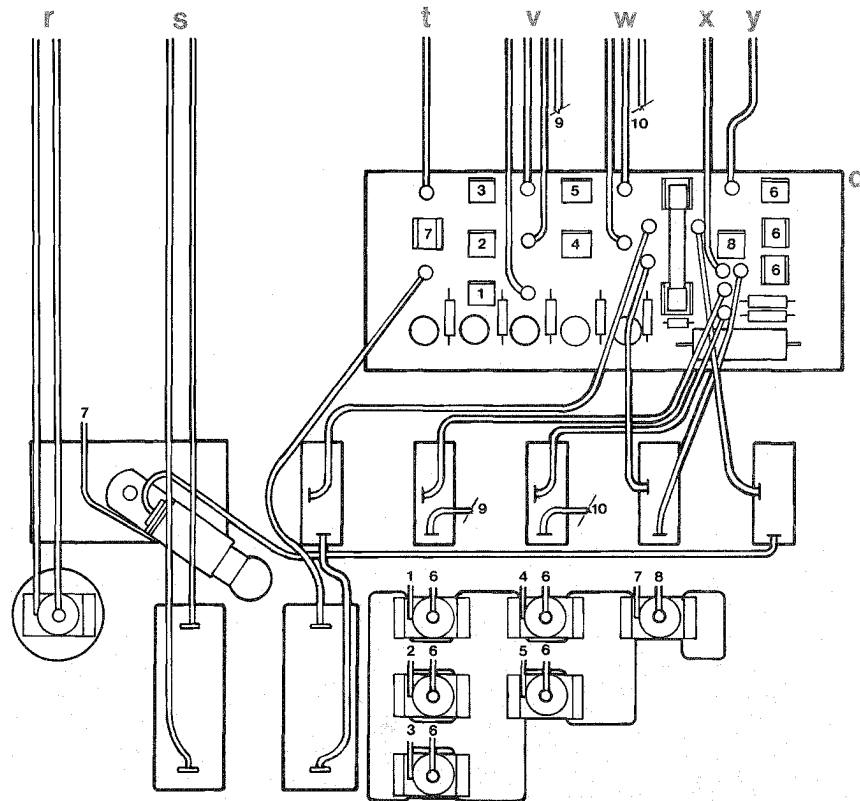
LAND YACHT
27T – 25D

INTERNATIONAL
27T

LOW VOLTAGE DISTRIBUTION PANELS SPECIAL LAND YACHTS



- a: Car Battery
- b: Circuit #4
- c: Radio-Stereo
- d: Trailer Battery +
- e: Circuit #1
- f: Circuit #2
- g: Circuit #3
- h: Negative Load
- j: Power-On-Light
- k: Trailer Battery -
- l: Ammeter
- m: 40-amp-Fuse
- o: 1-amp-Fuse
- p: 20-amp-Fuse

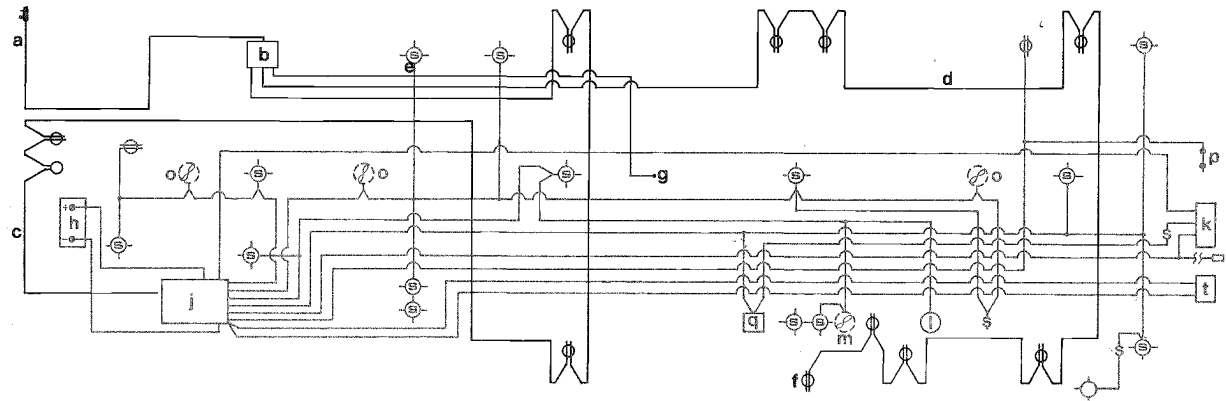


- LAND YACHTS &
INTERNATIONALS
- CENTRAL CONTROL
PANEL
- q: Printed Circuit Board
- r: Power-On
- s: Ammeter Shunt
- t: 12 V -
- v: Water Tank Probe
- w: Holding Tank Probe
- x: Water Pump
- y: 12 V +

LAND YACHT
27D

————— 120 Volt.

- a: Power Supply Cord
- b: 120 Volt Panel
- c: General Purpose Circuit
- d: Appliances Circuit
- e: Air Conditioner Circuit
- f: Waterproof Outside Receptacle
- g: Air Conditioner



————— 12 Volt.

- h: Battery
- j: Univolt & Fuses
- k: Central Control Panel
- l: Furnace
- m: Range Exhaust Fan
- o: Ceiling Fan
- p: Radio-Stereo
- q: Water Pump
- r: To 7-Way Connector
- s: Switch
- t: Ammeter

INTERNATIONAL
27D – 29T – 29D –
31T – 31D

SYMPTOM	POSSIBLE CAUSE	REMEDY
No. 12-volt power (Lights, appliances do not work)	1. Input line and/or battery not connected	1. Make necessary connections
Blown fuse	2. 40 AMP fuse blown (univolt)	2. See items 3, 4, 5, and 6
	3. Overloaded circuit (over 40 amps)	3. Turn off switches to reduce load Replace blown fuse in Univolt
	4. Electrical short	4. Find blown fuse in Univolt and identify circuit From wiring diagrams check the circuit for defective wiring, lamps or motors
	5. Shorted battery	5. Replace battery and fuse
	6. Battery terminals not properly connected to UNIVOLT + and – terminals	6. Make proper connections; replace fuse
Univolt automatic circuit breaker clicks on and off	7. Incorrect input line voltage (such as 230 volts or improper cycle power)	7. Connect to 120-volt, 60-cycle power
	8. Shorted battery	8. Replace battery
Dim lights or sluggish fan motor	9. 25- or 55-cycle power (some foreign countries)	9. Use 60-cycle power
	10. Discharged battery (when operating without 120-volt line)	10. Charge battery
UNIVOLT will not charge battery	11. Input line not connected	11. Connect input line
	12. Battery not connected	12. Connect battery to UNIVOLT
	13. Bad battery	13. Replace battery
	14. Too many lights and appliances in use	14. Reduce electrical load
Specific gravity of battery is too high (over 1.275)	15. Battery is low on water	15. Add distilled water to battery

The Univolt is at the rear, curbside, of the trailer, just outboard of the tub, accessible through the curbside access door. (Except in models 18, 21 and 23, it is through the rear trunk.)

The 120 Volt circuit breaker panel is in the rear roadside wardrobe.

The 12V fuse panel is in the Univolt case.

The battery is in the rear trunk compartment, mounted on a pivoting rack for servicing. In the event of failure of a 120V circuit, check your circuit breaker first.

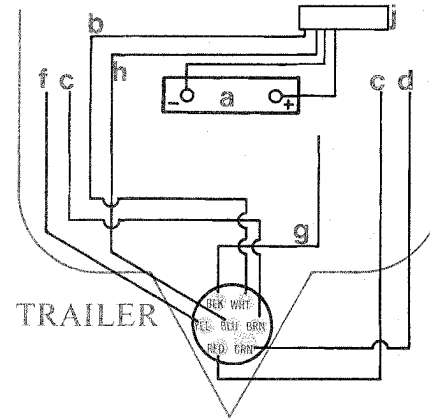
If the breaker continues to trip after you have reset it several times, your circuit may be overloaded with appliances, or there may be a short in the circuit. If lessening the load does not solve the problem, consult an electrician.

In models with factory installed airconditioning, a separate 120V system and breaker are provided to prevent overloading the appliance circuits.

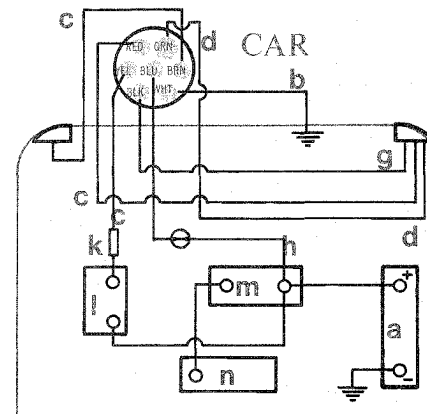
Access to rear of Central Control Panel is necessary for replacement of: clock battery, panel light bulbs, waterpump fuse, and the adjustment of the barometer and humidity meter.

Trouble with the electrical system is extremely unlikely. The Univolt system and the Central Control Panel are provided with a series of fuses, for your safety. Details of electric motor amperage, light bulb size, fuse and circuit breaker locations are shown on the specification chart on Page 69. We suggest you mark schematic diagrams that refer to your particular model, for future reference.

TRAILER CAR CONNECTOR



a: Battery b: Ground c: Right Turn & Stop d: Running Lights e: Left Turn & Stop f: Brake g: Backup Lights h: Charge Line j: Univolt k: Resistor l: Brake Controller m: Voltage Regulator n: Generator



Note: Polarity of trailer battery must match polarity of car battery. e.g. If negative pole of car battery is grounded, negative pole of trailer battery must be grounded.

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ELECTRICAL SYSTEM

LOCATION OF BASIC ELECTRICAL COMPONENTS

While you are connected to 120V the wiring is protected by circuit breakers in the 120V panel box.

A feature of your Airstream is the Multi-Dome system of removable panels in the trailer ceiling. These can be removed in case of need, exposing almost all of the 12V and 120V wiring.

TROUBLE SHOOTING

If difficulties arise, you will be able to trace the source of the problem with the help of checklist and circuit diagrams.

TRAILER CAR CONNECTOR SCHEMATIC

TROUBLE SHOOTING CHART

WIRING DIAGRAM 27D, 29T, 29D, 31T, 31D

For City Supply: Connect a hose to the water inlet fitting located under the rear roadside corner of the trailer, just forward of the bumper. The system is fully automatic, but you must turn the water pump 'Off'. The switch is on the Central Control Panel, above the front roof locker, or in Special Land Yachts above the galley sink. If the water system has been completely drained, it will be necessary to force the air from the waterheater before lighting it. To do this, open a hot water faucet, let it run and splutter till the water runs freely. It is then safe to light up. If you are staying for some time where city water is available, drain the water storage tank (valve accessible through hole in floor below galley sink) and refill with fresh water before departing. Your system has check valves in the water lines to protect the water tank while you are connected to city water.

When Self-Contained. The Water Pump runs whenever a faucet is open, and shuts off when it is closed, silently delivering 3 gallons per minute under constant pressure. To fill the water storage tank, open the filler spout and fill with hose or bucket, until the water supply pipe is overflowing. Close the spout, and the water system is again ready for use. There is a screen next to the water pump which should be cleaned periodically to prevent accumulation of dirt and sand.

The Water Tank is under the floor (except in Special Land Yachts) just forward of the axle; the pump and Water Screen are on the floor below the galley sink. The tank fill-spout is on the exterior wall near the center of the trailer.

In Special Land Yachts, the tank is above the floor across the front with the pump and water screen next to it, and the filler spout on the exterior front, roadside.

To remove the Water Screen, disconnect the rubber hoses from both ends, separate the screen housing, and lift the screen out of the cabinet.

To clean the Tank, pour some bicarbonate of soda into the filler pipe with several gallons of water and allow to stand for a minimum of 4 hours, then flush out by opening the drain valve below galley sink and run cold water through the tank.

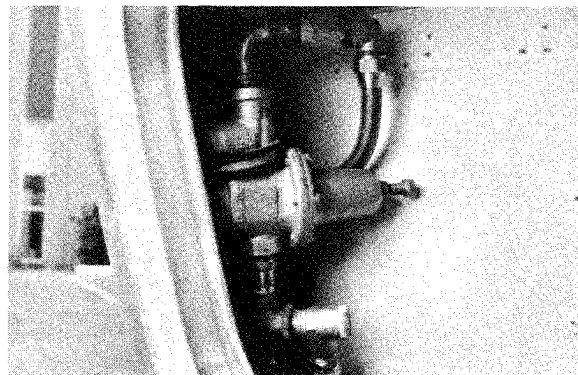
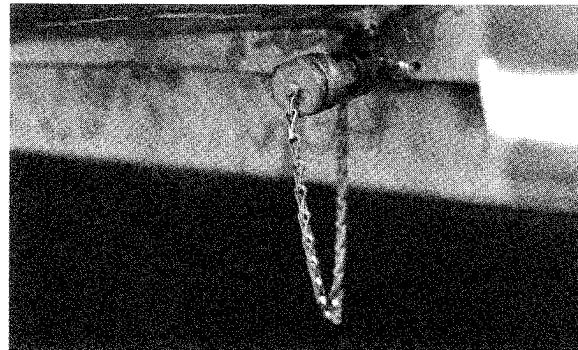
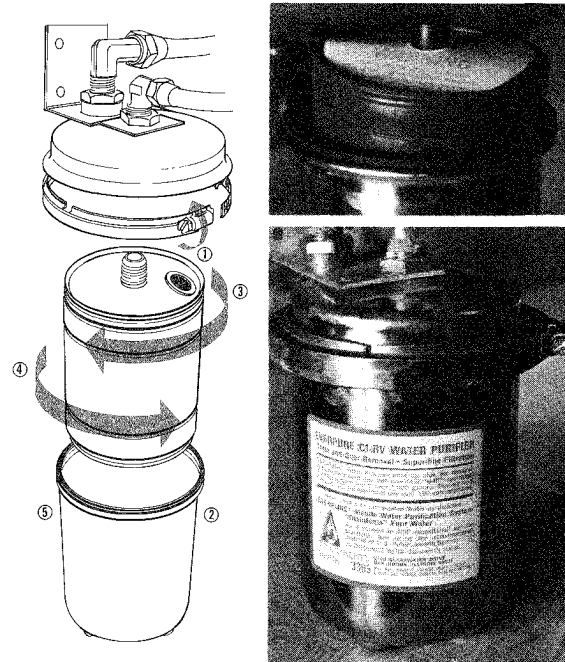
The Everpure EN-1 Water Purifier (A standard fitting in International Models) under the galley sink removes all dirt colloidal matter and eliminates all chlorine tastes and odors (also phenol and similar) delivering sparkling, taste-free water ideal for drinking and cooking.

The purifier is not guaranteed to remove tastes and odors of iron and sulphur.

To remove sulphur tastes chlorinate the water supply. Super chlorination will precipitate dissolved iron. The purifier then removes the formed chlorine salts. To purify any questionable water add 1/6 oz. of chlorine (ordinary household bleach) per 10 gals. of water to water tank: 5/6 oz. for 50 gal. tank, 3/6 oz. for 30 gal. tank.

The quality of the water never varies even at the end of the filter-pack life, however, the flow is affected as the minute pores slowly fill up with impurities, gradually reducing the rate of flow till it is time to change the pack. Instructions are in each box, and we advise you to buy two at a time, always keeping one in reserve.

Water Pressure Regulator: Protects the plumbing inside your trailer, regardless of the variation in city water pressures. The pressure at the faucet is kept constant. Should you ever have to adjust the regulator, there is a screw adjustment on the dome. Turning the screw clockwise increases pressure, counterclockwise decreases pressure.



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WATER SYSTEM

Provides full service, both when the trailer is self-contained or when city water is available. Water heater capacity is 10 US gallons. 6 gals. in Special LandYachts. The lightweight polyethylene water tank stores 50 gallons of clean fresh water for all your needs. (30 gals. in Special Land Yachts.)

When leaving your Airstream unattended, it is advisable to switch off the water pump.

Clean the tank occasionally as iron and lime deposits are common in various parts of the country.

WATER PUMP

WATER TANK

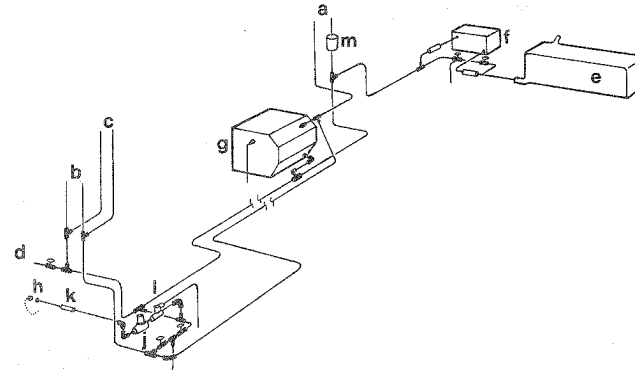
WATER SCREEN

WATER PURIFIER

is among the many fine accessories. WATER PRESSURE REGULATOR is on the roadside in the One-Stop-Service-Center.

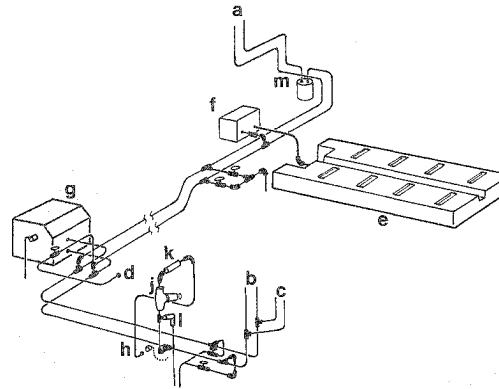
WATER SYSTEM TROUBLESHOOTING

SPECIAL LAND YACHT
 18D – 21T – 23T – 23D



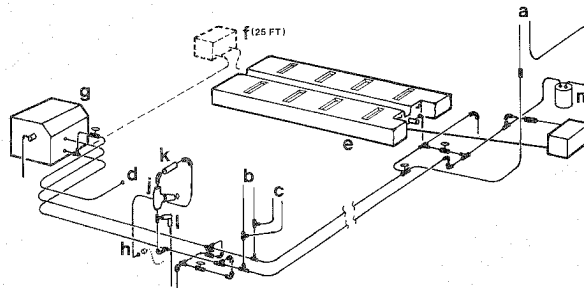
- a: Galley
- b: Lavatory
- c: Tub & Shower
- d: Toilet
- e: Water Tank
- f: Water Pump

LAND YACHT
 23T – 23D – 25T – 25D



- g: Water Heater
- h: Water Inlet
- j: Pressure Regulator
- k: Check Valve
- l: Pressure Relief Valve
- m: Galley Cold Water Filter

INTERNATIONAL
 25T – 27D – 29T – 29D –
 31T – 31D



- If Pump Does Not Prime:
1. Be sure there is water in the tank.
 2. Make certain battery power has not been exhausted.
 3. Check valve assemblies to make certain no foreign matter is between the valve and valve seat, causing loss of suction.
 - a) Remove four slotted headscrews.
 - b) Lift motor, drive and diaphragm assembly off base.
 - c) Lift valve assemblies from pockets and clean valve and valve seat thoroughly.
 - d) Replace assemblies back in the same pockets.
 - e) Be sure rubber valve is 'Up' on Intake Side, 'Down' on Exhaust Side.
 - f) Replace top assembly, and bolt back together.
 - g) Be careful to tighten evenly.

Pressure drops:

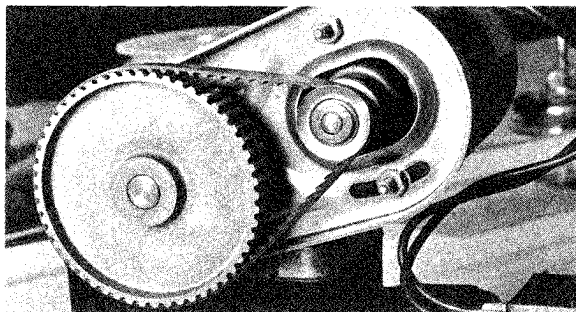
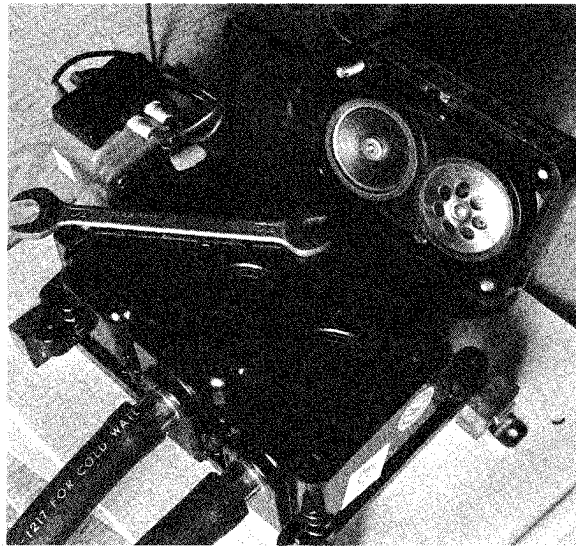
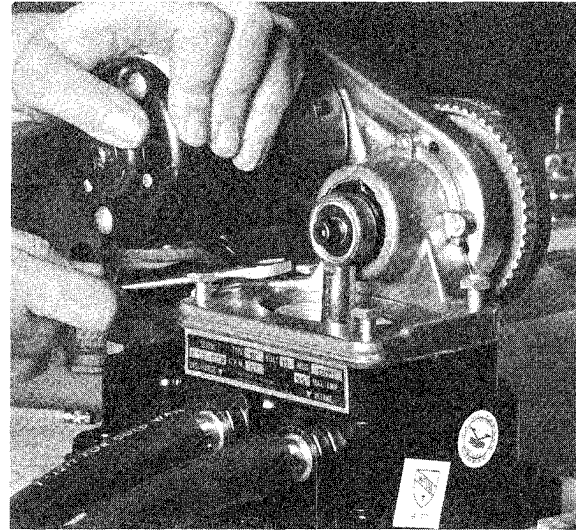
1. Check all connections and faucets for leaks. One drop per minute will cause the pump to run every two hours.
2. Check valve assemblies in the manner described above.
3. Check that faucet aerators are clean.

Pump Operation Is Rough – Excessive Noise:

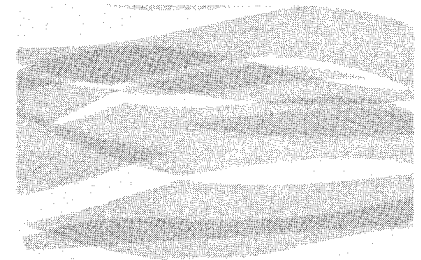
This may happen after several months of operation. If it does, turn pump off. Remove both inlet and outlet hoses, place rags or sponges under both ports and turn on the pump, letting it run till all water is expelled. Reconnect hoses. This will smooth out the flow.

Excessive Belt Wear: (This does not apply to Special Land Yacht models) Adjust belt for proper tension. This is the case when it can be moved in and out on one side a total of 1/4" at a point half-way between pulleys. To adjust belt: Loosen nuts on end of motor and slide motor up or down until the desired tension is attained, then retighten nuts.

Pump Runs Frequently or Constantly Yet There is No Leak in the Pressure Side: Check for an air leak in the suction side of the pump, between the tank and the pump. Such a leak does not damage the pump, but it runs the battery down.



WATER SYSTEM
TROUBLE SHOOTING:
PUMP DOES NOT PRIME
PRESSURE DROPS
ROUGH OPERATION –
NOISE
EXCESSIVE BELT WEAR
PUMP RUNS
CONSTANTLY



WATER SYSTEM
SCHEMATICS

We suggest you mark the one applicable to your model for future reference.

Water System Capacities are charted among the specifications on Page 69.

Your Airstream, has a Drain, Vent and Waste System. It also has a waste holding tank for sewage, which enables you to use the toilet for several days away from disposal facilities. The waste water from the sink, the shower, bath and lavatory, bypasses the holding tank, yet drains through the same outlet as the waste and you will therefore need to make one connection only when hooking up in a trailer park with sewer facilities.

When the Toilet will no longer drain, the tank is full and must be emptied. Watch this closely, because when the tank is full, sewage cannot be emptied from the toilet bowl. (In Models with a Central Control Panel, watch the Tank Level Indicator). To empty the tank, attach sewer hose by pressing the bayonet fitting onto the dumpvalve outlet and rotate clockwise until it feels solid and secure. Attach the outlet end of the hose to the sewage outlet, making sure that it is placed to drain completely. Pull up the dump valve handle as far as it will go, and wait until the tank is drained. Close the dump valve and refill the tank with 5-10 gallons, of clean water and repeat the operation till all paper and waste material is flushed out.

The Dump Valve has a wire loop that locks the handle in a closed position. To Unlock, push outward on the wire loop, it will snap loose, and the valve can be opened. Do not push the loop into the closed position unless the handle is completely closed.

The Aqua-Magic Toilet employs a new principle: 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 allows fresh water through either the fill rim or hand spray, without opening the slide valve.

Using Automatic Flush:

- a) Hold hand spray in ready position over bowl.
- b) Depress thumb button, this prepares for the spray of water released, as you:
- c) Step on the foot pedal, which also dumps the contents.

- d) Spray bowl clean.
- e) Release foot pedal, shutting off water flow.
- f) depress small footpedal till water reaches desired level.

Note: If you release the thumb button before the foot pedal, water will automatically flow through the rim of the bowl.

Using Water Saver Flush:

- a) Step on foot pedal. This opens slide valve and drops waste into holding tank.
- b) Hold pedal down until water begins to swirl. This fills rim storage and rinses the bowl.
- c) Release foot pedal, this closes valve blade and stops fresh water from flowing. Bowl fills automatically.

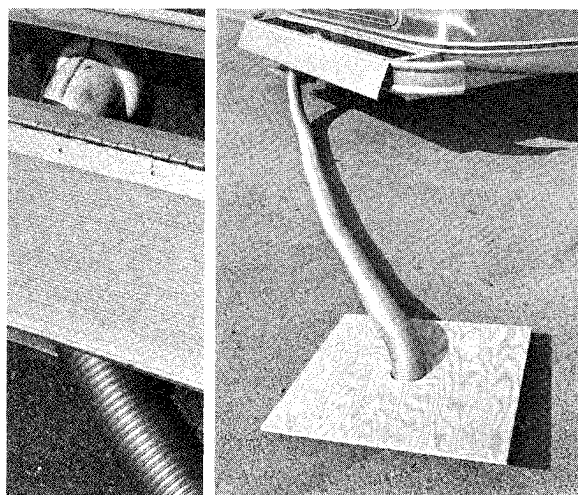
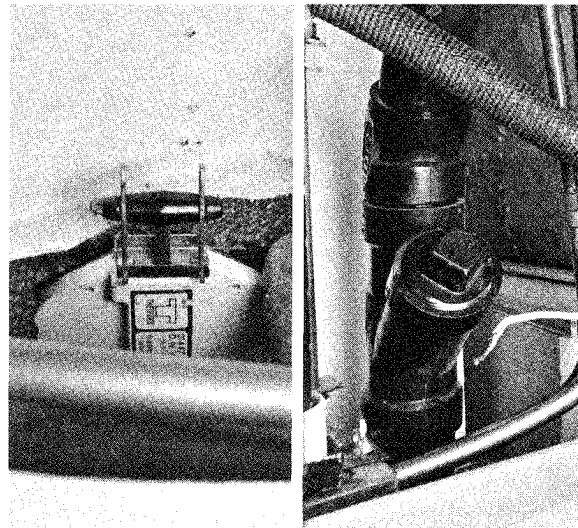
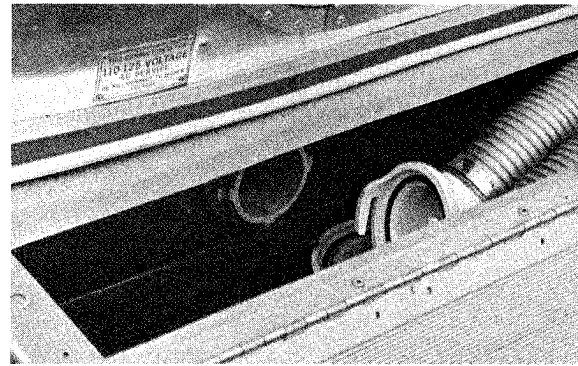
The System Without a Sewer Line Connection:

Automatic Flush. 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 for two to four days. While traveling in the United States or Canada, pressure or hand refill of your fresh water tank is seldom a problem.

'Water saver' Hand Spray Flush: Whenever water is scarce, the hand spray flush, makes it possible to stay a week or longer in faraway or crowded areas where you cannot empty your holding tank or resupply the water tank.

How to flush for Urine Only: First wet the bowl with fresh water, and again after use. Starting with a dry bowl makes more water.

How to Flush for Urine Feces: Spray just enough water in the dry bowl to provide for floating of 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, give it a once over quick clean. Then let up the pedal, ready for the next use.



DRAINAGE SYSTEM

Waste Holding Tank is made from molded plastic, free from corrosion problems, with a trouble-free dump valve.

A convenient Fitting for Flushing the Tank is on the right side in the One-Stop-Service Center. Replace the plug after using the fitting! The sewer hose is stored in the compartment, below. Rinse out sewer line before storing. When you are moving on, a small amount of clean water in your holding tank with some commercial cleaner, will clean the tank.

DUMP VALVE

THE TOILET

is a mechanical sealed Aqua-Magic, for travel trailers.

SYSTEM WITHOUT SEWER CONNECTION

Direction for Automatic Flush and Refill.

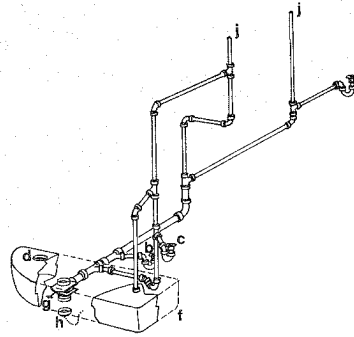
Directions for 'Water Saver' Hand Spray Flush.

While your thumb depresses the button, no water can enter the rim.

Gopher Hole: See next Page.

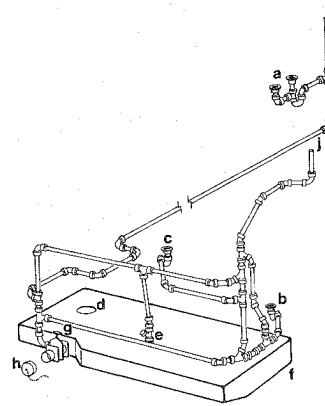
SPECIAL LAND YACHT
18D – 21T – 23T – 23D

- a: Sink
- b: Tub/Shower
- c: Lavatory
- d: Toilet Inlet

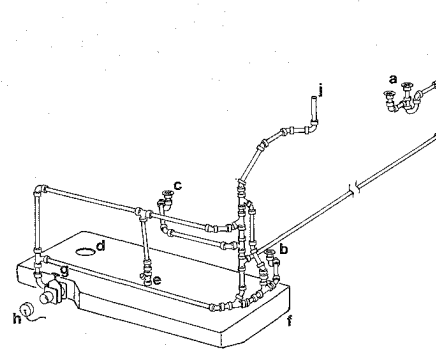


LAND YACHT
23T – 23D – 25T – 25D
INTERNATIONAL 27T

- e: Flushing Fitting
- f: Waste Holding Tank
- g: Dump Valve Handle
- h: Dump Valve Cap
- j: Vent



INTERNATIONAL
25T – 27D – 29T – 29D –
31T – 31D



Gopher Hole:

When you are parking in areas where this is allowed, you may dig a hole 18" to 20" diameter and 40" deep, to empty your waste holding tank. Keep the earth you dig out in a large box under your trailer, and use it to fill in again when you leave. Back your trailer up in such a way no one can step into the hole accidentally. Use a hole cover, 22" square with a 3" diameter cut-out. The drain hose should always drop straight down. Seal it by piling earth around the edges, make a mound to prevent rain causing an overflow.

The System Connected to a Sewer Line

Use the Toilet on Automatic Flush: The mechanism is designed to refill the bowl partially after each use. It is as sanitary as the toilet in your own home.

Keep the Holding Tank Dump Valve Closed: Empty the tank every few days, or whenever it becomes almost full. Only by sending a large volume through at the time do toilet paper and other solids float away completely. For this reason the tank valve is kept closed when connected to a sewer or gopher hole. It is not like a home toilet when a large volume of water is used with each flush.

Avoid Accumulation of Solids.

There is usually not enough liquid to float the solids away, and this can build up into trouble, leading

to an unpleasant cleaning job. If it ever happens to you, close the valve, fill the tank about half full with water and then tow the trailer for a few miles. The turbulence and surging of water will usually dissolve the solids into suspension as the tank can be drained. You can add a little soap or tank deodorant, but never detergent, it adds bubbles, to your troubles...

Things not to put into the Toilet or Tank:

Facial and other similar Tissues:

because they have wet strength and do not dissolve easily. Toilet paper dissolves after a period of traveling.

Detergents and Bleaches:

because they remove lubricating oils and greases from the tank. Use sewage tank deodorizer instead.

Antifreeze, Ammonias, Alcohols and Acetones:

because they may cause damage to your tank, valve parts, tank fittings and drain hose. For protection against freezing, use recommended fluids, see page 67.

Dishwater and Washwater:

because they always contain detergents which attack the lubricants, then should not be dumped into the tank. Some state and federal parks prohibit draining sinks and bathwater into the ground, though this is done in the wilderness. We suggest you use a pail under the drain outlet and discard the water in the public bathroom.



DRAINAGE SYSTEM

USING A GOPHER HOLE

Drain your holding tank the night before leaving. This makes filling easier in the morning.

SYSTEM CONNECTED TO A SEWER LINE

Automatic Flush.

Keep Dump Valve Closed.

AVOID ACCUMULA- TION OF SOLIDS

THINGS NOT TO PUT INTO THE TOILET OR TANK

Facial and other similar tissues. Detergents and Bleaches. Antifreeze, Ammonias, Alcohols and Acetones.

Dishwater and Washwater.

Capacities of Holding Tanks are on page 69.

SCHEMATICS

We suggest you mark the schematic for your model, for future reference.

THE FURNACE

is a Suburban, approved by the American Gas Association, for travel trailers, a sealed combustion system with a patented dual blower circulating warm air. One blower (a) circulates room air while the other (b) draws in air for combustion.

The Heat Register serving the living room area has adjustable louvers. Return cold air is drawn through the galley cabinet toe kick opening.

The heat duct system sends warm air around the holding tank, water tank and One-Stop-Service-Center.

OPERATION & THERMOSTAT

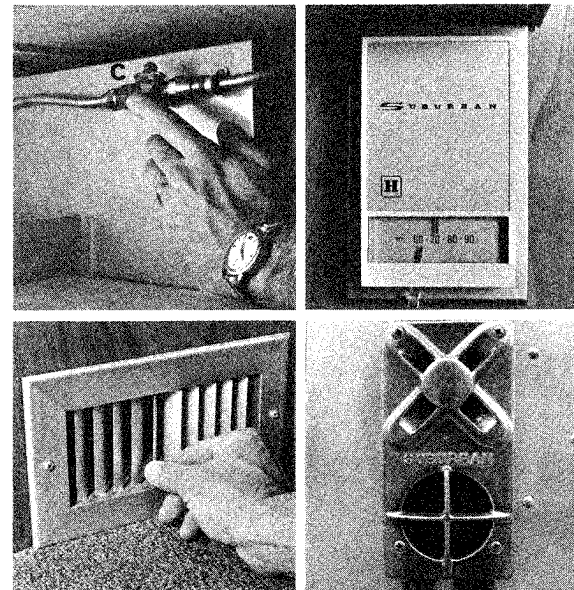
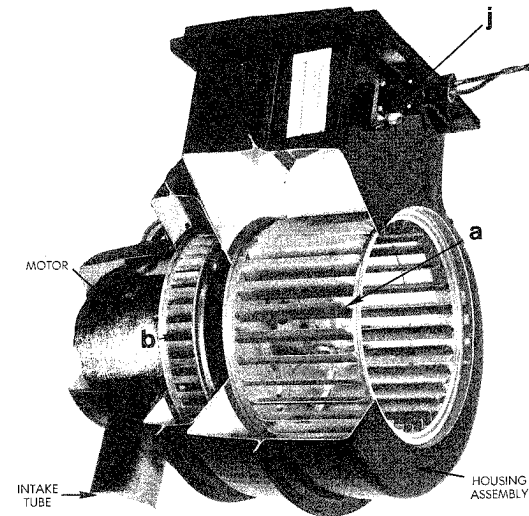
ADJUSTMENT OF MAIN BURNER

Caution: The flue gases from the furnace are vented outside your trailer through a vent in the outside wall. Do not place clothing or other flammable material on the vent assembly. Check that it is not clogged.

Operation: If the furnace has just gone out, turn the Manual Gas Valve (c) off and wait five minutes before attempting to relight the pilot. Set the thermostat (d) to the 'Off' position. Open the latch on the furnace door and raise the door. Turn on the manual gas valve and depress the reset button (e) and hold. Light the pilot by pressing in quickly with a pumping action on the ignition button (f). After the pilot is lit, keep the reset button depressed for thirty seconds. Release the reset button and the pilot should remain lit. If the pilot goes out, repeat, keeping the reset button depressed for a longer time. Close the front access door. The pilot may not light immediately due to air in the gas line. It may then be necessary to hold the reset button in for a minute or more before the pilot ignites. Set the thermostat.

Lighting the furnace with a match or a gas-lighter is possible. Open the front access cover, remove the lighter opening cover (g) and light the pilot (using the reset button as mentioned before). Differences in pressure between the room air and the outside air may cause a strong draft through the heater once the lighter opening cover is removed. If this happens, open a window or door on the same wall as the heater. After the pilot is lit and the lighter opening cover replaced, the difference in pressure will not effect the operation of the heater. Close the front access door and set the thermostat.

Adjustment of Main Burner (Primary Air): Set heater into operation by advancing the thermostat and allow to run until it reaches near-maximum operating temperature. Observe the main burners through the lighter opening cover. The flame should be without a trace of yellow and be "sitting" on the burner. As the heater 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 the characteristics of the fuel gases.



If the flame burns yellow or “lifts” off the burner, raise the front access cover and take out the screws retaining the rectangular cover plate (h) and lift off. Inside the opening, is a threaded rod with the visible end slotted, which controls the position of the main burner air shutter. With a screw driver, turn the rod until the flame sits on the burner. The air shutter should be adjusted to the point where a slight trace of yellow remains in the tip of the flame. Replace the cover and check that the yellow tips have now disappeared. Caution: Remember the lighter opening cover and the primary air adjustment cover plate must be in place for proper operation of the furnace.

Sequence of Normal Operation

When the thermostat calls for heat, the blower starts and as it reaches about 75% of full speed, the burner lights. After the temperature set on the thermostat is reached the burner will shut off, but the blower will continue to run for a short time, removing most of the remaining heat from the heater, as well as forcing the combustion gases from the heat exchanger. To turn off the heater, turn the thermostat to its ‘Off’ setting and turn the manual gas valve to its ‘Off’ position (perpendicular to gas line).

The furnace fan can be used to circulate air during hot weather by shutting off gas valve and turning the thermostat up higher than the temperature in the trailer. However, be sure you turn the thermostat to the ‘Off’ setting whenever the heater is not in use.

Pilot Outage: the most common cause of failure is that the pilot will not stay lit unless the reset button is depressed.

The trouble is most likely in the thermocouple. First, check to see that the end of the thermocouple lead is screwed firmly into the safety pilot valve and that the joint is clean. If this does not remedy the problem, the burner assembly should be removed. Check the thermocouple for defects. If the copper sheath of the lead is broken or if the thermocouple tip is bent or ruptured, replace it with a new part. Replacement parts are available through any Certified Service Center.

Sometimes a safety pilot system will hold part of the time but will drop

out during operation of the heater. This is commonly caused by either a weak pilot, a weak thermocouple, or a weak power unit in the safety valve. A simple check can be made to detect such a condition. Light the pilot and allow it to burn for two or three minutes; then blow it out. Using a watch with a second hand, measure the time required for the safety pilot valve to drop out. (A clicking sound comes from the safety pilot valve.) The time should not be less than 30 seconds. If it is less, consult a service representative.

In the case of low pilot flame, where the thermal element is not bathed in flame, the pilot may be too low. This is caused by either a partially stopped-up pilot orifice or pilot line, or possibly a partially blocked passage in the safety pilot valve.

A common cause of pilot failure (especially on LP gas), is in the failure or freeze-up of the pressure regulator on the gas bottles. Higher pressure builds up whenever just enough gas is drawn through a regulator, to supply a pilot flame, and when this happens for only a short time, it is often hard to detect. This condition shows by a blue flame, blowing hard. Check the regulator and adjust.

If the pilot fails during operation, this could be that either the controls compartment cover or the base of the blower assembly is not properly secured. This is evidenced by a ‘floating’ main burner flame and sometimes by a strong odor from the heater.

Defective Microswitch

The microswitch (j) operates in response to the current of air generated by the blower. If for any reason the blower is not sufficient, the microswitch will not operate. This may be caused by dirt in the blower wheels or by damage or dislocation of the cabinet insulation. If the switch is activated by the air but still fails to operate, it should be replaced.

Defective Blower Switch

The blower should continue to run while heater is on, and heat remains in furnace chamber. If blower does not operate in this manner, have the switch checked.

SEQUENCE OF NORMAL
OPERATION

TROUBLESHOOTING

If the heater does not perform normally, probable causes and their corrections will be helpful in an emergency situation, though servicing should be done by your dealer.

If cool air is constantly discharged by the blower, the main burner is not on. This is caused by one or any combination of the following:

1. Pilot Outage.
2. Defective Microswitch.
3. Defective Limit Control.
4. Defective Fan Switch.
5. Loose Connection in Terminal Block.
6. Defective Solenoid Valve.
7. Low Supply Voltage.
8. Out of Fuel.

REMOVING MOISTURE

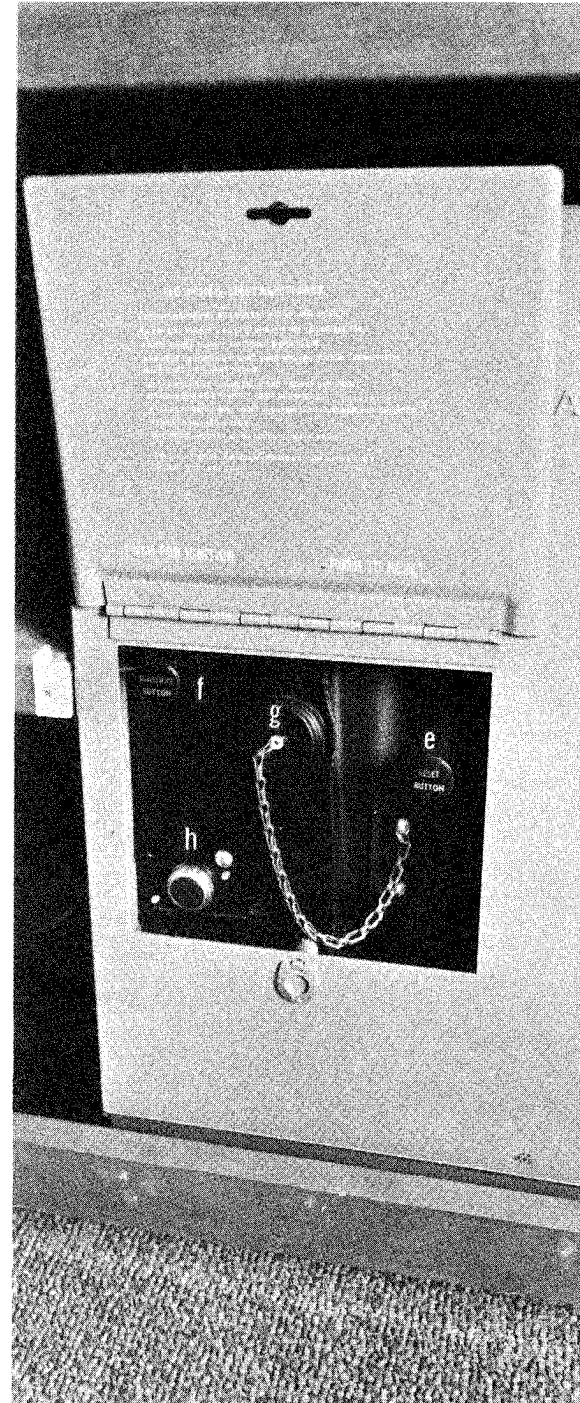
When humidity is high inside your trailer, open roof vent and turn on vent fan, if you do not have a fan open a window slightly to get cross ventilation.

Defective Limit Control: Its purpose is to turn off the gas to the main burner whenever the heater becomes excessively hot. Improper operation of the heater due to the limit control does not always indicate a defective control. If the circulating air is blocked even partially, the limit control will function and cause the main burner to cycle. Cycling on the limit is not always undesirable—if it happens only occasionally. This is a good indication of safe operation and will sometimes happen on a cold day. If cycling happens too often or for an extended period, it indicates insufficient movement of air through the system. Check to be sure that the front louvers are not closed. If cycling persists, it may be necessary to clear the heat ducts. If for any reason the limit control is found to be defective, it should be replaced with a new one. **Caution:** Never Bypass the Limit Control Even for Temporary Operation.

Loose Connection in Terminal Block: If the heater does not function as described under “Sequence of Normal Operation,” a likely source of trouble is in a loose electrical connection. All wiring is furnished with a pressure-type terminal. The ends which engage with the terminal block are of the friction type and must be pressed securely into the opening of the block. In most cases the trouble is quickly located and corrected.

Defective Solenoid Valve: Any evidence of improper performance may be checked by applying voltage directly to the leads. This voltage should, of course, correspond with the furnace rating plate data.

Power Supply: The furnace operates from a 12-volt DC power supply. On self-containment as the battery voltage drops, the blower circulation will decrease until the microswitch in the blower finally “drops out.” This condition prevents the furnace from operating until the rated battery voltage is restored.



To light — Open kick plate on bottom front of refrigerator by pulling outward.

1. Before the Refrigerator is started on gas, check that the switch lever F is in off position Turn gas valve handle A to open position and turn thermostat knob B to setting 4.
2. Press red button C of the automatic pilot and after about 15 seconds turn the lighter rod D clockwise with a rapid movement. This will create a spark which lights the burner.
3. After the burner is lit, keep the button C depressed for an additional 15 seconds.

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.

For Electric Operation

1. To start the refrigerator, turn the gas valve A to the shut-off position.
2. Check to be sure the electric cord is plugged into 110-volt outlet (at rear bottom of refrigerator). Turn the switch lever F to 'on' position.
3. Turn the electric thermostat knob ET to setting 4.

Be sure to make the temperature setting on the correct thermostat.

Trouble Shooting (Gas Operation)

For emergency only — this normally should be done by the dealer.

Trouble: Flame is noisy with buzzing sound.

- a. Burner is getting too much air. Screw down the lower ring G on the burner partially covering the air holes at the base, until the noise stops. Lock in position with the upper ring H. Make certain that the flame remains blue. Blocking the air holes K completely makes the flame yellow and causes it to smoke.

Trouble: When lighting, the gas flame goes out as soon as the push button is released.

a. The thermocouple tip may not be in the flame. The thermocouple should be at an approximate 45° angle to the burner.

Trouble: Flame goes out.

a. May be caused by excessive wind. If there has been no wind, and the flame goes out repeatedly go to a Certified Service Center to have the thermocouple and safety valve checked.

Trouble: Overfreezing.

a. The thermostat sensing tube is incorrectly located in the pocket inside the ice making compartment. Push the tubing back as far as it will go.

b. 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 L and remove the ball M. Clean seat and ball and replace.

2. If procedure (1) does not correct the problem, remove the dial knob O with the dial plate and turn the exposed set screw P out (in counterclockwise direction) until the flame goes down to the by-pass.

c. If the flame keeps going out when the dial is turned to 'zero', remove and clean the by-pass screw Q which is inside the gas connection on the left of the thermostat.

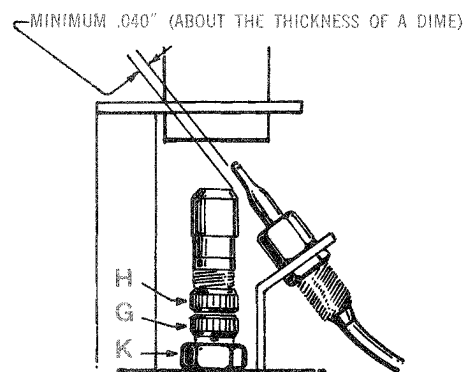
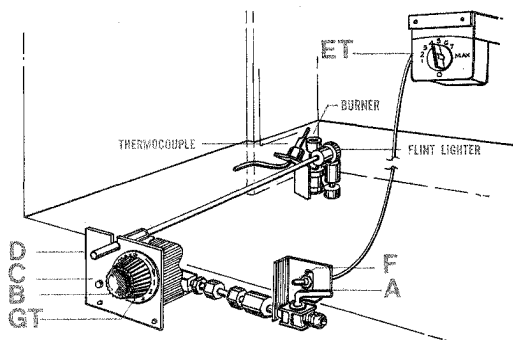
Trouble: Burner does not light.

a. Remove and clean burner barrel.

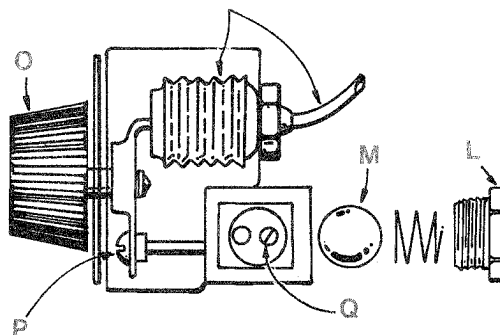
b. Check gas supply.

Access Doors:

Access to refrigerator elements is necessary when cleaning and servicing the burner to cleaning the burner flue stack. Open by unlocking and turning the handle approximately 1/4 turn counterclockwise.



TUBING WITH BELLOWS (REMOVABLE)



THE REFRIGERATOR is an A.G.A. approved Dometic gas-electric refrigerator. Whenever you park, take care that your trailer is level for best operation. Avoid having a strong wind blowing directly against the vent outlet.

The gas tap must always be fully opened whenever it is in use. A partially opened tap may interfere with the operation of the unit. Always make certain that electric switch 'F' is off before operating the refrigerator on gas.

THE THERMOSTAT

The gas thermostat (GT) controls the temperature during gas operation, while the electrical thermostat (ET) controls the temperature during electric operation. Be sure to set the right one!

ACCESS DOORS

The small door on the side of the trailer is for access to the elements for maintenance and service.

TROUBLESHOOTING

Range Top:

1. The flame will be approximately ½" long. Do not attempt to adjust gas to burner. The orifices have no adjustment.
2. Air shutters on top burners are to be adjusted so that each cone of the flame is separate and distinct and appears as illustrated. Air shutters set too far open will cause flame to lift away from burner head and will be difficult to light. If air shutters are closed too much, the flame will look hazy and the distinct cones will be missing.
3. On Land Yacht & International Models, adjust the top pilot so that the tip of the flame is just over the edge of the inner cone. The burners should light within 4 seconds. If lighting is difficult refer back to the previous step.

Trouble Shooting:

Trouble: Flames lift off ports.

Cause: Too much air. Remedy: Decrease air.

Trouble: Soot formations.

Cause: Not enough air. Remedy: Increase air.

Trouble: Flame flashes back into air mixture chamber.

Cause: Too much air in proportion to gas. Remedy: Slightly decrease air.

Trouble: Orange flame.

Cause: Small filings in new burners or dust in air. Remedy: Clean burners.

Trouble: Burner fails to light.

Cause: Usually too much air. Remedy: Decrease air.

Oven Section 18 ft. -27 ft. Land Yacht.

Important: The automatic oven burner pilot consists of a constant pilot and a heater pilot. The small constant pilot (A), which should

be burning at all times when parked, ignites the heater pilot (B) next to the oven burner (C).

Oven Section 18 ft. -27 ft. Land Yacht.

1. To Adjust the Constant Pilot (A): Open shut-off valve (D), open pilot valve (E), light constant pilot (A), adjust pilot valve (E), and reduce flame on constant pilot (A) until yellow tip disappears.

2. To Adjust the Heater Pilot (B): Turn control knob (F) to 300° setting. This will let gas flow through the heater pilot tube (G) to the heater pilot (B) where the gas is ignited by the constant pilot (A). Remove control knob (F) and bezel (H), turn green heater pilot adjusting screw (J) on front of control valve (K) until flame on heater pilot (B) yellows. Now close adjusting screw (J) until yellow tip disappears. See that flame envelops temperature sensing element (O). Replace bezel and control knob.

3. To Adjust Main Burner: When adjusted to the proper rate it will have a flame approximately ¾" long. The air shutter (L) on the main burners should be adjusted so the cone of each flame is separate and distinct as illustrated.

Note: On 23-ft. through 27-ft. Land Yacht models, the range gas line shut-off valve (M) located under the top of the range at the left end of the manifold pipe (N) must be turned off when towing the trailer, when changing the gas tanks, or if the gas supply is turned off for any reason. Be sure oven pilot light has been relighted as soon as range shut-off valve is turned on. The shut-off for the top burners is located under the range top and also should be turned off while traveling.

Oven Section: International Models:

The thermostat Control Knob (a) is combined with the constant pilot shut-off. For normal use: turn only between 'Off' and 'Broil'. When traveling turn to 'Pilot Off'. Relight only when you want to use the oven, by turning from 'Pilot Off' to 'off' and lighting with a match.

The air shutter (b) on the main burner is to be adjusted so that each cone of flame is separate and distinct, as illustrated.

Constant Pilot Adjustment: 1. Remove Control Knob and Bezel (a) 2. Using screwdriver, turn slotted red-colored Constant Pilot Selector (c) to LP position. When slot is in the vertical position, the Selector Cartridge is in the 'Off' position.

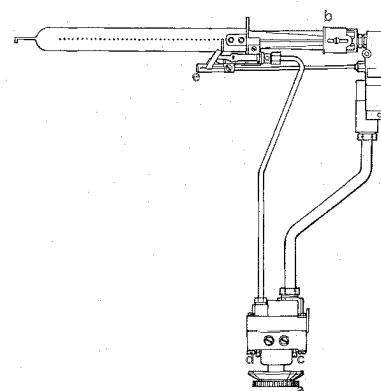
Heater Pilot Adjustment: 1. Replace Control Knob and turn to the 300° setting on Control Knob dial. This opens the thermostatic valve in the thermostat and allows gas to flow through the Heater Pilot tube to the Heater Pilot.

2. Remove Control Knob.

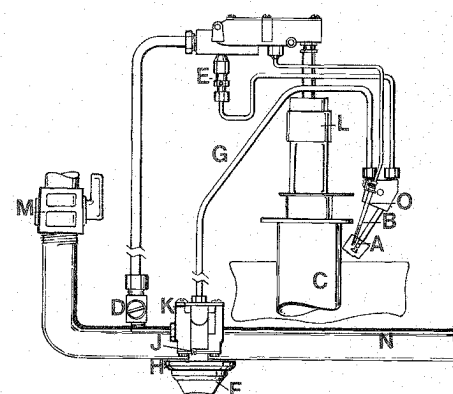
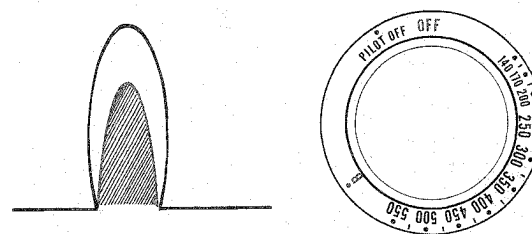
3. Using screwdriver, turn slotted, green-colored Heater Pilot Adjusting Cartridge (d) in either direction until pilot flame just envelopes Temperature Responsive Element (e).

4. Replace Bezel and Control Knob.

5. Make any air shutter adjustment for oven burner flames.



OVEN CONTROLS
INTERNATIONAL 27 FT.-31 FT.



OVEN CONTROLS
LAND YACHTS 18 FT.-27 FT.



THE RANGE AND OVEN are by Magic Chef, and are fitted with coaxial orifices for use with LP gas.

NEVER ALLOW THE TOP COVER TO BE CLOSED WHILE THE RANGE IS IN OPERATION.



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



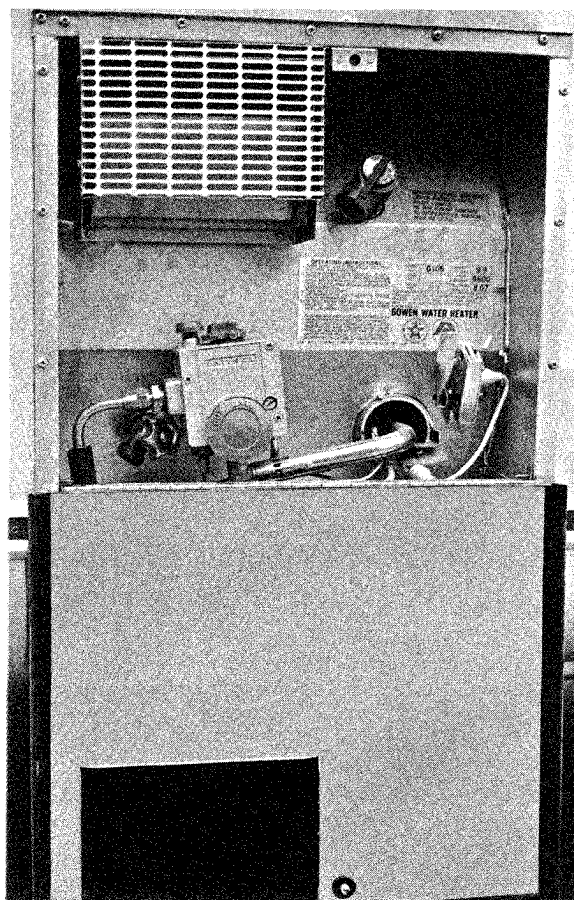
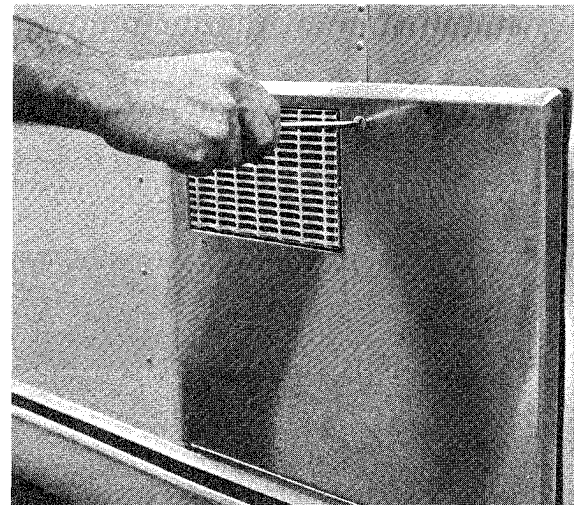
THE THERMOSTAT on your oven does not have a by-pass setting. It will cycle off and on at all temperature settings except broil. No by-pass adjustment is necessary.

The Water Heater: is equipped with a Robertshaw control (a 100% shutoff safety valve) which shuts off the gas supply if the pilot flame is extinguished or water temperature excessive. It is lighted and serviced from outside through an access panel at the roadside, rear, of the trailer.

Procedure for Lighting or Relighting: 1. Be sure the heater is filled. Open hot water faucet at sink – if water flows, heater is full. 2. Turn gas cock knob to 'off' position and temperature indicator to lowest temperature position. 3. Wait sufficient time to allow gas, which may have accumulated in burner compartment, to escape (approximately 5 minutes). 4. Turn gas cock knob to pilot. 5. Depress knob and move lever of spark igniter back and forth between its stops until the pilot flame ignites – this may take several movements of the lever (in models without spark igniter, use a match or lighter). 6. Keep knob depressed for 1 minute after pilot flame lights. 7. Turn the gas cock knob to 'On'. 8. Set the lever indicator for the right temperature. 9. To shut down the heater, turn gas cock to 'Off' position.

The flame should be about ¼" in vertical height when the water in the tank is cold and the burner is off, ¼" to ¾" in horizontal length when the tank is warm.

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 in lower right corner of control will reveal the pilot adjustment screw. Turning this screw clockwise reduces the flow of gas to the pilot (blue flame) and counterclockwise the gas supply is increased (orange flame). All fuels depend upon air for proper burning characteristics. The air shutter slides back and forth along the burner tube and is held in place by a small shutter adjustment screw. Loosen the screw for adjustment. Adjust the air shutter by sliding the shutter to the right until yellow tipping occurs on the main burner flame (not pilot), slowly slide the shutter to the left, until all signs of yellow tipping are gone.



THE WATER HEATER is a Bowen gas water heater.

PILOT FLAME ADJUSTMENT

If the pilot flame does not have a small orange tip, the pilot is not getting enough gas.

A large orange flame indicates excessive gas supply, which shortens pilot life.

Always replace the pilot adjustment cap to prevent gas leakage.

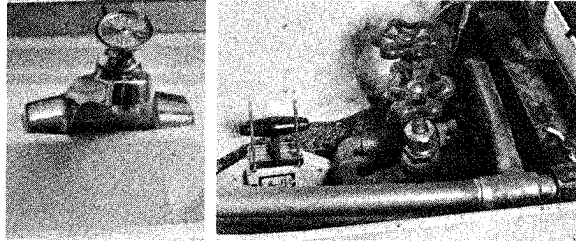
AIR SHUTTER ADJUSTMENT

A yellow, smoking flame indicates a lack of air and a noisy hard blue flame indicates a lack of air.

When properly adjusted, tighten screw holding the air shutter.

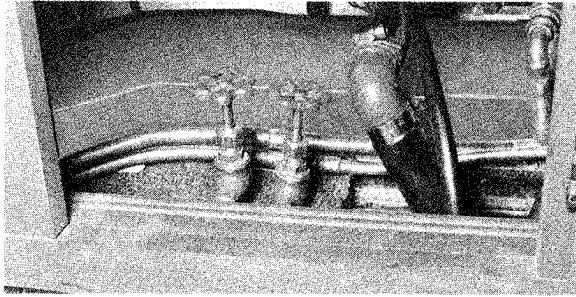
ACCESS DOOR MUST BE KEPT FIRMLY LOCKED.

FAUCETS



REAR DRAIN

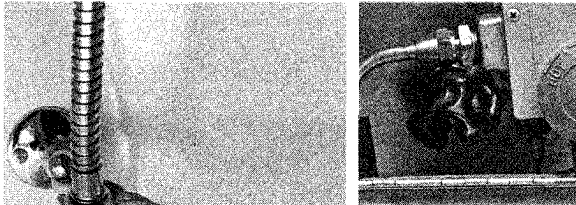
VALVE



TELEPHONE

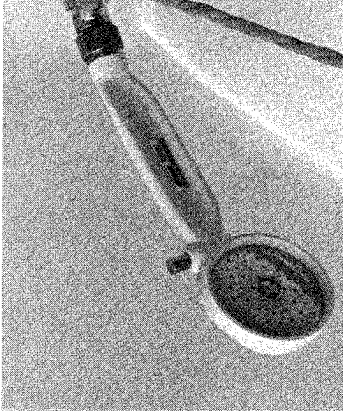
SHOWER

HEAD



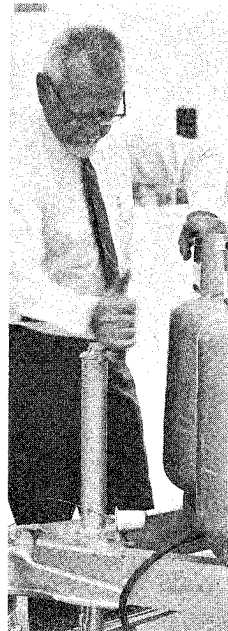
WATER HEATER

DRAIN VALVE



TOILET

HAND SPRAY

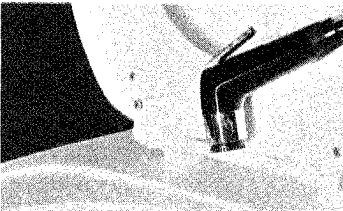


JACK UP

AND DOWN

TO LET ALL

THE WATER OUT



Trailer Storage:

Use the same precautions as in your home during mild weather: attend to perishables, ventilation and rain protection. For prolonged storage, flush out all the drain lines and the holding tank. Drain the water system to prevent it getting stale, drain also the water heater and the water storage tank.

1. Level the trailer from side to side and front to rear.
2. Open all faucets.
3. Turn the water pump switch to 'Off'.
4. Open all drain valves: there are five:
 - 2 valves in the One-Stop-Service Center.
 - 3 valves under the galley sink (water tank drain valve is under the floor).
5. While the water is draining from the system, open and flush the toilet flushing valve. Depress hand spray thumb button and hold the spray head below rim of toilet to drain the hand spray line.
6. Drain all water from telephone shower head flexible hose.
7. Lower the front of the trailer as far as the jack will allow while the water continues to drain. Then crank the jack up as high as it will go and let all remaining water out.

8. After the water has stopped, apply air pressure to the drain lines with all drain valves and faucets still open. This will force all remaining water from the water heater, also water that may be trapped in low areas.

9. Pour a cup of antifreeze into the lavatory and sink and tub drains to prevent freezing in the taps.

10. Open the waste holding tank drain valve and drain and flush the tank thoroughly.

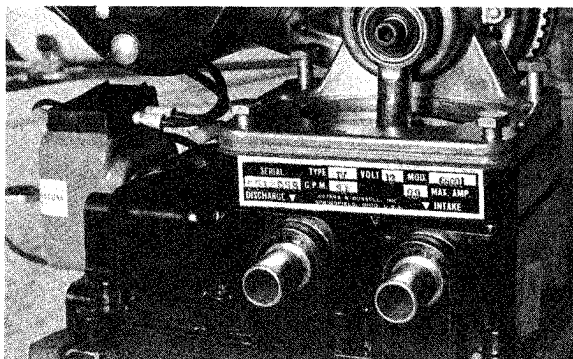
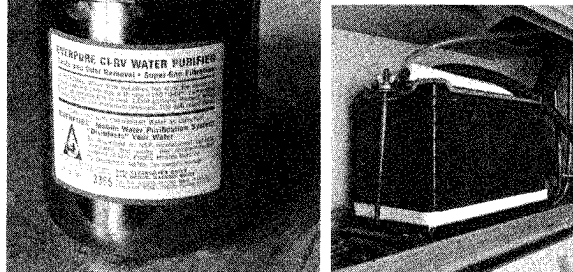
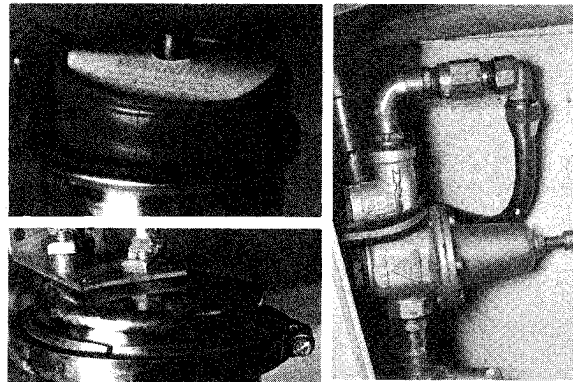
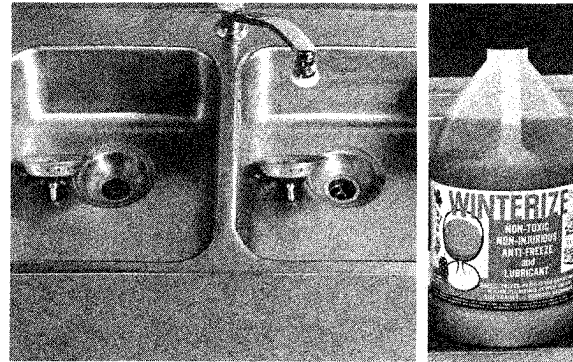
11. If you have a water purifier, remove the lower portion and drain it.

12. Disconnect the inlet and outlet connections of the water pump and turn by hand till all water is expelled.

13. A normal battery will discharge itself in 30-45 days, and faster if it is freezing.

Therefore, it is most important to check every 2 weeks at least in freezing weather and charge it as necessary. A safe specific gravity reading is 1.225.

Please see Page 41 — on charging battery — also about using the battery checking device.



67 WINTERIZING

The main consideration is to prevent freezing damage to the hot and cold water systems, waste drain systems, all faucets, the waste holding tank, the water-heater and the battery.

FROST WILL CAUSE DAMAGE IN LINES AND VALVES

Sewage if frozen in the tank will damage it.

A fully charged battery cannot freeze. A fully charged reading is 1.250-1.280.

You will of course want to remove all food, cosmetics and the like which may either be damaged, or cause damage by freezing.

Remember to drain:
Telephone Shower Head, Toilet Hand Spray, Water Purifier, and loosen hexnuts on Water Pressure Regulator, also 5 Main Valves.

B.T.U. RATINGS

APPLIANCE	MODEL	B.T.U.
Furnace	25 ft. thru 27 ft.	22,000
	29 ft. thru 31 ft.	30,000
	18 ft., 23 ft.	16,500
Oven (only)	27 ft. thru 31 ft. (Int'l)	12,000
Range Top (only)	27 ft. thru 31 ft. (Int'l)	28,000
Range — Oven	23 ft. thru 25 ft.	39,000
Range — Oven	18 ft., 21 ft.	23,600
Refrigerator	All	1,345
Water Heater	All Int'l and Land Yacht	12,600
	All Special Land Yacht	8,800

FUSES & CIRCUIT BREAKERS

CIRCUIT	LOCATION	RATING
Air Conditioner & Other 120V Circuits	120 volt panel	20 amp C.B. (man. resetting)
Charge line from Car	Univolt	40 amp fuse
Low Voltage Circuits	Univolt	20 amp fuse
Trailer Battery Fuse	Univolt	40 amp fuse
Power On Circuit	Univolt	1 amp fuse

CAPACITIES

APPLIANCE	CAPACITY
Waste Holding Tank (Int'l & L.Y.)	17 gal.
Waste Holding Tank (Spec. L.Y.)	11 gal.
Water Tank (Int'l & L.Y.)	50 gal.
Water Tank (Spec. L.Y.)	30 gal.
Water Heater (Int'l & L.Y.)	10 gal.
Water Heater (Spec. L.Y.)	6 gal.

LIGHT BULB REPLACEMENT

LOCATION	LAMP NUMBER
Reading Lights (living room)	1383
Reading Lights (bedroom)	1141
Galley & Vanity Flood Lights (Int'l)	1383
Galley & Vanity Lights (L.Y.)	1141F
Ceiling Lights	1141F
Shower Light (Spec. L.Y.)	1141F
Central Control Panel Light	53
Door Light	90
Service Center & Trunk Lights	1141
Clearance & Cluster Lights	1895
Stop & Turn Signal	1034
License Plate Light	89
Backup Lights	1073

This chart shows Light and Appliance Amperages, from which you can tell how much to deduct from the hourly Univolt output (45 amps in Land Yachts and Internationals, 30 amps in Special Land Yachts) to determine the surplus power that will charge the battery.

ITEM	AMPERAGE
READING LIGHTS: Living Room, Bedroom59 each bulb
MAIN DOOR LIGHT58 each bulb
CEILING LIGHT (4 Bulbs):	
Living Room, Galley, Bedroom, Bathroom	1.65 each bulb
GALLEY FLOOD LIGHTS	
(Internationals Under Roof Locker)58 each bulb
GALLEY LIGHT (L.Y. Under Roof Locker)	1.65 each bulb
TRUNK LIGHTS: Service Center, Trunk	1.47 each bulb
CONTROL PANEL LIGHT12
WATER PUMP (Internationals & Land Yachts)	9.9 max.
WATER PUMP (Special Land Yachts)	6.2 max.
CEILING FAN	4.8
BATHROOM EXHAUST FAN	2.0
RANGE EXHAUST FAN	2.0
FURNACE FAN	4.5

Note: When self-contained, conserve battery power for Water Pump, Lights and Furnace Fan.



SPECIFICATION CHARTS



AMPERAGE
CONSUMPTION OF
LIGHTS & APPLIANCES
REFERENCE TO PAGE 41



SPECIFICATIONS

B.T.U. RATINGS

CAPACITIES

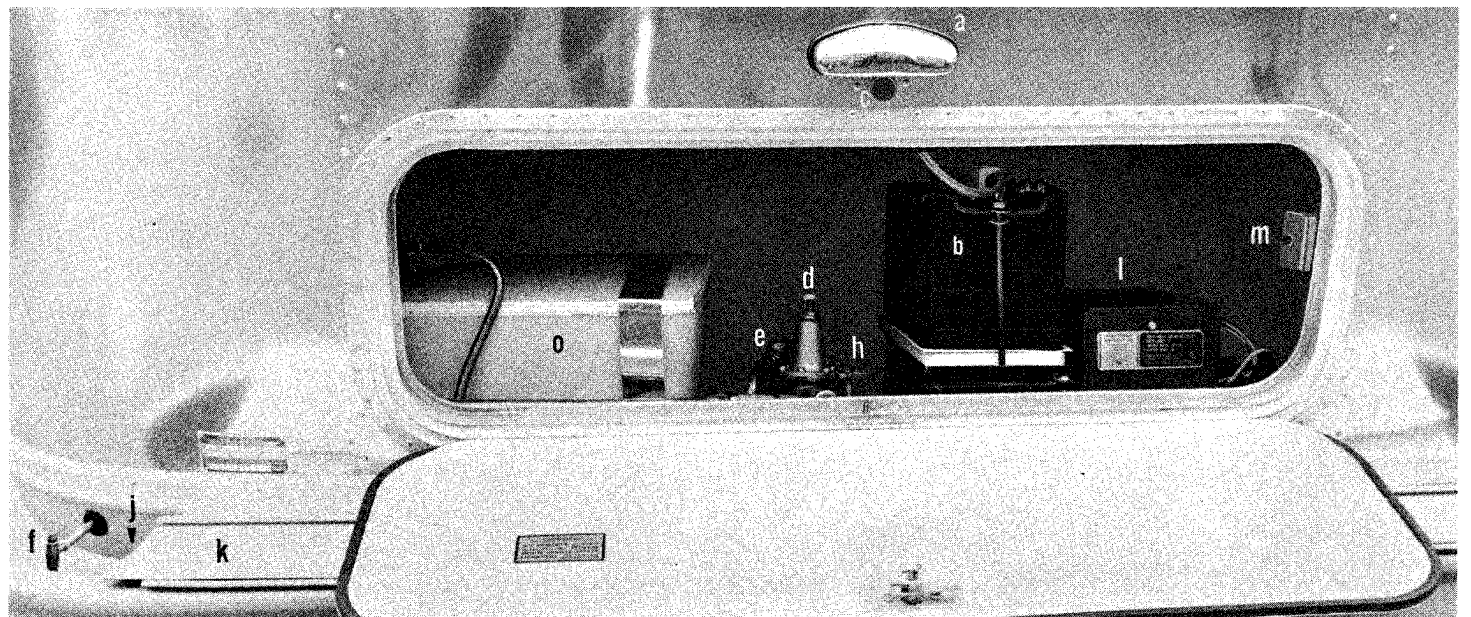
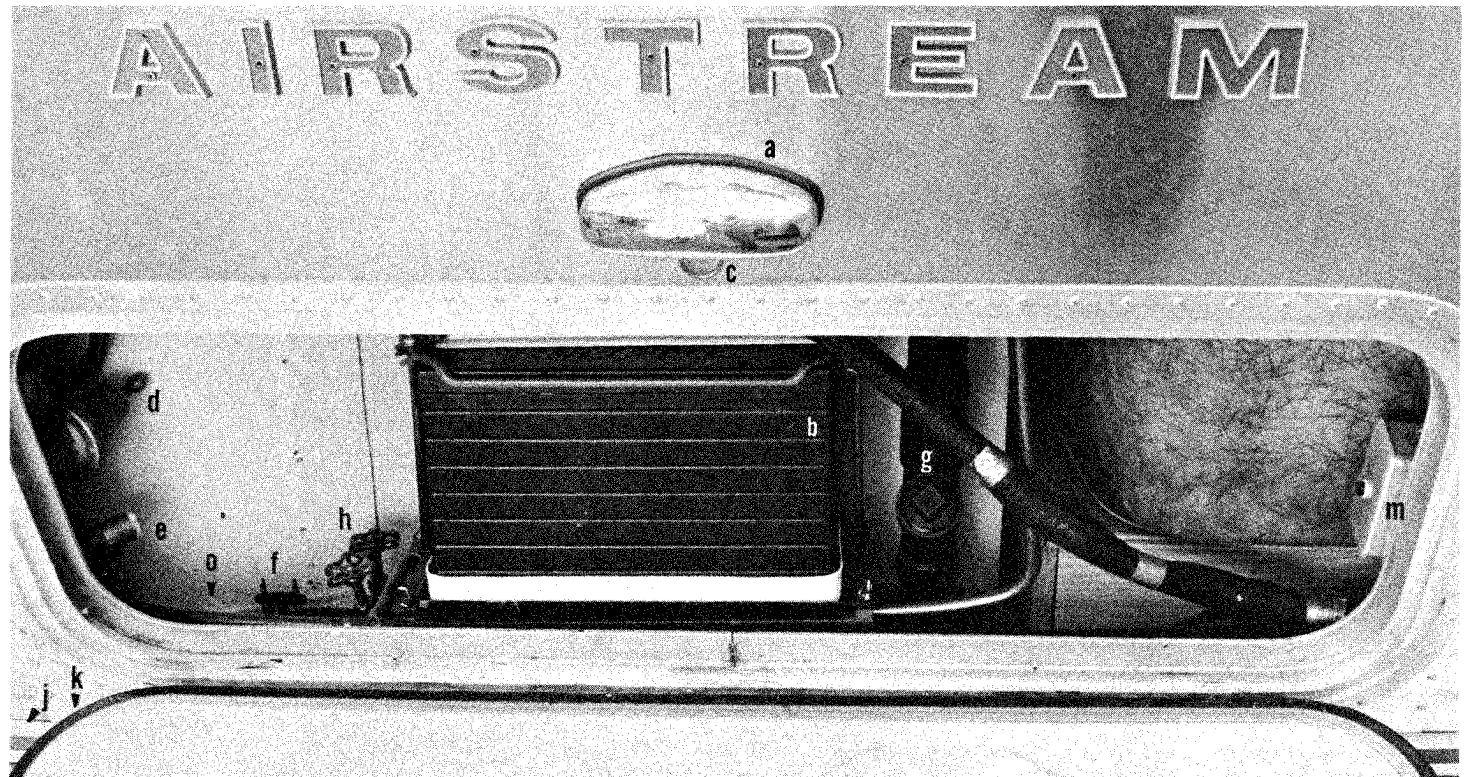
FUSES & CIRCUIT

BREAKERS

BULB REPLACEMENT

ONE-STOP-SERVICE
CENTER
LAND YACHTS AND
INTERNATIONALS

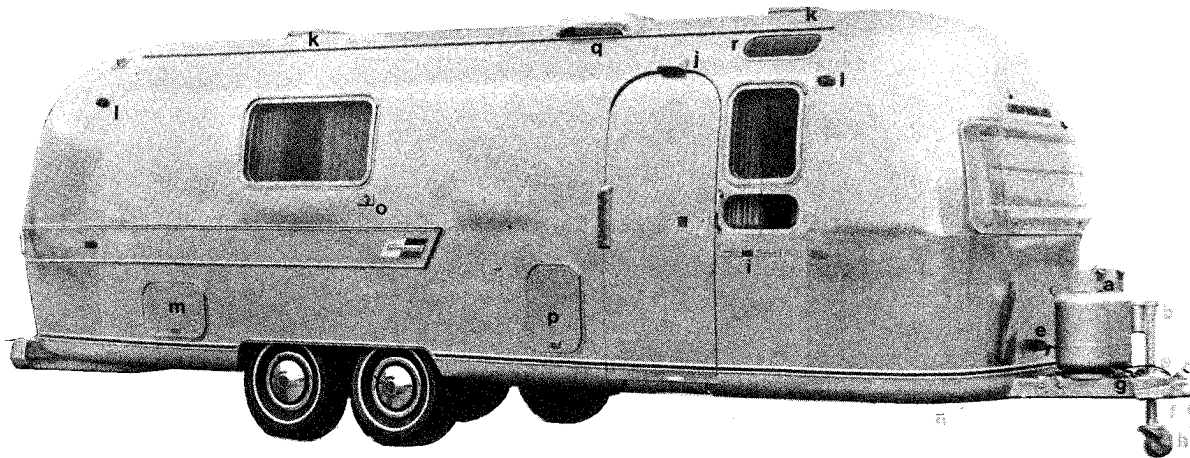
- a: License Light
- b: Trailer Battery
- c: Battery Vent
- d: Water Pressure Regulator
- e: Water Pressure Relief Valve
- f: Dump Valve Handle
- g: Flushing Fitting
- h: Water Line Drain Valves
- j: City Water Inlet
- k: Storage Compartment
(Sewer & Electrical Lines)
- l: Univolt
- m: Polarity Light
- o: Waste Holding Tank



ONE-STOP-SERVICE
CENTER
SPECIAL LAND YACHTS

SPECIFICATION
PHOTOGRAPHS

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- a: LPG Regulator & Tank
- b: Power Jack (optional)
- c: Locking Lever
- d: Coupler
- e: Electrical Connector
- f: Breakaway Switch Cable
- g: Safety Chains
- h: Dolly Wheel
- i: Serial Number Plate
- j: Main Door Light
- k: Roof Vent
- l: Clearance Light
- m: Trunk Door
- n: Spare Tire Carrier (optional)
- o: Weather-proof 120V Receptacle
- p: Refrigerator Access Door
- q: Refrigerator Vent
- r: Vistaview Window
- s: Range Exhaust Vent
- t: Furnace Vent
- u: Stop-Tail & Directional Signals
- v: One-Stop-Service-Center
- w: License Light
- x: Water Heater Vent
- y: Water Heater Access Panel
- z: Water Inlet

ONE-STOP-SERVICE-
CENTER

LUBRICATION & MAINTENANCE

ITEM	Every	Every	Every	PROCEDURE
	1,000 miles or 30 days	5,000 miles or 90 days	10,000 miles or 6 months	
Battery	X			Check water level — fill with distilled water only.
Smoke Hood	X			Clean fan blades and wash filter.
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).
7-way Plugs & Receptacle		X		Clean contacts and coat with "SPRA-KLEEN."
LPG Hold Down Knob	X			Lubricate with light household oil.
Entrance Door Hinge	X			Lubricate with light household oil.
Roof Vent Elevator Screws	X			Lubricate with light household oil.
All Exterior Door Locks	X			Lubricate by shooting in dry graphite.
Strike pocket on Main Door	X			Coat with paraffin.
Wheel Bearings			X	Clean, repack, and adjust.
Brakes			X	Inspect and adjust.
Tires	X			Check for foreign objects. Check air pressure.
Tires		X		Cross-switch.
Water Pump		X		Check belt for wear and proper tention.
Wheel Lug Nuts		X*		Check for tightness.
Retracting Step		X		Lubricate moving parts.
Window Seals/Door Seals		X		Clean with mild detergent & coat with "Slipicone."

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

HOW TO USE BAROMETER Weather Station FORECASTING GUIDE

Wind Direction	Sea-Level Barometric Pressure in Inches	Character of Weather Indicated
SW to NW	30.10 to 30.20 and steady	Fair, with little temperature change for 1 to 2 days.
SW to NW	30.10 to 30.20 and rising rapidly	Fair, followed within 2 days by rain.
SW to NW	30.20 and above and stationary	Continued fair with no marked temperature change.
SW to NW	30.20 and above and falling slowly	Fair for 2 days with slowly rising temperature.
S to SE	30.10 to 30.20 and falling slowly	Rain within 24 hours.
S to SE	30.10 to 30.20 and falling rapidly	Wind increasing in force, with rain within 12 to 24 hours.
SE to NE	30.10 to 30.20 and falling slowly	Rain in 12 to 18 hours.
SE to NE	30.10 to 30.20 and falling rapidly.	Increasing wind, and rain within 12 hours.
E to NE	30.10 and above and falling slowly	In summer, with light winds, rain may not fall for several days. In winter, rain within 24 hours.
E to NE	30.10 and above and falling rapidly	In summer, rain probably within 12 to 24 hours. In winter, rain or snow, with increasing winds.
SE to NE	30.00 or below and falling slowly	Rain will continue, 1 to 2 days.
SE to NE	30.00 or below and falling rapidly	Rain with high winds, followed within 36 hours by clearing, and in winter by cold.

INTERIOR CHECK LIST

- Central Control Panel for:
 - Water Pump Switch
 - Battery Reading
- Turn off interior lights.
- Turn off Gas to Range & Oven.
- Lock all interior cabinet doors.
- Lock refrigerator door. (Seal containers first.)
- Hold down or stack securely all loose, hard and sharp objects.
- Fasten folding & foldette doors.
- Lock interior cabinet doors.
- Close windows and vents.
- Secure & Lock the Main Door.
- Pull up step.

EXTERIOR CHECK LIST

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- Disconnect and stow:
 - a) electrical hook-up cord.
 - b) sewer-hose hook-up hose.
 - c) water hook-up hose.
- Turn off gas line shut-off valve to appliances.
- Remove and stow leveling jacks and wheel chocks.
- Check hitch: it must be properly attached: crank down hitch jack, until the rear bumper of the car is about 6" above normal.
- Fully retract jack. Remove and stow dolly wheel.
- Check clearance and stop lights.
- Check lug nuts.
- Check tires: 40 p.s.i. for 7:75x15 8 Ply
45 p.s.i. for 7:00x15 6 Ply
60 p.s.i. for 7:00x15 8 Ply
- Check trailer brakes.
- Check that TV antenna is pointed forward & dipoles closed.
- Adjust car mirrors.
- Pull forward some 50 ft. and check site for forgotten objects and cleanliness.
- Fully retract jack. Remove and stow dolly wheel.

PRE-TRIP HOME-CHECK LIST

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

PERSONAL ITEMS

- Automobile insurance to cover you and your family fully.
- Avoid Cash. Use travelers checks and Credit Cards.
- Confirm reservations.
- Have sunglasses for everyone.
- Pack cameras and films.
- Make a check list of clothing for everyone, & toilet articles.

MOTORING ESSENTIALS

- Display car and trailer registration properly.
- Carry drivers license. In Canada you will need a non-resident liability insurance card.
- In Mexico you must have special auto insurance.
- Carry an extra set of ignition and trunk keys in a separate pocket, or in your wallet.
- Keep an operating flashlight with fresh batteries in the glove compartment.
- Pack the trunk so that you can reach the tools and spare tire without completely unpacking.
- Keep sharp or hard articles securely packed wherever they may be.
- Do not pack things in the passenger sitting area, you need maximum space for comfort.
- Wear easy-wash, drip-dry traveling clothes.
- Do not make your vacation trips a mileage marathon! Stop and relax frequently.
- Carry a first aid-kit, including car sickness tablets.
- Carry your pets dish, food, leash and health and registration papers.

NOTE: 'A-W' INTERIOR FITTINGS ARE UNDER INTERIOR MAINTENANCE

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