OWNER'S MANUAL

95

LAND YACHT
MOTORHOME
LE SERIES
by Airstream

INDEX

INTRODUCTION

The Owners Manual for your new Airstream Land Yacht LE Motorhome is designed to explain the operation, function and care of the many systems that make modern motorhoming a joy.

Airstream realizes our customers possess varying degrees of expertise in the area of repairing and maintaining the appliances in their motorhome. For this reason, the service and trouble-shooting information found in this manual is directed toward those with average mechanical skills. We also realize you may be more familiar in one area than you are in another. Only you know your capabilities and limitations.

We want you to use this manual, and hope you will find the information contained in it useful; however, should you ever feel you may be "getting in over your head" please see your dealer to have the repairs made.

The operation and care of component parts such as chassis, refrigerator, furnace, water heater and others are explained in this manual. However, you will also find manufacturer's information supplied in a packet included with this manual.

All information, illustrations and specifications contained in the literature is based on the latest product information available at the time of publication approval.

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

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

TABLE OF CONTENTS

G. PLUMBING

LP (Liquid Petroleum) Gas
Water System
Water Pump
Water Filter
Faucets
Drainage System
Toilet

H. ELECTRICAL

Battery
12 Volt system
Monitor Panel
Antennas
110 Volt System

I. APPLIANCES

Air Conditioner
Furnace
Refrigerator
Range/Oven
Water Heater
Power Roof Vent

J. SPECIFICATIONS

AIRSTREAM, INC.

LIMITED WARRANTY

AIRSTREAM LAND YACHT LE MOTORHOME

Warranty Coverage

When you buy a new Airstream Land Yacht LE Motorhome from an authorized Airstream dealer, Airstream, Inc., warrants the motorhome from defects in material and workmanship as follows:

Warranty Period

12,000 miles (20,000 Kilometers) or one year, whichever occurs first, beginning when the vehicle is delivered to the first retail purchaser or first placed into demonstrator service. This warranty must have been started prior to the accumulation of 4,000 miles in order to be valid.

Items Covered

Any part of the motorhome or any component equipment installed by the factory is covered by the warranty except the following items which are not covered:

* Spartan Chassis
* Battery
* Fuses and Light Bulbs
* Video Recorder
* TV and Radio
* Backing Monitor
* Microwave Oven
* Tires
* AC Power Plant

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

Limitation of Implied Warranties

All warranties of merchantability and fitness for a particular purpose, whether written or oral, express or implied, shall extend only for a period of one year from the date of original purchase, or 12,000 miles, whichever comes first. There are no other warranties which extend beyond those described on the face hereof and expressly excludes conditions resulting from normal wear, accident, abuse, exposure or overload. Some states do not allow limitation on how long an implied warranty lasts, so the limitation may not apply to you.

Airstream' s Responsibility

The Airstream Limited Warranty applies for a period of one year from the date of original purchase, or 12,000 miles, whichever occurs first, and the applicable date of all warranties is that indicated on the Owner's Identification Card. Defects in items covered under this warranty will be corrected without cost upon the return at the owner's expense of the motorhome or defective part to an authorized Airstream dealer.

Care and Maintenance

This warranty covers only defective material and/or workmanship; adjustments and checking are excluded. All adjustments are made at the factory prior to shipment, and rechecked by the dealer prior to delivery to the customer. Adjustments thereafter become a customer responsibility.

The owner is also responsible for following all recommendations, instructions and precautions contained in the Airstream Owner's Manual and the individual manuals furnished by the chassis, appliance and other manufacturers.

Installations not Covered

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

If Repairs are Needed

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

1. Take your motorhome to your selling dealer or other Authorized Airstream dealer.

2. If the dealer is incapable of making the repair, request that he contact the Service Administration Department at Airstream, Inc., for technical assistance.

3. If repairs are still not made, the customer should contact Airstream, Inc., 419 W. Pike Street, Jackson Center, Ohio 45334, Attention: Owner Relations Department, and furnish the following information.

    * The complete serial number of the motorhome
    * Mileage
    * Date of original purchase
    * Selling dealer
    * Nature of service problem and steps or service which have been performed. (The owner may be directed to another dealer at the owner's expense.)

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

Dealer Representation Excluded

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

Consequential and Incidental Damages

Airstream, Inc., will not be responsible for any consequential or incidental expenses or damages resulting from a defect. Incidental expenses include, but are not limited to, travel expenses, gasoline, oil, lodging, meals, telephone tolls, loss of work and loss of use of the motorhome. Some examples of consequential damages would be: stained curtains due to rain leaks or delaminated floor caused by a plumbing leak. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Warranty Transfer

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

Changes in Design

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

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

Thor Industries
Airstream, Inc.
419 West Pike
Jackson Center, Ohio 45334

WARRANTY EXPLANATION

Along with your new Airstream motorhome you have purchased the Airstream Limited Warranty. Read your Limited Warranty carefully. It contains the entire agreement with respect to Airstream's obligation on the Limited Warranty on your new vehicle. The terms of the Limited Warranty, and only those terms, will define Airstream's responsibility. When you receive your Limited Warranty file it for safekeeping.

Upon proof of purchase date to any Airstream Dealer Service Center, defects in materials or workmanship will be repaired or replaced without cost to the owner for a period of twelve (12) months from the original purchase date, or 12,000 miles, whichever occurs first. Written warranties of some manufacturers of components of the motorhome will be honored by Airstream for the duration on that manufacturer's warranty.

Items such as motorhome chassis, engine, tires, batteries and generator are serviced by their respective manufacturers and will be handled by their service centers according to the terms of their written policy. Any warranty forms from these manufacturers should be completed promptly, preferably at time of purchase.

Your motorhome chassis is prechecked by its manufacturer before delivery to Airstream. All service to the chassis must be performed by the manufacturer according to the manufacturer's warranty and service policies. Literature is supplied with each Airstream motorhome which gives important information concerning its warranty coverage; however, the Airstream Limited Warranty covers the chassis heater, defrosters, windshield wiper blade, motor, washer, LP gas bottle and gas regulator.

Paint and appearance items which show imperfections should be brought to the attention of your dealer at the time of delivery and during pre-delivery inspection. Normal deterioration by use and exposure is not covered by the Airstream Limited Warranty.

Damage to enameled or porcelain surfaces resulting from abrasion, collision or impact, and broken window glass is not covered by the Airstream Limited Warranty.

The Airstream Limited Warranty Excludes:

Normal Wear:

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

Accident

Damage caused by accident is usually visible, and we strongly urge our dealers and customers to inspect the motorhome upon delivery for any damage caused by accident while being delivered to the dealer, or while it is on the dealer's lot. Damage of this nature becomes the dealer's or your responsibility upon acceptance of the motorhome. GLASS BREAKAGE, whether obviously struck or mysterious, is always accidental and covered by most insurance policies.

Abuse
Lack of customer care and/or improper maintenance, including failure to comply with the terms of the Owner's Manual, or failure to heed proper vehicle operation shown by the dash instruments are not covered by warranty.

Exposure
Deterioration by sunlight is possible to such items as tires, curtains or upholstery. Steel or metal surfaces are subject to the elements, causing rust and corrosion which is normal and beyond the control and responsibility of Airstream.

Overload
Damage due to loading beyond capacity or to cause improper balance is not covered by the Airstream Limited Warranty. The Airstream motorhome body is engineered to properly handle any normal load. There are limits to the amount of load that can be safely transported depending upon speed and road conditions. If these limits have been exceeded the Airstream Limited Warranty will not cover resulting damage. For additional information on the load capacity of your motorhome consult your Owner's Manual or gross vehicle weight rating plate. The motorhome alignment is checked during the last quality inspection. These tolerances will only change if the motorhome is subjected to abuse, such as dropping off a sharp berm, striking a curb, or hitting a deep hole in the road. Such damage would be considered as resulting from an accident which risks are not covered under the warranty. Abnormal tire wear and/or wheel alignment resulting from such damage is not covered under the terms of the warranty. Chevrolet recommends you have the motor aligned after you've made a couple of trips and have developed an average load.

SERVICE

The Airstream Silver Key Delivery Program is an exclusive Airstream program. Before leaving the factory each and every vital part of the motorhome is tested for performance. Each test is signed and certified by an inspector. After the motorhome arrives on your dealer's lot all of these vital parts and systems are again tested. When you take delivery of your new motorhome you will receive a complete checkout.

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

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

ALL CENTERS OPERATE ON AN APPOINTMENT BASIS FOR THE UTMOST EFFICIENCY.

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

Service may be arranged at the Factory Service Center by contacting the Service Coordinator at:

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

You Should Also be Aware of the Following:

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

In the event of a defect, the owner must take all reasonable corrective action to lessen the damages which might result from such defect. Airstream will not be responsible for damages which could have been avoided.

Airstream's responsibility is defined solely by the Airstream Limited Warranty and Airstream is not responsible for or bound by representations or warranties made by any of its dealers.

Your Airstream Limited Warranty is transferable to subsequent owners of the motorhome, but only for the duration of the warranty period. Warranty transfer application forms are available from your dealer or the Airstream factory.

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Airstream, Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Airstream, Inc.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to : NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

MAINTENANCE SCHEDULE

Note: See Spartan and appliance manufacturer's literature for further information.

EVERY 30 DAYS

Escape Window	Check operation of latches and upper hinge
Smoke Alarm	Test and replace battery as required
Tires	Check tire pressure (90 psi)
G Fl Circuit Breaker	Test and record

EVERY 5000 MILES OR 90 DAYS

Exterior Door locks	Lubricate with dry graphite
Exterior Hinges	Lubricate with light household oil
LPG Regulator	Check bottom vent for obstructions
Main Door Striker Pocket	Coat with paraffin
Wheel Lug Bolts	Torque to 325 ft. lbs.
Range Exhaust Hood	Clean fan blades and wash filter
Roof Vent Elevator Screws	Lubricate with light household oil
Main Door Step	Lubricate moving parts and check

EVERY 10,000 MILES OR 6 MONTHS

Exterior	Clean and wax
Hitch	Check bolts and welds (90 ft-lb)

EVERY YEAR OR 12,000 MILES

Battery	Clean, neutralize and coat terminals with petroleum jelly
LP Tank	Have purged by LP supplier
Seams	Check seal on exterior seams, windows, lights, and vents. Reseal with Sikaflex or equivalent as needed.

MAINTENANCE RECORDS

Date	Dealer	Service Performed

DRIVING

LOADING

It's very important to realize fluids is probably the heaviest material you'll carry in your motorhome. Luckily it's also one of the easiest to load and unload.

Be realistic when filling your tanks. Do you really want to carry a full 60 or 80 gallons of water for a long trip? Water weighs 8.33 lb. per gallon. Ten less gallons of water is over 83 pounds - - that would be a lot of fishing tackle or back packing equipment you could take in its place. If you're going to camp in the "boonies" consider filling your water tank shortly before entering the camping area. Carrying a quarter ton of water for more than a few miles doesn't make good sense since it's pretty cheap and usually readily available.

With all the available storage space and tanks you can overload your vehicle, but using a little common sense makes it easy to take everything you need and still be legal. It's also a good idea to take everything out of your motorhome every couple of years and only put back what you really use. It's awful easy to take along a lot of "what if" things that aren't really needed.

Weigh your unit a couple of times when you're loaded and ready to travel so you get an idea of the limitations. If you're not aware of any scales in your area, call your Highway Patrol Department for directions.

SAFETY CHECK LIST

Your Airstream motorhome should be given a thorough safety check before a trip. Regular use of the following list will provide safe operation of your motorhome and will help you spot any malfunctioning equipment and correct the problem as soon as possible. The list is to help you and may not be all inclusive.

Failure to heed many of the following items may cause damage to the vehicle or personal injury.

EXTERIOR CHECK LIST (BEFORE ENTERING VEHICLE)

1. Check condition of tires for proper inflation.
2. Turn off LPG valve on LPG tank.
3. Check that sewer connection, all external compartments and filler openings are properly stowed or closed and/or locked.
4. Check that items stored on exterior of vehicle are securely tied down.
5. Would any items stored on exterior of vehicle present a clearance problem?
6. Lower and secure awnings, TV antenna and roof vents.

INTERIOR CHECK LIST (BEFORE DRIVING OFF)

1. It is important that the main door and cab door be completely closed and locked during travel. This includes locking the dead bolt.
2. Turn off living area water pump.
3. Check that refrigerator door is fastened.

4. Check that nothing heavy is stored in overhead or high cabinets which could fall out and cause injury. Heavy items should be stored in low cabinets.

5. Stow folding and pedestal tables.

6. Check that counter tops, range top, credenza tops and shelves are clear of even small items that could become projectiles in an accident.

7. Do not cook while under way. Hot food or liquid could scald due to a sudden stop or accident.

8. Check that any internal stowage is securely held in place.

9. Check that lights and switches are set in positions safe for travel.

10. Adjust the driver's seat so that you can easily reach and operate all controls. Make sure seat is locked in position. Do not adjust driver's seat swivel or fore and aft mechanism while vehicle is moving. The seat could move unexpectedly causing loss of control.

11. Check that front passenger's seat is locked in position - both fore and and aft adjustment and swivel mechanism.

12. Check rear view mirror adjustment, inside and outside. Adjust curtains if necessary for maximum visibility.

13. Fasten lap belts.

14. Check that step light goes out and that electric step has retracted.

SAFETY SEAT BELTS

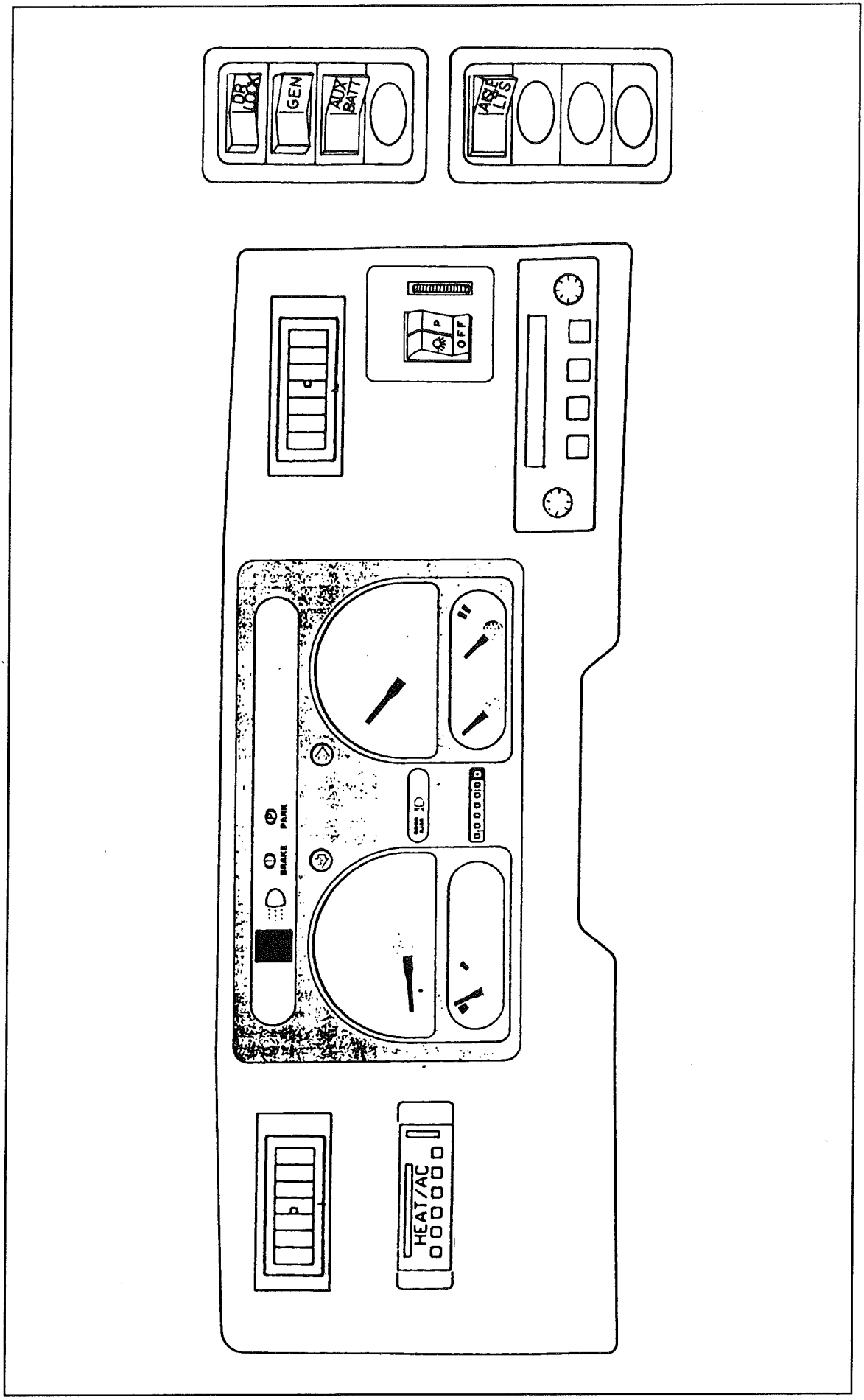
In the forward driver's area of the motorhome, safety seat belts are provided for the use of the driver and the right front passenger. Safety belts are available for other seats. It is strongly recommended that all occupants remain seated with their safety belts firmly attached while the motorhome is in motion. The driver should adjust his seat so that he is able to reach all controls easily with the belt on, especially able to use all the travel on the foot brake. The belt should be placed as low as possible around the hips to prevent sliding out from under them in case of accident. This places the load of the body on the strong hip bone structure instead of around the soft abdominal area. Two people should never try to use the same seat belt.

WARNING: Children must be secured in a Federally Approved Child Restraint Device. Failure to use proper restraints can result in severe or fatal injuries in case of accidents.

Child restraint devices are designed to be secured with lap or lap/shoulder belts. All instructions supplied by the restraint manufacturer must be followed. Statistics have shown children are safer when properly restrained in a rear seating position than in a front seating position.

Often the children traveling in motorhomes are grandchildren. There are times when our love for grandchildren makes us hesitate to properly supervise their actions. Don't hesitate when it comes to their safety. Make sure they are properly restrained.

CHILDREN HAVE LOVED ONES TOO...IF YOU WON'T BUCKLE UP FOR YOURSELF, BUCKLE UP FOR THEM.


DR LOCK
GEN
AUX BATT
MAP LTS
P
OFF
PARK
BRAKE
HEAT/AC

AIRSTREAM DASH CONTROLS

Most automotive gauges and controls are standard Chevrolet instruments. Their function and use is described in your Spartan Drivers Manual. The exception on automotive controls is the heater/air conditioner and "Smart Stick." Operating instructions on these components can be found in the chassis section of this manual.

Right side switches:

- **Door Lock** - The main door can be locked or unlocked from the drivers seat. Remember to hide an extra door key on the exterior in case of unexpected battery failure.
- **Auxiliary Battery** - The auxiliary start switch is intended to be used if the engine battery becomes to discharged to turn the engine over. To operate, hold the switch in the start position, then use the ignition switch in a normal fashion. Operating the auxiliary start switch closes the points on a large solenoid, tying all three vehicle batteries together for increased starting power.
- **Generator Switch** - The remote generator switch on the dash allows the driver to start or stop the generator without leaving the driver's seat. It should be noted a built-in time delay allows the generator to reach full operating speed before 120 volt current is provided to the coach.
- **Courtesy Light** - The courtesy lights are low intensity lights along the dash.
- **Aisle Lights** - The low aisle lights will allow passengers to converse without using overhead lights that could be bothersome to a driver at night.
- **Docking Light** - This switch powers exterior lights on the curbside exterior of the coach and the curbside front cornering lamp (the roadside cornering lamp is not in this circuit).

FLOOD LIGHT

(Optional, not shown) Two switches control the operation of the search lights. The left hand switch controls the directional movement of the lights. Move it up or down, right or left, and the light will move in the same direction. The right hand switch illuminates the light in either spot light or flood light mode.

CAB SEATS

The cab seats will adjust three ways for maximum comfort. Three levers control the operation. The levers in the end of the arm rest control the recline and swiveling of the seat. A lever under the front left side of the seat allows forward and backward adjustment.

WARNING: Never adjust drivers seat while vehicle is in motion.

POWER SEAT CONTROLS

Power seat controls have three switches. The center switch moves the seat up and down, forward and back. The other two switches control the tilt of the seat. If the seat is run to the end of its movement in any direction a stall condition will exist and a 12 volt automatic circuit breaker will "kick-out" to avoid damage to the motors. If this occurs wait approximately 30 seconds and operate the switch in the opposite direction.

CAUTION: Revolving the power seat completely around will pull the wiring apart. The seats should only be swiveled toward the center of the vehicle. If the wires are loosened they can be reconnected by following the color code: Red to red, green to green, etc. On some models the wires will be on a plug that can be reattached.

TRAILER TOWING AND DRIVING TIPS

Since this vehicle is designed and intended to be used primarily as a load carrying vehicle, towing a trailer will affect handling, durability and economy. Maximum safety and satisfaction depends upon proper use of correct equipment and avoiding overloads and other abusive operation.

CAUTION:

The maximum loaded trailer weight which you can pull with your vehicle is 2,000 lbs. Vehicles should be properly equipped for towing trailers. Information on trailer hauling capabilities and special equipment required may be obtained from your Airstream dealer.

To assist in attaining good handling of the vehicle/trailer combination it is important that the trailer tongue load be maintained at approximately 10% of the loaded trailer weight, but not to exceed 200 lbs. Tongue loads can be adjusted by proper distribution of the load in the trailer, and can be checked by weighing separately the loaded trailer and then the tongue.

When towing trailers, tires should be inflated to the highest pressures shown on the information plate attached to the drivers door jamb of your motorhome. The allowable passenger and cargo load (GVW) of this vehicle is reduced by an amount equal to the trailer tongue load on the trailer hitch.

Trailer brakes are required on axles of trailers over 1,000 lbs. loaded weight.

CAUTION:

Considerable damage will occur if the motorhome is improperly lifted for towing purposes. Only qualified professional wrecker service companies with proper equipment should be used.

The most common equipment is called "reach underhooks". These allow the tow operator to lift on the front suspension of your motorhome without damaging the bumper or other body parts. Another choice is a wheeled dolly. In these the front tires sit in a cradle supported by its own wheels. The tow operator should be told the weight of your vehicle is close to 5,000 lbs. on the front suspension so they can be properly prepared when they reach you.

On vehicles with hydraulically operated park position, it may be necessary to remove a drive shaft before towing. It's important to mark the position of the drive shaft relative to the "U" joints. Chevrolet balances the drive shafts in sets so they must be replaced in the same position they were removed. Further information is available in your Chevrolet Owners Manual.

NOTES

CHASSIS

The Airstream motorhome is built on a Chevrolet chassis. Operation of the Chevrolet engine and other related components is discussed in the Chevrolet Owners and Drivers Manual supplied with each coach.

If repairs are needed it can be difficult to determine which parts of the chassis are warranted by Chevrolet, and which are Airstream's responsibility. The following list shows the major components of the chassis and the company responsible for their servicing.

Chevrolet (P-30 Forward Control, Motorhome Chassis)

Engine
Transmission
Brakes (Except Tag Axle)
Steering Assembly
Front Spindle, Bearings
Steel Wheels
Alternator
Cruise Control
Turn Signals
Front Suspension, Air Bags (Except Shocks)
Drive Axle and Hubs
Rear Shocks
Automotive Fuse Panel
Parking Brake
Electric Fuel Pump

Airstream

Auxiliary Heater
Dash Air Conditioner/Heater
Windshield Wipers
Leveling Jacks
Aluminum Wheels
Air Horn
Isolator
Automotive Accessory Fuse Block

The above list covers almost all of the chassis components. If you need further clarification or information your dealer should be contacted with the details.

SUSPENSION

The suspension is all Chevrolet. Airstream sets the air bag pressure at 70 psi when aligning the front end.

DASH AIR CONDITIONER/HEATER

Acme Radiator Air Conditioning, Inc.
17103 St. Rd. 4E
Goshen, Indiana 46526
800-552-2263

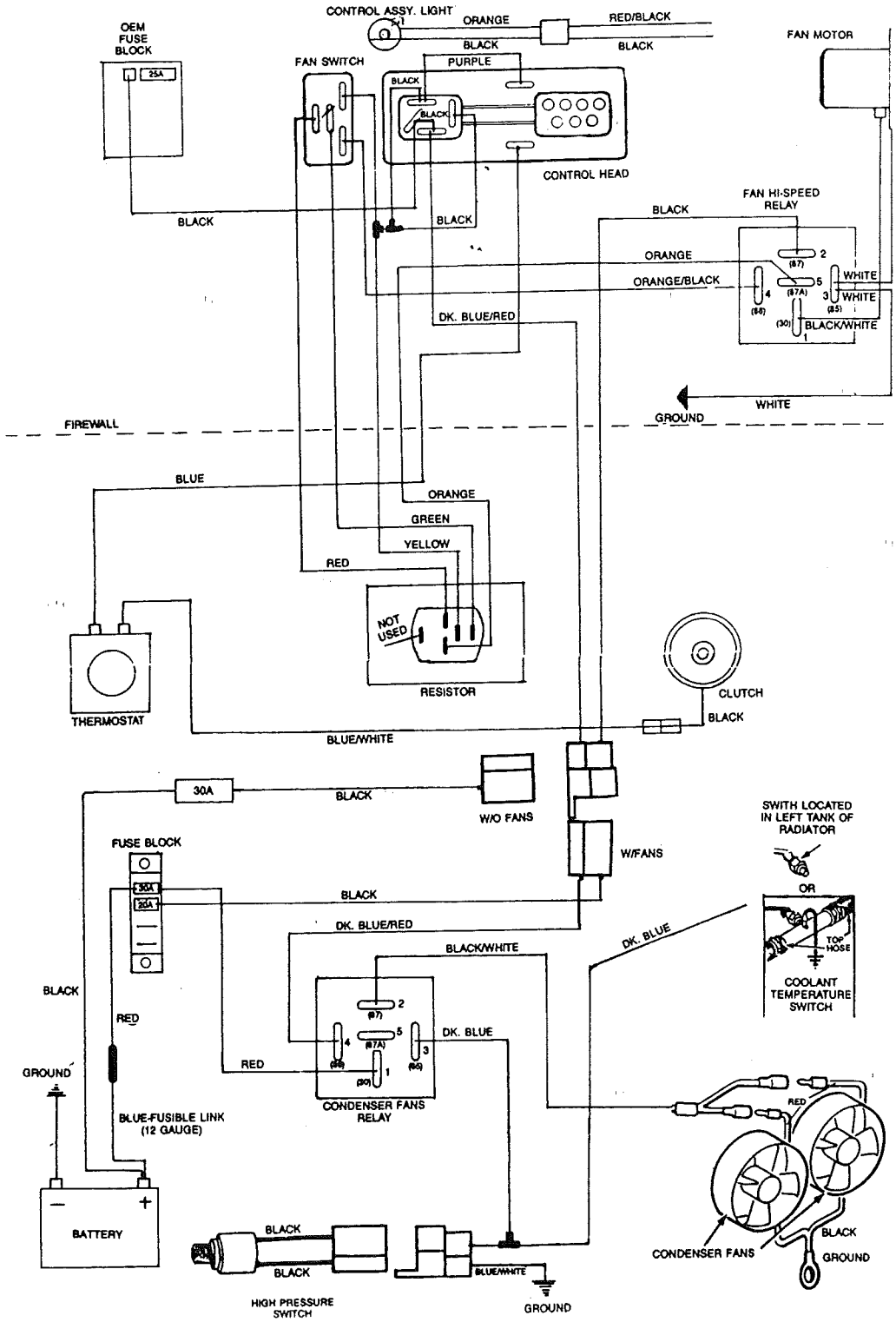
OPERATION

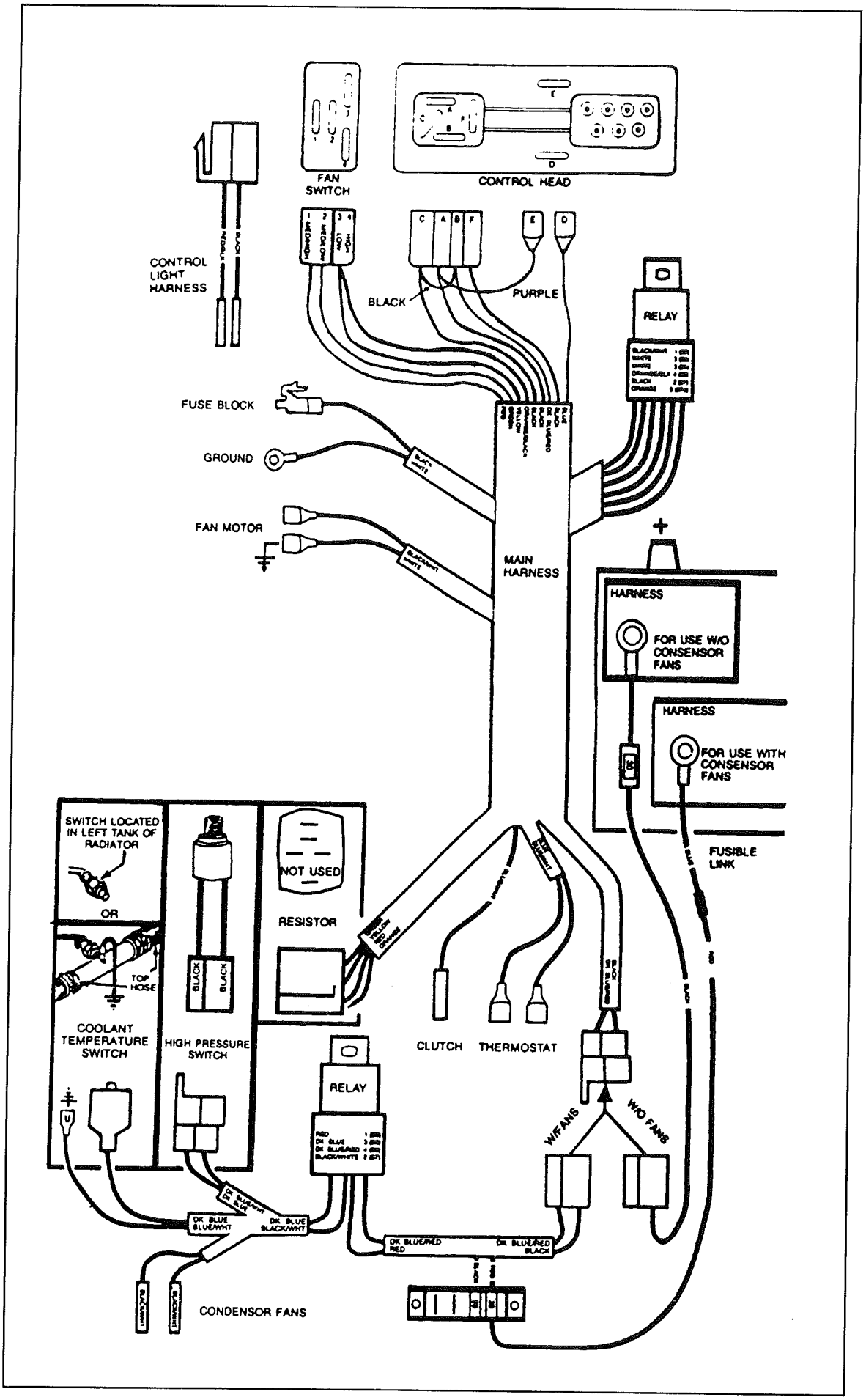
The operation of your dash air conditioner/heater is practically identical to those found in most automobiles. Three controls are involved. The fan switch varies the amount of air flow through the system. The "mode" controls between heat, air conditioning, defrost, floor and panel. So mode not only determines the part of the system you want to use but also the area where either the hot or cold air will be vented into the coach. The temperature control lever controls the amount of hot water being allowed to flow through the heater core.

SERVICE

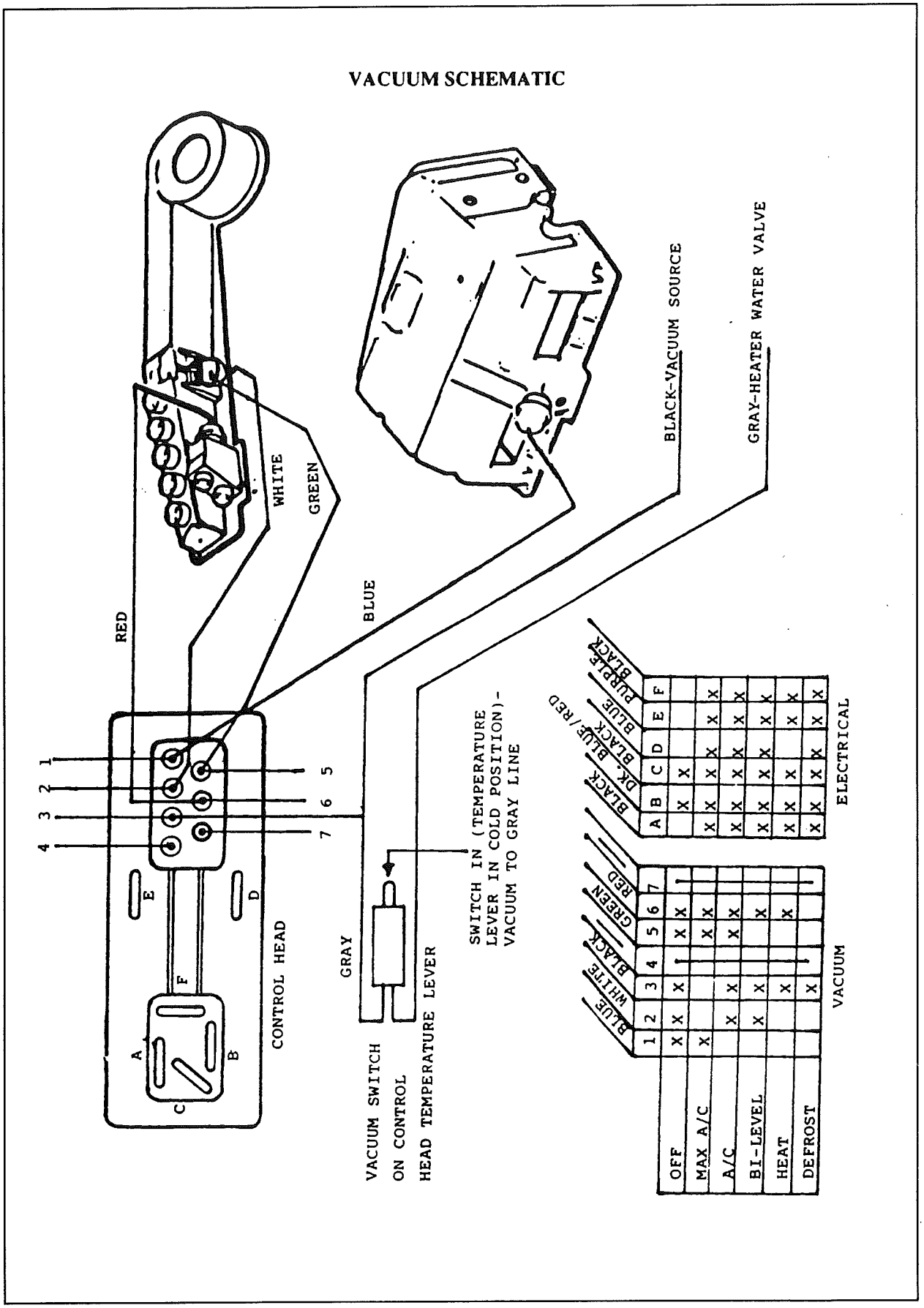
Acme has requested you to call them on the 800 number listed above should you experience any service problems. They are usually able to help get any repairs needed at an air conditioner repair facility close to your location.

The following pages include wiring diagrams and vacuum line diagrams.


CONTROL ASSY. LIGHT
ORANGE
RED/BLACK
BLACK
BLACK
OEM FUSE BLOCK
25A
FAN SWITCH
PURPLE
BLACK
BLACK
CONTROL HEAD
FAN MOTOR
FAN HI-SPEED RELAY
BLACK
BLACK
ORANGE
ORANGE/BLACK
DK. BLUE/RED
WHITE
WHITE
BLACK/WHITE
WHITE
GROUND
FIREWALL
BLUE
ORANGE
GREEN
YELLOW
RED
NOT USED
RESISTOR
THERMOSTAT
CLUTCH
BLACK
BLUE/WHITE
30A
BLACK
W/O FANS
W/FANS
SWITH LOCATED IN LEFT TANK OF RADIATOR
OR
TOP HOSE
COOLANT TEMPERATURE SWITCH
FUSE BLOCK
30A
20A
BLACK
DK. BLUE/RED
BLACK/WHITE
DK. BLUE
BLACK
RED
GROUND
RED
DK. BLUE
CONDENSER FANS RELAY
BLUE-FUSIBLE LINK (12 GAUGE)
BATTERY
BLACK
BLACK
HIGH PRESSURE SWITCH
BLUE/WHITE
GROUND
RED
CONDENSER FANS
BLACK
GROUND


FAN SWITCH
CONTROL HEAD
CONTROL LIGHT HARNESS
BLACK
PURPLE
RELAY
FUSE BLOCK
GROUND
FAN MOTOR
MAIN HARNESS
HARNESS
FOR USE W/O CONSENSOR FANS
HARNESS
FOR USE WITH CONSENSOR FANS
FUSIBLE LINK
SWITCH LOCATED IN LEFT TANK OF RADIATOR
OR
TOP HOSE
COOLANT TEMPERATURE SWITCH
HIGH PRESSURE SWITCH
NOT USED
RESISTOR
CLUTCH
THERMOSTAT
RELAY
W/FANS
W/O FANS
CONDENSOR FANS

VACUUM SCHEMATIC



AUXILIARY HEATER

The auxiliary heater is plumbed into the radiator system. Two "tees" are located between the engine and the front heater. The water lines to the heater are routed under the floor. By using the two speed dash fan the temperature output can be varied.

FUEL SYSTEM - CHEVROLET

This system is all standard Chevrolet parts supplied with motorhome chassis. An electric fuel pump is located on the fuel pick-up tube within the fuel tank. You'll hear this pump run for just a few seconds when the ignition key is turned on. The Chevrolet relay operating the pump would be mounted on the frame work to the left of the engine just below the accelerator.

It should also be noted the Chevrolet fuel system has in in-line filter located along the main frame rail just forward of the step area. The Chevrolet part # is 25055347 or Delco GF 509.

TIRES

The tires installed on your Airstream motorhome are engineered to provide a proper balance of performance characteristics for normal vehicle operation.

This section contains some tips on how you can obtain the most benefit from these tires. Your Chevrolet drivers manual also contains important information on tires and should be reviewed.

Incorrect tire inflation pressures can have adverse effects on tire life and vehicle performance. Too low an air pressure causes increased tire flexing and heat build-up. This weakens the tire and increases the chance of damage or failure and can result in tire overloading, abnormal tire wear, adverse vehicle handling, and reduced fuel mileage. Too high an air pressure can result in abnormal wear and harsh ride, and also increase the chance of damage from road hazards.

Tire inflation pressures should be checked at least monthly and when significantly changing the load you plan to carry in your motorhome. Always check tire inflation pressures when the tires are "cold".

Standard inflation pressures for tires are listed in the "Minimum Tire Inflation Pressure at Gross Vehicle Weight Rating" chart. Front and rear pressures are shown for each model and GVWR, are are based on the GVWR and front and rear axle ratings (GAWRs) printed on your vehicle VIN plate and Certification label. Tires must be inflated to these pressures when the vehicle is fully loaded or an axle GAWR is reached.

MINIMUM TIRE INFLATION PRESSURE (PSI)

Model		Tire Size	Front	Rear Duals
30 ft.	14,800 GVWR	225/70R19.5	60 psi	60 psi
34 ft.	16,000 GVWR	225/70R19.5	70 psi	70 psi

The outer tire of a pair in dual wheel installations generally wears faster than the inner tire. When vehicles are driven continuously on high crown roads, an increase in air pressure of from 5 psi to 10 psi on the outside tire of each dual produces maximum tire life.

Proper FRONT END ALIGNMENT improves tire tread mileage. Your front end suspension parts should be inspected periodically and aligned when needed. Improper alignment may not cause the vehicle to vibrate. However, improper toe alignment will cause front tires to roll at an angle which will result in faster tire wear. Incorrect caster or camber alignment will cause your front tires to wear unevenly and can cause the vehicle to "pull" to the left or right. The Chevrolet front air bags are inflated to 70 psi when the motorhome is originally aligned. If this pressure varies excessively alignment will be affected.

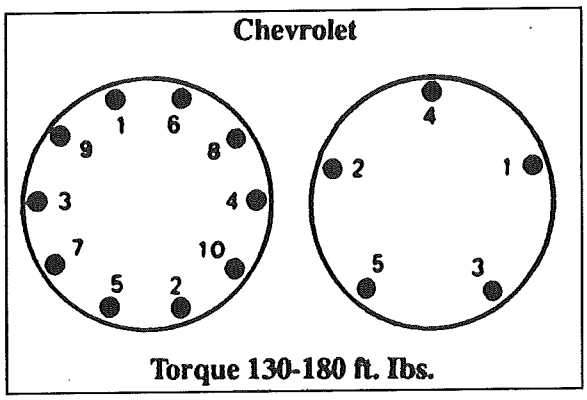
TIRE CHANGING

When removing steel wheel rim to change a tire, loosen all wheel nuts approximately flush with end of stud, then tap clamp ring to loosen rim. Do not remove nuts until clamp ring is free or clamp ring may fly off of stud. When installing rim be sure pins on clamp ring face outboard. Then tighten attaching nuts alternately and evenly to avoid excessive wheel run-out. See torque values and sequence diagram. ***Aluminum wheels do not use the clamp ring and may be removed in the normal fashion.***

LUG NUT TIGHTENING SEQUENCE

WHEEL NUT TORQUE MUST BE CHECKED AT 100, 1,000 AND 6,000 MILES, AND EVERY 6,000 MILES THEREAFTER.

To change front tires the jack should be placed under th control arm. Rear tires, both on dual and tag axles, may be changed by placing the jack under the dual wheeled axle close to the tires being changed.



TIRE ROTATION

Radial	First 6,000 Miles and at Least Every 12,000 Miles thereafter.

Front and rear tires perform different jobs and can wear differently depending on the types of rads driven, your driving habits, etc. To obtain the longest tire live you should INSPECT AND ROTATE your tires regularly. (See Tire Rotation Illustration).

Many GM dealers and tire dealers will perform a free tire inspection to look for uneven or abnormal tire wear..

For the longest tire life, any time irregular wear is seen have the tires checked and rotated by your truck or tire dealer and have the cause of uneven wear corrected. After rotation be sure to check wheel nut tightness and to adjust the tire pressures, front and rear.

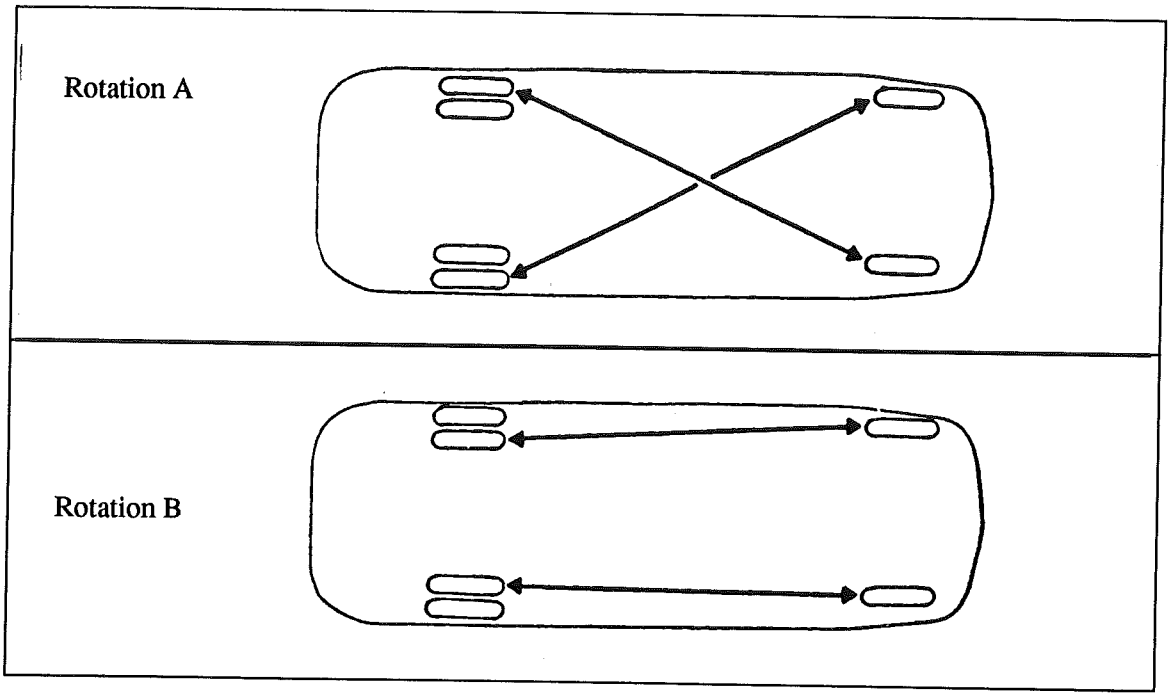
WARNING: Wheel nuts should be tightened at certain intervals. See Wheel Nut Tightening Sequence.

There are two different tire rotations we recommend on the Legacy. Rotation A should be done at approximately 6,000 miles and Rotation B at 12,000 miles.

Your local tire dealer, upon inspection of your tires, may have a tire rotation recommendation that better fits your driving habits and the characteristics peculiar to your vehicle.

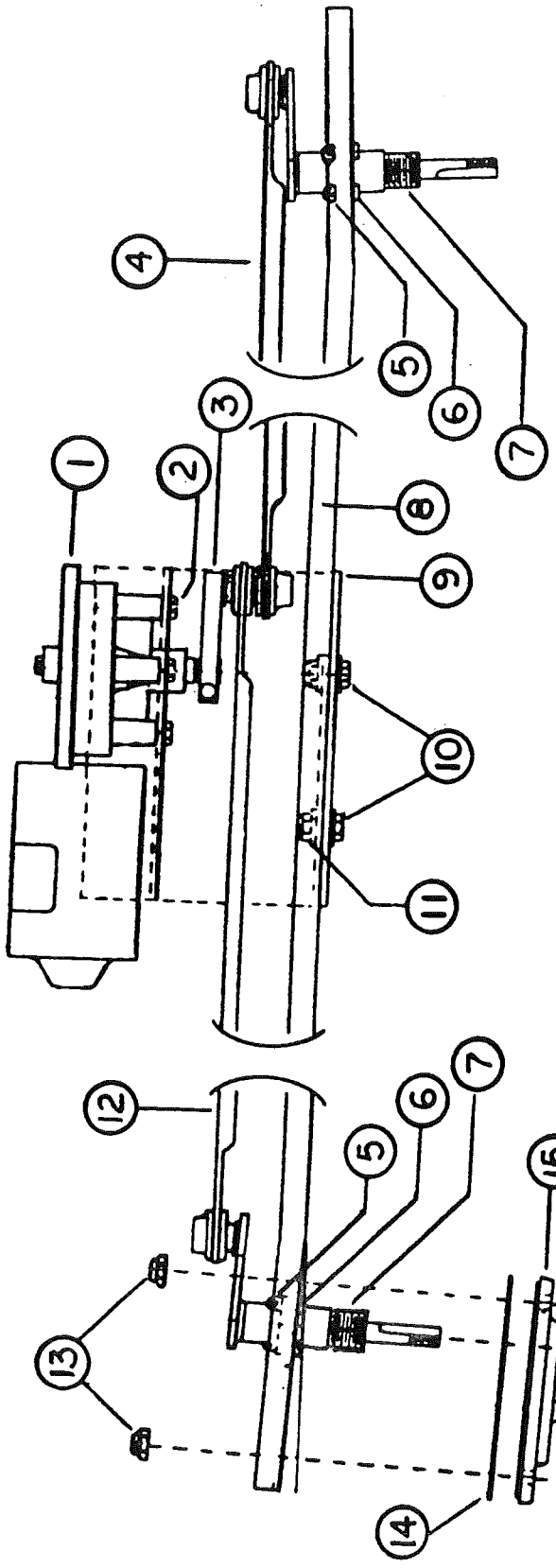
Note: It is recommended that disc brake pads be inspected for wear whenever tires are rotated.

TIRE ROTATIONS



NOTES

WINDSHIELD WIPER ASSEMBLY



1. Motor Assembly SWML
2. Screw, hex head, M6
3. Motor crank assembly
4. Conlink Assembly, R.S.
5. Nut, hex #10-32
6. Screw, Pan Head #10-32
7. Shaft Assembly Idler/HSG
8. Channel, mounting
9. Bracket, mounting
10. Bolt, hex head 5/16 - 24
11. Nut, lock 5/16 - 24
12. Conlink assembly, C.S.
13. Nut, lock 1/4 - 28
14. Gasket
15. Pivot mounting bkt.
16. Bolt, hex head 1/4 - 28
17. Acorn nut, black
18. Washer, gasket
19. Nut, hex 11/16 - 24
20. Weather seal
21. Knurled arm driver
22. Acorn nut, 3/8 - 24
*23. Arm assembly, panto MD
*24. Wiper blade

* Not shown

ELECTRIC STEP (KWIKEE STEP)

Manufacturer: Kwikee Products Company
Division of Ashton Corporation
P.O. Box 638
Drain, Oregon 97435
Phone: 503-836-2126

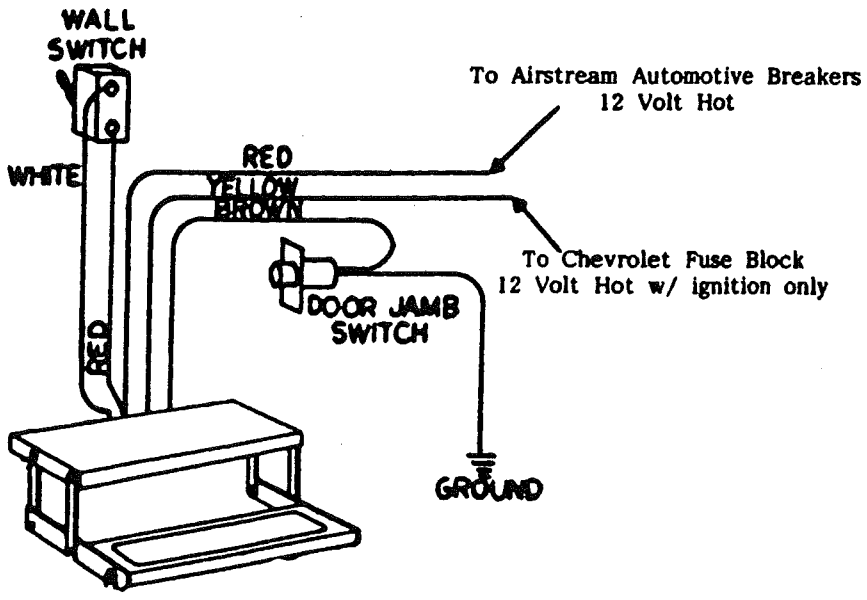
The step is easy and convenient to operate. Just inside the main door is a wall switch for the step. When traveling leave the switch in the "ON" position. The step will lower when the door is opened and retract when the door is closed.

When parked, open the door so the step is lowered. Then shut the switch off. The step will remain in the lowered position and the "step" light on the dash will be extinguished.

If you forget and leave the switch off as you leave - No Problem! When the ignition is "ON" the wall switch is by-passed and the step will retract when the door is closed.

WARNING: If the wall switch is turned off, and the step is in the retracted position when the ignition is turned off, the step will not lower when the door is opened. Keep your passengers informed.

ELECTRIC STEP



If the step does not work or operates erratically, such as extending part way and shutting off, the first item that should be checked is the vehicle battery. The voltage across the battery terminals should be at least 12.7 volts DC to insure a well charged battery. A battery that reads below 12.7 volts DC may drop as low as 8 volts DC when a load is drawn, such as the engaging of the step motor. The control unit will shut off if the loaded voltage falls below 9 volts DC. The control unit will remember which function it was performing. It will wait between two and five seconds (time depends upon temperature) and will try again to complete the original function. If the supply voltage is still below 9 volts, the control will go into another delay state. If the supply voltage remains above 9 volts DC, the original function will be completed. Should the supply voltage again fall below 9 volts the system will go into another delay state. It many take a couple of minutes to complete the original function. Low supply voltage may cause erratic operation of the step. Intermittent ground may also cause erratic operation of the step.

The step may also operate erratically if the step is being operated directly from a converter and the output from the converter is not adequate or properly filtered for clean DC voltage. The converter must be capable of producing a minimum of 30 amps for proper step operation.

If the control unit is hooked up electrically backwards, the step will not operate. If ground to the control unit is lost, either between the step control unit and the vehicle chassis (the 31" long 10 ga. green ground wire), or between the vehicle battery and ground (negative battery cable) the step will not function.

Make sure the battery terminals and all wire connections are clean and tight.

Be sure all wires are of proper gauges or heavier as specified in the wiring diagram.

No other devices (hearers, fans, burglar alarms, lights, etc.) can be incorporated in the same circuit as the control unit or step. This may cause the step or control unit to malfunction.

Check the step for physical damage. If the step has been struck by some kind of road hazard, the sep mechanism may be bent, causing the step to bind. Check the tread, sliding rails, and extending arms for physical damage. Also check the pivot points for rusting. (See the LUBRICATION AND MAINTENANCE SCHEDULE).

If the power switch is on and the step will not extend when the door is opened and/or retract when the door is closed, but there is a clicking noise coming from the control unit (the engaging and disengaging of the relays in the control unit) the first item that should be checked is the motor. See the MOTOR TEST PROCEDURE. The relays will engage and disengage (the clicking noise) when the door switch is cycled if the motor is malfunctioning.

Basic Summary of Operation

Power is normally supplied to the system through the kill switch by the white wire. The red wire supplies a "stand by" power source which by-passes the kill switch in the "OFF" position. When the ignition switch is turned on, 12 volt DC is supplied to the yellow wire. This engages a relay that passes the "stand by" power into the system and retracts the step automatically when the door is closed.

When the door is open the door jamb switch makes contact to the ground, which operates certain relays in the control unit. One of the relays is sent into a down-oriented position and the step extends. When the door is closed, the switch opens so the circuit to ground is interrupted. This puts a relay into an up-oriented position so the step retracts.

The control unit is essentially a current sensor as well as a switching device. When the motor assembly moves the step tread to its extended or retracted position, or stops moving because of an obstruction, such as a curb or the binding of a damaged or bent step frame, the motor draws a larger amount of current. The control unit"senses" the larger current draw and shuts off power to the motor.

General Service Notes

The following general service notes pertain to steps with the #8 control unit (blue or yellow plastic control unit box).

If the power wire to the step is disconnected from its source and reconnected, a spark is common. This is caused by the momentary charging of the control unit and does not necessarily indicate the system is staying on, causing a drain on the battery.

If battery drain is suspected, observe the understep light (if so equipped) while the step is extending. The power switch must be on for the understep light to operate. When the step locks into the down position, the understep light should become noticeably brighter. If it does not, the control may not be shutting off. Turn the power switch off and unplug the four way plug between the control unit and the vehicle to prevent overheating the motor.

To further determine that the control is not shutting off, strip a small section of insulation from one of the motor leads (orange wire or white wire with black tracer). Place a voltmeter between the stripped wire and the ground cable attached to the step frame, then reconnect the four way plug. Turn the power switch on. If any voltage is read, the control unit is not shutting off and may be defective. If this is the case, disconnect the four way plug to prevent the motor from overheating. If zero voltage is present, the control has shut off and is normal.

These general service notes and the following test procedures cover the most common problems associated with Kwikee electric steps. Due to the number of variable conditions available, you may experience symptoms other than those covered. Please feel free to contact the customer service department for further information or assistance.

TEST PROCEDURE - COACH WIRING

Read the General Service Notes before starting any test procedure.

1. Unplug the four way plug from the control unit and the 90° molded motor plug from the motor.. (See Figure 2)
2. Check the main power source by connecting a voltmeter between the Red 96' wire from the coach half of the four way plug and the ground cable attached to the step frame (See Figure 3). The reading should be about 12 volts DC. If the voltage is low there may be a loose or corroded connection, or low battery charge. If the voltage reading is zero, check the fuse/circuit breaker and all connections. Be sure there is a good ground connection from the step frame to the coach chassis. See Step #2 of the HOOKUP PROCEDURE. A good ground connection is a must. If the reading is approximately 12 volts DC proceed with the next test.

Figure 2

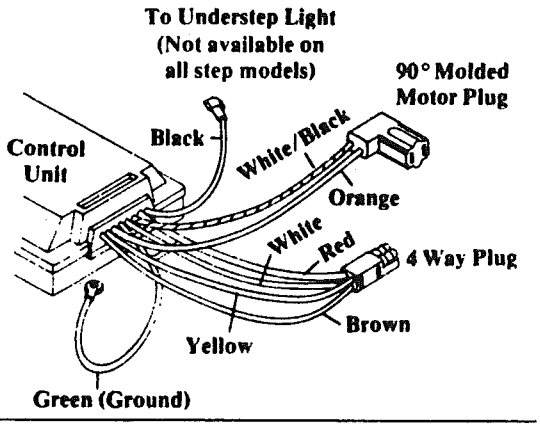
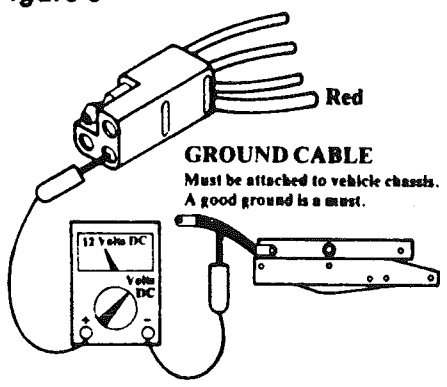


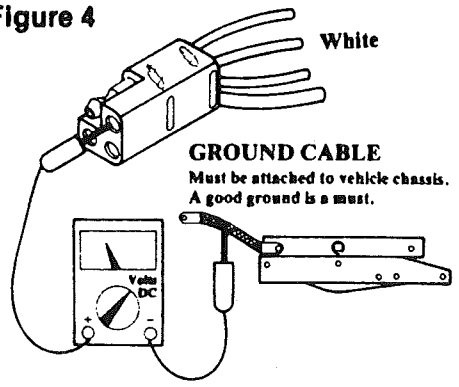
Figure 3



3. To check the power switch, connect the voltmeter between the WHITE wire from the four way coach plug and the ground cable. (See Figure 4). The reading should be about 12 volts DC with the power switch ON and zero when the switch is OFF. If the voltmeter reads zero with the power switch ON, connect the voltmeter between the terminal on the power switch with the wire leading to the power lead (red wire) and ground. (See Fig. 5). If the reading is still zero, check the wire going to the power lead. There may be a loose connection or cut wire. If the reading is about 12 volt DC turn ON the power switch and check the other power switch terminal in the same manner, by connecting the voltmeter between the terminal and ground. If the reading is zero, replace the power switch. (Note: If your step has the #1 electrical pack, the coach manufacturer supplied the power switch or it was purchased separately.) If the reading was about 12 volts DC, there may be a loose connection or cut wire between the power switch and the four way plug.

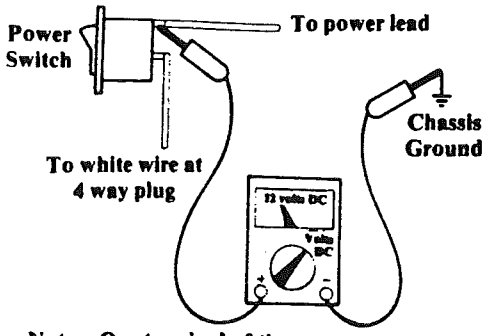
4. To check the door jamb switch, connect the voltmeter between the RED wire from the coach four way plug and the BROWN wire in the same plug (See Figure 6). The reading should be about 12 volts DC when the door is open and zero when the door is closed. If the reading is zero with the door open, check the ground connection from the door switch. This connection should be clean and tight. See Step #8 of the HOOKUP PROCEDURE. An improper ground can cause intermittent or erratic operation of the step. If the step will not retract after being extended or extends with the door closed, the BROWN wire attached to the door switch may be touching a grounded surface inside the wall behind the door jamb, or the door switch terminals may be touching each other. If the step extends and retracts by itself while traveling, check the conditions previously described. Also make sure the door switch plunger is depressed at least two thirds of its travel when the door is closed. If the switch is not depressed at least two thirds of its travel, the switch may make intermittent contact as the coach's frame shifts slightly while traveling along the roadway. If all the previous conditions check okay, the door switch may be faulty.

Figure 4



Voltmeter should read 12 volts DC with the power switch on and zero volts DC with the power switch off

Figure 5



Note—One terminal of the power switch should always be "hot". The other terminal should be hot when the switch is on.

5. To check the ignition safety system connect the voltmeter between the YELLOW wire from the coach four way plug and the ground cable. (See Figure 7). The reading should be about 12 volts DC when the ignition is turned on and zero when the ignition is off. If the reading is zero when the ignition is on, check the connection of the YELLOW wire at the coach fuse panel. If connected at a fuse, check for a blown fuse. If the reading was about 12 volts DC when the ignition was off, the YELLOW wire is connected to a constant live source. If the YELLOW wire is connected to a constant live source, the step will always work with the door movement, even if the power switch and ignition are off.

6. When checking the motor be sure your hands are clear of the step mechanism. Also be sure the motor has a good ground connection to the step frame and the step frame is grounded to the coach chassis. To retract the step connect a 10 gauge minimum jumper

wire for the RED wire of the four way coach plug to the motor terminal closest to the top of the step. (See Figure 8). **Note:** The RED wire must have power. See Step #2 of COACH WIRING TEST PROCEDURE. To extend th step, jump the RED wire from the coach four way plug to the motor terminal closest to the ground. (See Fig. 8). **Note:** Motor function will be reversed on steps equipped with the yellow plastic control unit box.

CAUTION: ***Do not leave the jumper wire connected to the motor terminal for more time than it takes to extend or retract the step or damage to the motor may result.***

If the motor fails to move, the motor may be defective. If the step has been struck by some kind of road hazard, the step mechanism may be bent and causing the step to bind. The control unit would then shut off power to the step as described in the BASIC SUMMARY OF OPERATION. Check for physical damage to the tread, sliding rails, extending arms, etc. Also check all pivot pints for rusting. (See LUBRICATION AND MAINTENANCE SCHEDULE).

Figure 6

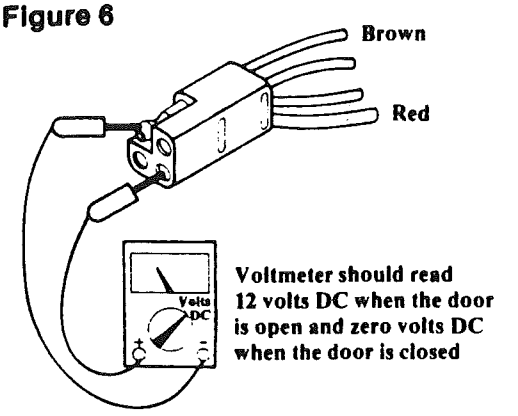
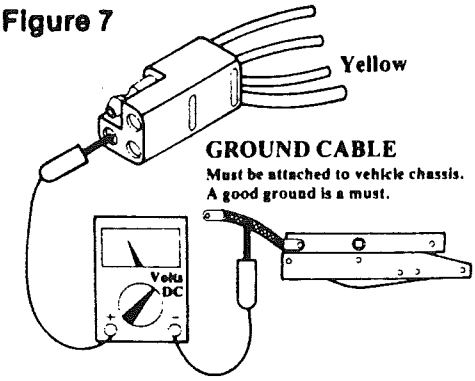
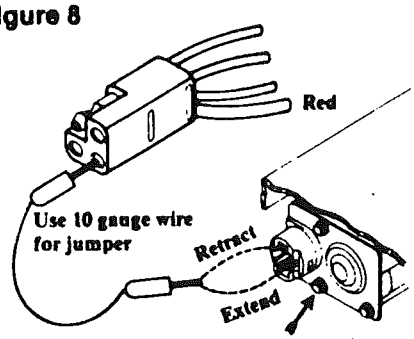


Figure 7



If the step doesn't move when power is applied to the motor terminals, but a dim spark is noticeable, there may be damage to the windings inside the motor, requiring replacement of the motor. A dim spark may also indicate a poor ground connection. A very bright spark usually indicates a shorted or burned out motor requiring replacement.

Figure 8



Further inspection of the motor should be done by removing one of the 1/4" bolts in the end of the motor near the plug. Remove the bolt shown in Fig. 8 with the arrow pointing to it If the shaft of the bolt has a burned, tar like substance on it, the motor windings have overheated. The motor should be replaced, even if it still works. However, a clean bolt does not necessarily mean internal damage is not present.

If the motor is defective refer to the instructions for removing the motor assembly from the step frame and disassembly of the motor assembly to remove the motor.

TEST PROCEDURE - CONTROL UNIT TEST

7. The motor must be operational to test the control unit using this procedure. See MOTOR TEST PROCEDURE.

   a. Ground the negative (-) post of a well charged 12 volt DC battery to the ground cable attached to the step frame. **Note:** A well charged battery will read at least 12.7 volts DC when a voltmeter is connected between the battery posts. See GENERAL SERVICE NOTES.

   b. The 90° molded motor plug must be connected.

   c. The four way plug between the control unit and the coach should be disconnected. Install pigtail (four way plug - part #9336 - same plug as supplied with the step for connection to the coach) into the control unit half of the four way plug.

   d. Touch the RED and WHITE wires of the pigtail to the positive (+) post of the battery. At the same time, touching the BROWN wire to the ground cable will cause the step to extend. **CAUTION:** ***Keep hands clear of the step mechanism.***

   e. When the BROWN wire is removed from the ground cable the step should retract.

   f. Extend the step again by applying power to the RED and WHITE wires and grounding the BROWN wire to the ground cable. Remove the RED and WHITE wires from the battery before removing the BROWN wire from ground. This will cause the step to remain extended.

   g. To test the ignition safety system circuit, apply power to the RED and YELLOW wires at the same time and the step should retract.

   h. To test the "last out feature" remove the YELLOW wire from the battery without removing the RED wire. Ground the BROWN wire to the ground cable and the step should extend. If the RED wire is removed from the battery before grounding the BROWN wire, Step #7f and #7g must be repeated before testing the last out feature. This test will only work if performed immediately after the ignition safety system test.

   i. If the control unit tests okay, then recheck all wire and ground connections. If the source of the trouble cannot be found, feel free to contact the customer service department for further information or assistance.

   j. If the above tests do not check out, the control unit may be defective and should be returned to the factory for evaluation.

Note: All blue and yellow plastic boxed control units have the circuitry to perform all the above functions. Your particular connection to the coach may or may not use all these features, but all the above tests should be completed to fully test the control unit.

In most cases the control unit does not fail and problems can be traced to vehicle wiring or voltage problems.

LUBRICATION AND MAINTENANCE SCHEDULE

Clean all mud, salt and road grime from step before lubricating. Lubricate all moving parts (bearings, pivot points, slides, clevis pin, and drive linkage ball) every 30 days with a good quality moisture and heat resistant penetrating grease. Kwik-Lube Spray Grease is especially formulated to lubricate Kwikee electric steps and is recommended for lubricating all moving parts. Refer to figures below for lubrication locations:

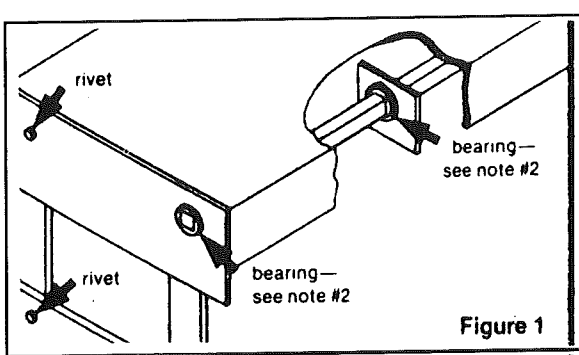


Figure 1

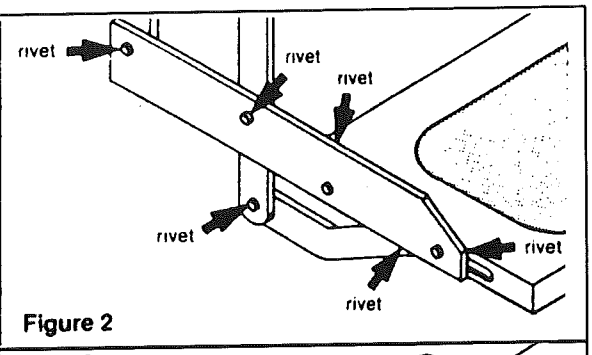


Figure 2

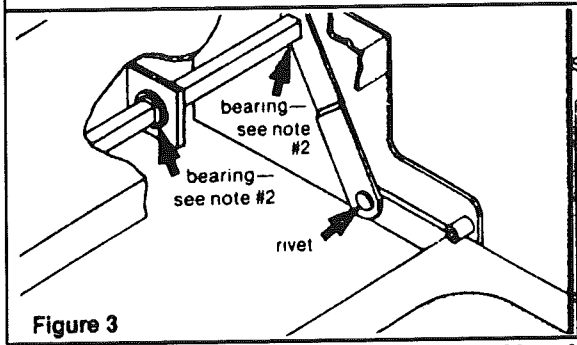


Figure 3

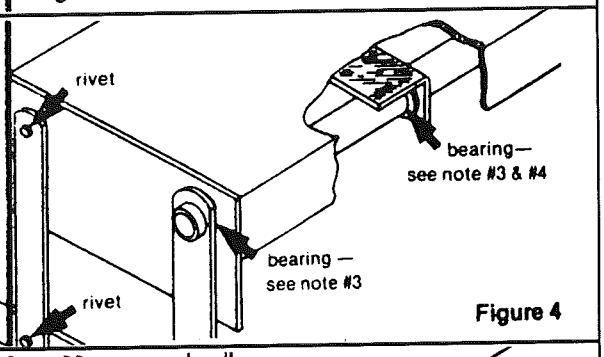


Figure 4

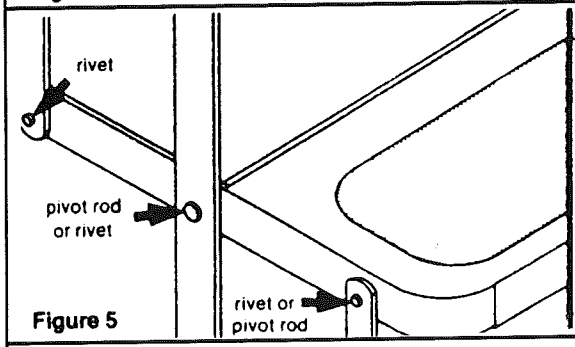


Figure 5

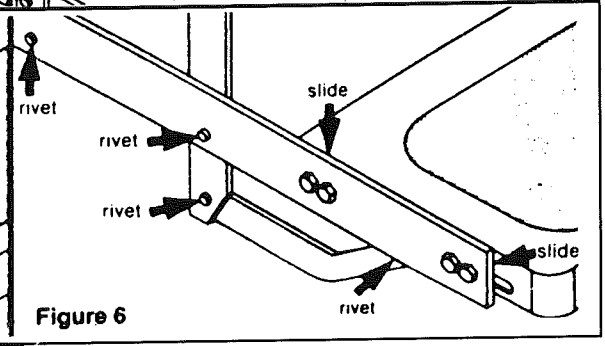


Figure 6

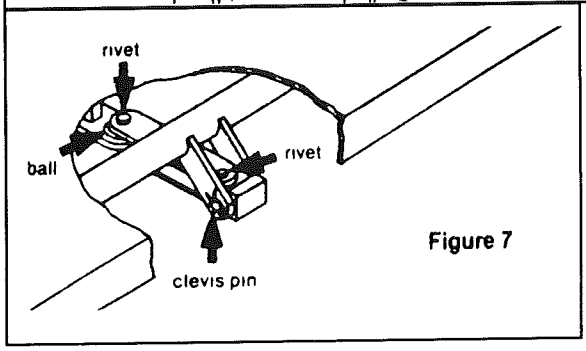


Figure 7

Note —

1. Figures are to be used as a general reference only. Some may not pertain to your particular step model. Views are typical to both ends of step.
2. Figures 1 & 3 - Square shaft bearing - lubricate around outside and under head of bearing.
3. Figure 4 - 1" O.D. tube bearing - lubricate around drive tube and between head of bearing and drive leg.
4. Figure 4 - on step models equipped with plastic cover, this cover will have to be removed to lubricate center bearings. Lubricate bearings under cover every 90 days.

INSTRUCTIONS FOR REMOVING THE SINGLE REDUCTION MOTOR ASSEMBLY FROM THE STEP FRAME AND DISASSEMBLY:

Read all instructions before starting any procedure.

Refer to the single reduction motor assembly exploded view drawing for the item numbers referred to in these instructions.

1. Unplug the control unit from the vehicle (four way plug). Do not cut any wiring.
2. Unplug the 90° molded motor plug from the motor assembly.
3. It is easiest to remove the motor assembly from the step frame if the step tread(s) are in a partially extended position. Try to extend the step (or retract the step if it is locked in the extended position) by connecting a 10 gauge minimum jumper wire between the RED wire from the coach half of the four way plug to the motor terminal closest to the ground. (See Fig. #8 in the TEST PROCEDURE - MOTOR TEST. **Note:** Motor function will be reversed on steps equipped with the yellow control unit box. Disconnect the jumper wire from the motor terminal after the step unlocks but before the step fully extends. If the step does not extend, go to Step #4.

   WARNING: Do not step on a partially extended step or damage to the step frame and/or motor assembly may result.

   Connect the 10 gauge minimum jumper wire to the motor terminal closest to the step frame to try to retract the step (See Fig. #8 in the TEST PROCEDURES - MOTOR TEST).

   Note: Motor function will be reversed on steps equipped with the yellow control unit box.
4. Remove the hair pin (Item #6) from the clevis pin (Item #7).
5. Remove the clevis pin (Item #7) from the cast block in the end of the linkage assembly (Item #8, #9, or #10). Note which direction the clevis pin goes into the cast block. If the step is in its locked position, the clevis pin may have to be pried or driven out of the block. If the step is in the locked position, loosening the motor assembly mounting bolts may allow the clevis pin to be removed easier. The step tread(s) should swing freely when the clevis pin is removed. If the tread does not move freely, check for a bent step frame and for rusting at the pivot points.
6. If the step tread was removed on 30 and 33 series steps to remove the plastic splash cover, reinstall the tread and tighten the 1/4-20 x 1" long hex bolts. Be sure to reassemble the tread and sliding blocks the same way they were removed. Be sure the step moves freely.
7. Remove the motor assembly from the step frame.
8. Set the motor assembly on its flat mounting plate and remove the 3/8-16 socket head screw (Item #1) from the bearing bracket (Item #2) and lift off the bearing bracket.
9. Remove the bearing (Item #3) and the linkage assembly (Item #8, #9 or #10) from the gear case (Item #11). If the linkage assembly is jammed against the side of the gear case it may have to be pried out.
10. Turn the motor assembly over and remove the four (4) 1 1/4" long #10 self tapping screws (Item #13) from the gear case. Lift off the mounting plate (Item #16)
11. Remove the bearing (Item #3). Lift off the gear case cover (Item #15) and lift out the gear (Item #14). Note which side of the gear goes up.

12. Remove the 1 1/4" long #10 self tapping screw (Item #13) and the 1/4-20 self tapping screw (Item #12) inside the gear case.

13. Turn the motor and gear case over and remove the 3/4" long #10 self tapping screw (Item #4) and remove the gear case from motor.

REASSEMBLY AND INSTALLATION OF THE SINGLE REDUCTION MOTOR ASSEMBLY ON THE STEP FRAME

Read all instructions before starting any procedure.

Refer to the motor assembly exploded view drawing for the item numbers referred to in these instructions.

1. Place the motor with the gear head up. Remove the 1/4-20 self tapping screw (Item #12) and the 1 1/4" long #10 self tapping screw (Item #13) from the new motor (if present).

2. Set the gear case (Item #11) on the motor and start the 1/4-20 self tapping screw (Item #12). Do not tighten this screw.

3. Turn the motor and gear case over and install and tighten the 3/4" long #10 self-taping screw (Item #4)

4. Turn the motor and gear case back over and tighten the 1/4-20 self tapping screw (Item #12) in the gear case. Install and tighten the 1 1/4" long #10 self tapping screw (Item #13).

   WARNING: Failure to follow the above sequence could result in the gear case not being positioned properly on the motor.

5. Install the gear (Item #14) in the gear case (Item #11). Be sure the gear is reinstalled the same way it was removed (with the penny sized depressions down).

6. Place the gear case cover (Item #15) on the gear case. Set the bearing (Item #3) in the center hole of the gear case cover (the flange of the bearing should be up) and align the square hole in the bearing with the square hole of the gear.

7. Place the mounting plate (Item #16) on the gear case cover (the square holes in the mounting plate should be away from the motor) and install and tighten the four (4) 1 1/4" long #10 self tapping screws (Item #13)

8. Turn the motor assembly over and set it on the flat mounting plate. Install the linkage assembly (Item #8, #9, or #10) into the gear case. Be sure the linkage assembly seats all the way into the gear and bearing or the bearing bracket (Item #2) will not set properly. The swivel ball and cast block should face the front of the motor assembly.

9. Place the bearing (Item #3) on the linkage assembly shaft. Place the flange of the bearing down.

10. Place the bearing bracket (Item #2) on the motor assembly and install and tighten the 3/8-16 socket head screw (Item #1).

11. Reinstall the motor assembly on the step frame and tighten all mounting bolts.
    NOTE: Be sure the motor assembly is positioned the same way the old one was prior to removal.

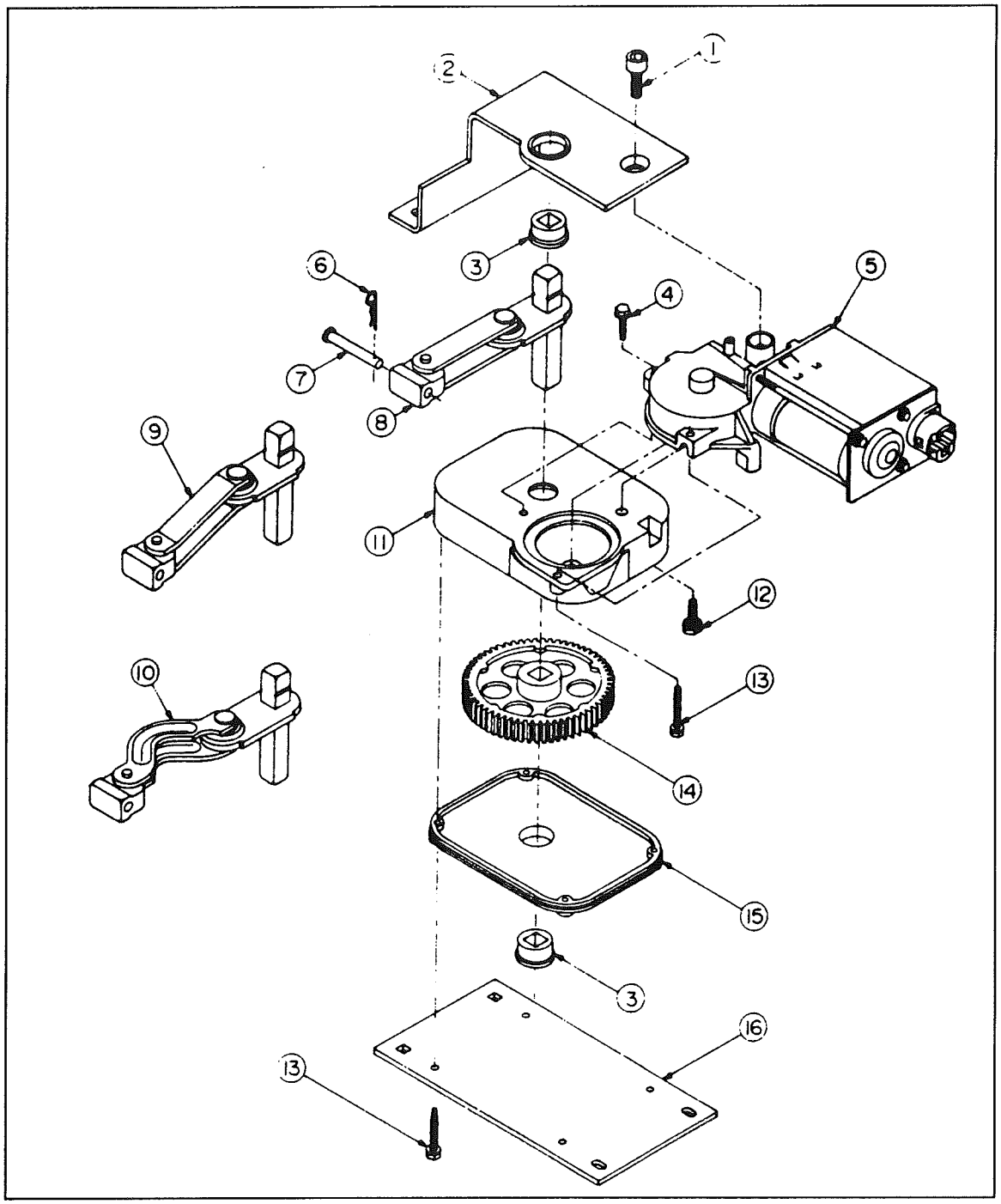
12. Install the clevis pin (Item #7) through the drive arms attached to the step frame and the cast block in the linkage assembly (Item #8, #9, or #10). Be sure to reinstall the clevis pin in the same direction it was removed. Install the hair pin (Item #6) in the clevis pin.

13. Plug the 90° molded motor plug into the motor assembly and connect the control unit to the coach (four way square plug).

14. Test step functions.

15. On 30 and 33 series steps, extend the step and reinstall the plastic splash cover. Be sure the four way square plug is fed out the notch in the rear of the plastic cover. Tighten all mounting nuts.

SINGLE REDUCTION MOTOR ASSEMBLY



1. 3/8-16 Socket head cap screw
2. Motor Bearing Bracket
3. Bearing
4. #10 Self Tapping Hex Washer Head Screw 3/4"
5. Motor
6. Hair Pin
7. Clevis Pin
8. Linkage for Motor Assy. #8002
9. Linkage for Motor Assy. #8278
10. Linkage for Motor Assy. #8279
11. Gear Case
12. 1/4-20 Self Tapping Hex Washer Head Screw 5/8"
13. #10 Self Tapping Hex Washer Head Screw 1 1/4"
14. Gear
15. Gear Case Cover
16. Motor Mounting Plate

NOTES

NOTES

NOTES

CAMPING

SAFETY

As always, safety should be one of your top priorities. Make sure you, and everyone traveling with you, can operate the main door and exit window rapidly without light.

WARNING: ***The escape window (which is the rear, roadside windows) is opened by pulling the red latch handle inward then sliding the glass and screen forward. The pleated shade is opened by sliding it straight up. The window operation should be checked each trip.***

WARNING: ***At each campsite make sure you have not parked in such a manner as to block the operation of the escape window by being too close to trees, fences or other impediments. Scenic views are one reason for traveling, but don't park so the beautiful lake or steep cliff is just outside your escape window.***

WARNING: ***Read the directions carefully on the fire extinguisher. If there is any doubt on the operation, you and your family should practice, then replace or recharge the extinguisher. You will find your local fire department will be happy to assist you and answer any questions.***

WARNING: ***DON'T SMOKE IN BED!***
KEEP MATCHES OUT OF REACH OF SMALL CHILDREN!
DON'T CLEAN WITH FLAMMABLE MATERIAL!
KEEP FLAMMABLE MATERIAL AWAY FROM OPEN FLAME!

We have all heard these warnings many times, but they are still among the leading causes of fires.

Other safety information on the LPG system of your motorhome is located in the Plumbing Section of this manual.

SMOKE DETECTOR

OPERATION AND MAINTENANCE

The PROBE Battery Powered Smoke Alarm operates on the ionization principle of fire detection. That is, the ionization chamber inside the unit monitors the air to detect particles of combustion present as a result of smoke.

When the small current inside the ionization chamber is decreased, indicating the presence of smoke, the alarm sounds.

Probe Smoke Alarms only **warn** of a situation which may be potentially hazardous. No smoke alarm can eliminate the hazard.

Your PROBE Smoke Alarm requires very little maintenance.

The unit should be vacuumed occasionally to remove dust. Simply hold the nozzle of the vacuum near the alarm cover and the suction will remove any dust particles. (DO NOT TRY TO OPEN THE ALARM OR PLACE THE VACUUM NOZZLE INSIDE THE ALARM COVER.)

Battery Replacement

When the battery begins to weaken, a warning "chirp" will sound at least twice per minute for about a month. To replace the battery simply remove the alarm from the mounting bracket (turn counter-clockwise), remove the old battery and replace it.

*Model #105 with silencer provides a 15 minute pause button to quiet nuisance alarms. Perfect for confined areas (cooking areas, furnace rooms, etc.)

LP Leak Test

In the refrigerator inspection compartment, a LP gauge has been plumbed in the gas line. To check for leaks, open the LP tank valve, then turn appliances off. The gas pressure should not drop any more than 2 inches of water column pressure in a 30 minute time span. Further information is located in the plumbing section of this manual.

OVERNIGHT STOP

In time you will develop a knack for spotting wonderful little roadside locations by turning off the main highway and exploring. There are many modem recreational vehicle parks, including State, County and Federal parks with good facilities, where you may obtain hookups of electrical, water and sewer connections. Directories are published which describe in detail these parks and tell what is available in the way of services and hookups.

Overnight or Weekend Trips

On overnight or weekend trips, chances are you will not use up the capacity of the sewage holding tank, deplete the water supply, or run down the batteries which supply the living area 12 volt current.

Longer Trip

On a longer trip, when you have stayed where sewer connections and utility hookups were not available, it will be necessary for you to stop from time to time to dispose of the waste in the holding tank and replenish the water supply. Many gas stations (chain and individually owned) have installed sanitary dumping stations for just this purpose. Booklets are available which list these dumping stations.

When you stop for the night, your Airstream motorhome is built to be safely parked in any spot that is relatively level and where the ground is firm. Your facilities are with you. You are self-contained. Try to pick as level a parking spot as possible.

Hydraulic Leveling Jacks

Some models are equipped with hydraulic leveling jacks that can be deployed. Complete instructions are included with the Owners Packet. Be sure to read the directions completely prior to operating the jacks. The jacks will be able to level your unit in most modern campgrounds. However, their capabilities are limited, and in some situations you will have to use planks to level the coach.

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

1. Turn on LP gas supply and light appliance pilots if required.
2. Turn on water pump and open faucets until air is expelled from the system.

Before moving on, turn off the LP gas and water pump, check your campsite, both for cleanliness and also to be sure you haven't left anything behind. Make sure everything is properly stowed.

WINTER TRAVELING

Traveling in your motorhome during the cold winter months can be a most exhilarating experience.

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

WARNING: Always shut off the LP gas when gasoline is added to the fuel tank.

Some states do not allow LPG to be turned on while moving. While traveling in these states you must use your common sense. How cold is it? How long will it be before you can turn the heat back on? Is the temperature dropping or rising? Remember, the wind chill factor when driving 50 MPH will cause the interior of the motorhome to cool much faster than when it is parked.

1. You must have a plentiful supply of propane gas.
2. If your stay is longer than overnight, you should endeavor to have 120-volt electricity available. The batteries, fully charged, will not last more than about 15 hours in freezing weather. Of course, you can run your generator to recharge the batteries, or even use the generator continually.
3. Minimize use of electricity if 120 volt power source is not available.
4. Leave cabinet doors, bed doors and wardrobe doors slightly open at night to allow circulation of air in and around all furniture components.
5. Use propylene glycol type antifreeze in waste and drain water tanks to prevent freezing. Quantity of antifreeze needed will vary with ambient temperature and the amount of liquids in tank.
6. For extended stays in cold weather, insulate the water line outside the motorhome. You should remember that low temperatures in combination with high winds cause an equivalent chill temperature much below what your thermometer is reading. For instance, with an outside temperature of zero degrees, and the wind velocity of 10 miles per hour, the equivalent chill temperature is minus 20° F.

Condensation

It is also important to guard against excessive humidity inside your motorhome during winter campouts. When windows and window frames fog up or "sweat," it means that there is too much moisture in the air. Moisture comes from water vapor and water vapor is the direct result of water evaporating.

Many things such as baths and showers, boiling foods, washing dishes, washing clothes, even breathing, contribute to evaporation. The inside air can only absorb so much of this moisture before it becomes saturated. At this point it can hold no more, and any additional water vapor condenses back to liquid water in the form of droplets on any available cool, solid surface. Temperature has a direct effect on the airs saturation point. Cold air holds less moisture than warm air. For this reason, the air immediately adjacent to cold outside walls and windows cools down and causes water vapor to condense and form moisture droplets, even though warmer inside surfaces are still dry.

The best way to keep condensation under control is to reduce moisture producing activities. It is important to provide adequate ventilation and keep the air circulating as much as possible.

Use your exhaust fans to remove moisture before water vapor mixes with the air. Open windows slightly once in a while, while operating fans, to bring in drier outside air and aid in overall air circulation. In extremely cold weather, when outside ventilation is not practical, it may be necessary to use a small dehumidifier to aid in reducing condensation.

There is no substitute for common sense in cold weather.

Note: The Airstream motorhome is built as a recreational vehicle and is not intended as a permanent dwelling or for more than temporary use in sub-freezing temperatures.

EXTENDED STAY

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

Some models are equipped with Hydraulic Leveling Jacks that can be deployed. Complete instructions are included with the Owners Packet. Be sure to read the directions completely prior to operating the jacks.

When you plan to stay in the same place for several days, weeks or months, you will want your motorhome to be as level as possible. Check the attitude with a small spirit level set on the inside work counter. If a correction is necessary, then you must first level from side to side. This can be done most easily by driving up a small ramp consisting of 2" x 6" boards tapered at both ends. WE DO NOT RECOMMEND PLACING TIRES IN A HOLE FOR LEVELING.

Hook Up to Water by attaching a 1/2" minimum high pressure water hose to the city water service, or the hose from the water reel if so equipped.

Plug the Electrical Cable into the City Power Service. Be sure you have the wire grounded and have the proper polarity. See Electrical Section for technical details.

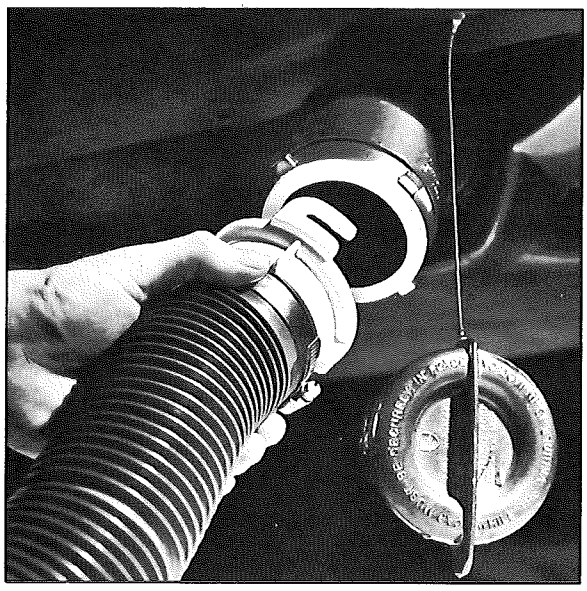
A Cable TV Hookup is located on the roadside rear corner of the motorhome. It is already wired into the existing system, so the exterior connection is all that is required.

To operate the Generator simply start the generator at the control panel. After the generator has run a couple of minutes, an automatic relay will close and current from the generator will be supplied to the 120-volt circuit breakers. This is indicated by the AC power light on the control panel starting to glow. Operating the generator for about one hour each day will normally keep the battery charged.

Hook your Waste Drain Hose into the Sewer Disposal Facility and attach to the drain outlet in your motorhome. For details on this procedure see Drain and Waste System Section.

Turn on the gas supply and light the oven pilot. Lighting a top range burner to bleed any air from the system will make it easier to start other appliances.

When you stay for extended periods where electric or water hookups are not available, you must make regular checks on the condition of your 12 volt battery and the contents of your water tank. Carry drinking water in a clean bucket to refill your tank. When your waste tank nears capacity, move your motorhome to a dumping location.



Sewage Outlet

NOTES

NOTES

EXTERIOR

The side walls and roof of your Airstream Legacy motorhome are laminated fiberglass. There is no magic to caring for your motorhome. As a general rule of thumb, we recommend the motorhome be washed about every four weeks and waxed in the spring and fall. To make sure your new unit is always protected, you should wax it immediately or have your dealer wax it just prior to delivery. In industrial areas cleaning and waxing should be done on a more frequent schedule.

ALWAYS CLEAN YOUR MOTORHOME IN THE SHADE OR ON A CLOUDY DAY WHEN THE SKIN IS COOL. Oil, grease, dust and dirt may be removed by washing with any mild non-abrasive soap or detergent. Cleaning should be followed by a thorough clean water rinse. Spots and streaks may be prevented by drying the unit with a chamois or a soft cloth.

After cleaning and drying, a good grade of non-abrasive automotive paste or liquid wax will increase the life of the finish, especially in coastal areas where the finish is exposed to salt air, or in polluted industrial areas. It will also protect the shell from minor scratches and make subsequent cleaning easier.

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

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

Main Door Lock

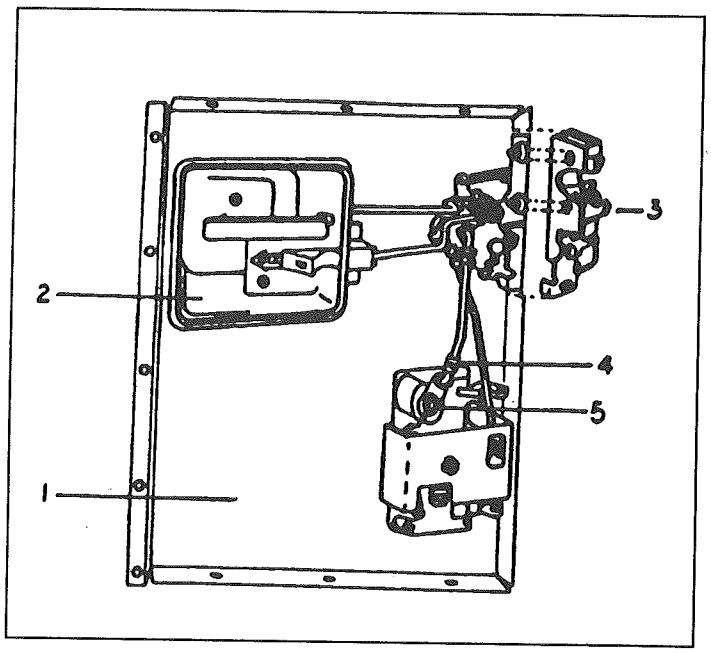
The door lock on your motorhome operates in the same manner as the locks used on most automobiles. Locking the latch actually disengages the linkage between the handles and the latch. This prevents forced entry by using large pliers on the lock handle.

We urge you to keep an extra set of keys for both the door lock and the ignition hidden somewhere on the exterior of the coach. We probably receive a dozen calls a year from people who have lost keys or locked them in the coach.

Occasionally you might find the latch catch, shown in the open position below, out of time. This simply means it has been bumped and has flipped to the closed position when the door is still open. To re-time, hold the door handle in the open position, then pull out and down on the latch catch. It should flip to the open position as shown in the illustration.

1. Mounting plate, Door Lock
2. Lock Handle, Inside
3. Latch Catch
4. Keeper, Rod Linkage
5. "E" ring, Tumbler Installation

(Lock assembly as viewed from inside of door with cover plate removed.)



Access to the linkage mechanism of the lock is gained by removing the two screws holding the lock handle and the center panel of the inside door skin. This will expose the door lock assembly, as shown in the illustration.

The tumbler is replaced by removing the inside lock handle and the center panel of the inside door skin so the lock assembly is exposed. Insert key into tumbler then remove the "E" ring (item #5 on Illus), being careful it is not lost.

EXTERIOR COMPONENTS

On the curbside of the motorhome, forward of the main door, is a large compartment door enclosing the LP tank.

The storage compartment behind the main door contains the hydraulic jack, lug wrench warning triangles, air hose with chuck, and air gauge.

In the rear trunk you will find a crank-type wrench and the reel to crank the spare tire up and down. You should operate the reel at least a couple of times a year to keep it turning free and to check your spare tire. You know what will happen if you don't!

The roadside of the motorhome has the big compartment up towards the front and the generator compartment behind that. Towards the rear is another smaller storage compartment.

The hood release latch is located by the driver's left knee. Under the front hood is the engine oil dip stick and oil fill. Also, the radiator over flow bottle, windshield washer fluid and batteries are located in this area.

The ATC fuse below the oil fill is for the automotive air conditioner. It's for the high speed mode of the air conditioner circulating fan.

Next to the lower right side of the radiator are the serial numbers. The larger of the numbers is Airstream's serial number. The smaller number next to the bar code is the Chevrolet serial number.

NOTES

NOTES

INTERIOR

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

Lounges

To convert the Deluxe Sofa into a bed, it is only necessary to grasp the front edge of the seat, raise and pull it toward the aisle of the motorhome.

Dinette

The dinette is hinged to the wall and is supported by one folding table leg. To make into a bed, the front of the table is lifted slightly, the release latch is depressed on the leg bracket, and the leg is then folded up against the bottom of the table leaf. Velcro will hold it up in position. Raising the front of the table leaf further allows it to be in position. Raising the front of the table leaf further allows it to be unhooked from the wall. The leaf will then swing out and down onto the support ledges on the front of the dinette seat. The back rests are then laid on the table leaf to complete the bed.

Cocktail Chairs

The cocktail chairs have two adjustments. As you sit in the chair, one lever will protrude on the left side. Releasing this lever allows the chair to rotate.

On the right side is another lever. Releasing this lever will allow the chair to slide forward and backward.

CAUTION: Rotating the chair when it's slid back against the wall can damage the upholstery. Position the chair so it isn't chafing when in transit.

Fabric Cleaning

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

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

Cleanability Codes

CODE W-S

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

CODE S

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

CODE W

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

CAUTION:

Never remove cushion cover for separate cleaning or washing. Any tumble cleaning method can destroy the backing, shrink or otherwise damage upholstery.

SMOKING WARNING

Keep your furniture and family safe from fires caused by careless smoking. Do not smoke when drowsy. Remove immediately any flowing ash or a lighted cigarette which falls on furniture. Smoldering smoking material can cause upholstered furniture fires.

Drapes

Use the following procedures to remove drapery panels for cleaning:

Front Wrap Around Drapes

1. Remove screws securing rear end of drapery track bracket to wall, both roadside and curbside.

2. Slide draperies to the rear until they are clear of track.

3. After reinstalling drapes, replace screws in bracket.

CAUTION: All drapery materials and mattress covers must be professionally dry cleaned.

To prevent excessive wear to drapery linings, blinds must be secured at the bottom and slats turned vertically when driving long distances.

Shades

The shades are operated in the same manner as most venetian blinds. Pulling down on the rope raises the shade. Swinging the rope to one side prior to releasing it will secure the shade in position.

A feather duster, or the soft-bristled brush often found as part of vacuum cleaner attachments, are recommended for cleaning the blinds and pleated shades.

The mini blinds can be spot cleaned with soapy detergent. However, you must be very careful or you may find yourself washing each individual slat so they'll match.

The longevity of the pleated shades in the rear will be increased if the shades are in the up position when your vehicle is stored.

Carpet

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

Counter areas

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

Walls/cabinets

The vinyl walls of the motorhome can be wiped with any mild household cleaner. The wood grain panel also has a vinyl covering for easy care. The cabinet doors and framework are hardwood, so any good furniture polish can be used.

Drawers

Drawer removal - pull drawer out to stop then depress white nylon tab(s) in center of drawer stops.

Drawers with metal runners on each side are removed by extending completely then lifting up on the front of the drawer and pulling it out of the track.

NOTE: The drawers under the rear double beds will contact the wall before coming free from the metal runners - hold drawer out against the wall and slide the metal runners under the bed until the drawer is free.

CAUTION: Do not use any abrasive material on the vinyl covered walls.

Bathroom

CAUTION: The lavatory bowl and countertop in your bathroom are made of a special ABS long-wearing, light-weight, high-strength plastic material or cultured marble. When cleaning, use soap or detergent only. NEVER USE SCOURING POWDER.

Always rewax the ABS plastic surfaces after each heavy cleaning with a good grade paste wax (without solvents or cleaners). The wax will protect the surfaces from discoloration and stains. When you first purchase your motorhome, Airstream recommends that you give all ABS plastic surfaces a heavy coating of paste wax. This will assure easier cleaning and lasting beauty.

Stainless Steel Sink

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

Shower Stall

To clean your ULTRA/GLAS shower stall unit, use warm water and one of the stronger liquid detergents. Do not use abrasive cleaners; they may scratch and dull the surface of your ULTRA/GLAS unit. Stubborn stains can be removed with solvents such as turpentine, paint thinner or acetone. Restore dulled areas by rubbing with an automotive-type liquid cleaner, then put the soft glow back into your ULTRA/GLAS unit with a light application of liquid wax.

WARNING: Do not wax the floor of the stall without using a bath mat afterward to prevent a dangerous slippery floor condition.

NOTES

NOTES

PLUMBING

LPG SYSTEM

Your motorhome is equipped with a permanently mounted tank for LPG (Liquid Petroleum Gas). LPG burns with a clean blue flame. There are two basic types of LPG in common usage: Butane and Propane. Butane is widely used where temperatures are normally above freezing the year round, and Propane is used where subfreezing temperatures are common, since Butane freezes at 32°F as compared to -40°F for Propane. ALL OF THE ORIFICES IN THE LPG APPLIANCES ARE OF THE UNIVERSAL TYPE WHICH WILL BURN EITHER FUEL. How long a full tank of gas will last is dependent on usage. In cold weather, when you are using the furnace, large amounts of hot water, and cooking extensively, you will naturally use more than you will in warm weather, when you may do limited cooking. On the average, with normal cooking and other appliance use, you can probably count on one month of usage from the tank.

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

WARNING:

All pilot lights and appliances must be turned off during refueling of motorhome fuel tank and permanently mounted LPG tank. Gas lines should be checked periodically for leaks with ammonia free soapy water. Do not use open flame.

CAUTION:

Moisture in the LPG tank will cause a malfunction of the regulator in controlling proper pressure. This may result in the flame lifting off the burner, or the flame may go out frequently. Many refueling stations will add approximately 1/4 to 1/2 gallon of alcohol to lower the moisture temperature. Moisture will then pass through the regulator without the formation of ice crystals.

WARNING:

If gas can be smelled, appliance pilots fail to stay on, or any other abnormal situation occurs, shut off tank valve immediately and call on a qualified LPG service center or Airstream Service Center.

LPG Regulator

The LPG regulators used on Airstream motorhomes are designed for low pressure service, with a normal outlet pressure setting of 11.5 water column. Only personnel trained in the proper procedures, codes, standards, etc., should service regulators.

Have the regulator inspected each time the tank is refilled. Make sure the regulator vent opening on both first and second stage regulators does not become plugged by mud, insects, snow, ice, paint, etc. Vents must remain open.

Replace any regulator that has had water in the spring case, or shows evidence of external corrosion, or corrosion inside the spring case. Closely examine regulators directly connected to the container valve by means of a solid POL adapter (horizontal mounting) for signs of corrosion. (An Airstream Service Center is recommended for this service.)

BASIC RULES FOR SAFETY

WARNING: DO NOT store LP containers within vehicle. LP containers are equipped with safety devices that vent gas should the pressure become excessive.

WARNING: DO NOT use cooking appliances for comfort heating. Cooking appliances need fresh air for safe operation. Before operation open overhead vent or turn on exhaust fan and open window.

A warning label has been located in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliances will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

WARNING:

Portable fuel burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.

WARNING:

A Warning Label has been located near the LP gas container. This label reads: DO NOT FILL CONTAINER(S) TO MORE THAN 80% PERCENT OF CAPACITY. Overfilling the LP gas container can result in uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP gas.

WARNING:

Do not bring or store LP gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result.

WARNING:

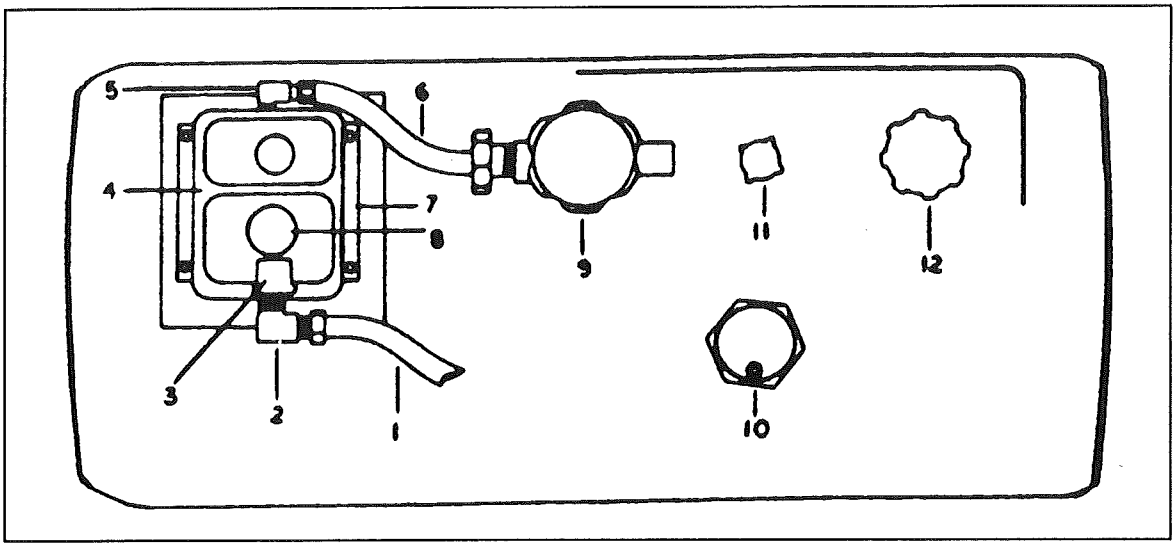
If you smell gas:

1. Extinguish any open flames, pilot lights and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the gas supply at the tank valve(s) or gas supply connection.
4. Open doors and other ventilating openings.
5. Leave the area until odor clears.
6. Have the gas system checked and leakage source corrected before using again.

WARNING:

LP gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that regulator vent faces downward and that cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

LP TANK INSTALLATION



1. Hose regulator to main gas line
2. Street el 1/2 MPT
*3. Vent
4. Regulator, two stage
5. Street el 1/4 MPT
6. Hose, gas bottle to regulator
7. Mounting bracket, regulator
8. Cap, second stage pressure adjustment
9. Valve, main shut off
10. Gauge
11. 10% valve
12. Valve, fill

***WARNING:**
Check vent each time bottle is filled to make sure it is clear of obstructions.

Gas Regulator Removal/Replacement

1. Shut off main gas supply at the tank.
2. Remove the plastic protective cover from the regulator assembly.
3. Using two wrenches, one to hold the line fitting and one to turn the flare nut, disconnect the regulator from the flexible rubber line.
4. Disconnect the regulator from the tank fitting. Remove regulator.
5. To replace, reverse the removal procedures.

LPG System Pressure Check

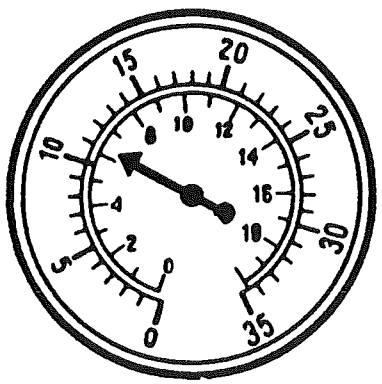
Use a pressure gauge. (See Illustration)

This gauge is calibrated to read in "inches of water column pressure" or kilopascals. Our reference figures will always use the American inches of water column.

It can be viewed by opening the exterior refrigerator access compartment. Since it's permanently plumbed into the system, it constantly monitors the pressure.

The optimum pressure is 11.5 inches of water column. The pressure should never be less than 11.0, nor higher than 12.0 inches with all appliances operating or off.

LOW PRESSURE GAUGE



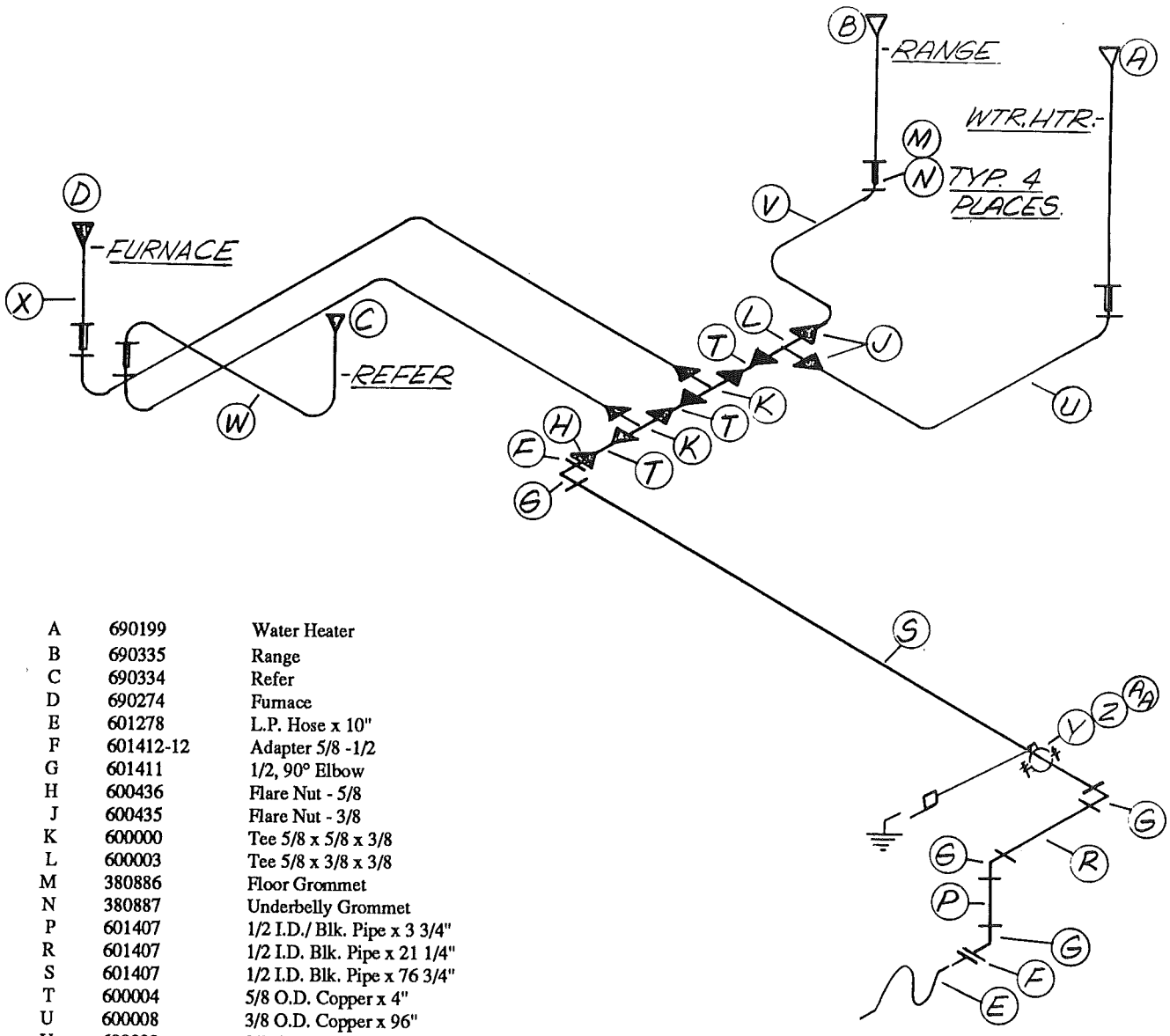
To use the gauge to check for leaks:

- Turn all appliances and pilots off.
- After two minutes shut main valve off at LP tank
- Loosen fitting at main valve so high pressure is released from line between tank and LP regulator
- * No pressure drop should be seen on the gauge within 10 minutes.

***NOTE:** The American Gas Association allows some gas leakage through valves. Reference their regulations A-119 and Z-21.21. This allowable seepage may cause some pressure drop within the 10 minute check period.

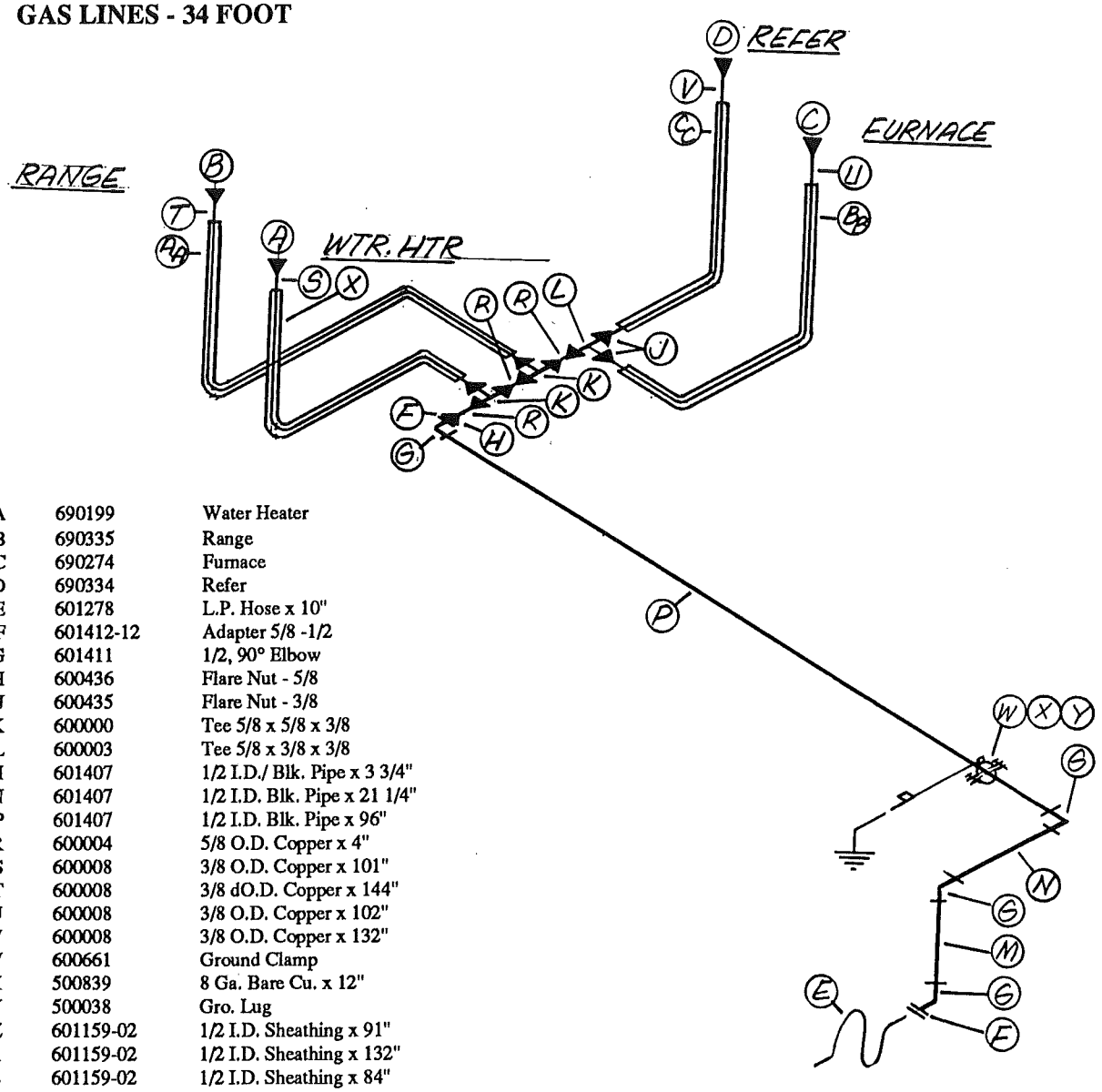
***WARNING:** Have a professional check your system if you have any doubts.

GAS LINES - 30 FOOT



A	690199	Water Heater
B	690335	Range
C	690334	Refer
D	690274	Furnace
E	601278	L.P. Hose x 10"
F	601412-12	Adapter 5/8 -1/2
G	601411	1/2, 90° Elbow
H	600436	Flare Nut - 5/8
J	600435	Flare Nut - 3/8
K	600000	Tee 5/8 x 5/8 x 3/8
L	600003	Tee 5/8 x 3/8 x 3/8
M	380886	Floor Grommet
N	380887	Underbelly Grommet
P	601407	1/2 I.D./ Blk. Pipe x 3 3/4"
R	601407	1/2 I.D. Blk. Pipe x 21 1/4"
S	601407	1/2 I.D. Blk. Pipe x 76 3/4"
T	600004	5/8 O.D. Copper x 4"
U	600008	3/8 O.D. Copper x 96"
V	600008	3/8 dO.D. Copper x 108"
W	600008	3/8 O.D. Copper x 180".
X	600008	3/8 O.D. Copper x 120"
Y	600661	Grd. Clamp
Z	500839	8 Ga. Bare cu. x 12"
AA	500036	Gro. Lug

GAS LINES - 34 FOOT



A	690199	Water Heater
B	690335	Range
C	690274	Furnace
D	690334	Refer
E	601278	L.P. Hose x 10"
F	601412-12	Adapter 5/8 -1/2
G	601411	1/2, 90° Elbow
H	600436	Flare Nut - 5/8
J	600435	Flare Nut - 3/8
K	600000	Tee 5/8 x 5/8 x 3/8
L	600003	Tee 5/8 x 3/8 x 3/8
M	601407	1/2 I.D./ Blk. Pipe x 3 3/4"
N	601407	1/2 I.D. Blk. Pipe x 21 1/4"
P	601407	1/2 I.D. Blk. Pipe x 96"
R	600004	5/8 O.D. Copper x 4"
S	600008	3/8 O.D. Copper x 101"
T	600008	3/8 dO.D. Copper x 144"
U	600008	3/8 O.D. Copper x 102"
V	600008	3/8 O.D. Copper x 132"
W	600661	Ground Clamp
X	500839	8 Ga. Bare Cu. x 12"
Y	500038	Gro. Lug
Z	601159-02	1/2 I.D. Sheathing x 91"
AA	601159-02	1/2 I.D. Sheathing x 132"
BB	601159-02	1/2 I.D. Sheathing x 84"
CC	601159-02	1/2 I.D. Sheathing x 120"

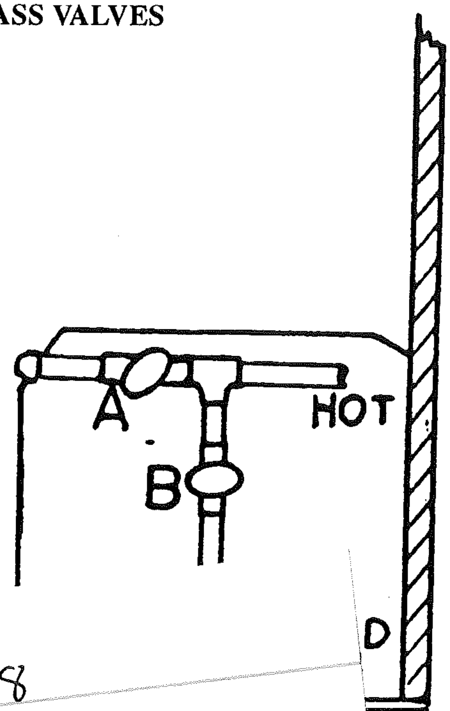
WATER SYSTEM - SELF CONTAINED

Fill the water tank by opening the exterior door marked water fill and remove largest screw cap. A garden hose can now be inserted. It's a good idea to let the water run through the hose for a short time to flush it out. Experienced Rvers usually fill their tanks with "home" water to avoid strange water that may be distasteful to them.

The amount of water in the tank may be checked on the Monitor Panel, or you may fill the tank until water overflows out of the fill.

Turn water heater by-pass valves to normal flow, open valves A and C. Close valve B. For winterizing B would be opened while A and C are closed. Access to the valves is under the kitchen sink.

WATER HEATER BY-PASS VALVES



Open the hot side of the galley or lavatory faucet and turn on the water pump switch located on the monitor panel. For some time the open faucet will only sputter. This is because the water heater is being filled and air is being pushed out through the lines. Once the water heater is full a steady stream of water will come from the faucet. Now open a cold faucet. It will sputter for a short time, but will soon expel a steady stream. All other faucets can now be opened until all air is expelled.

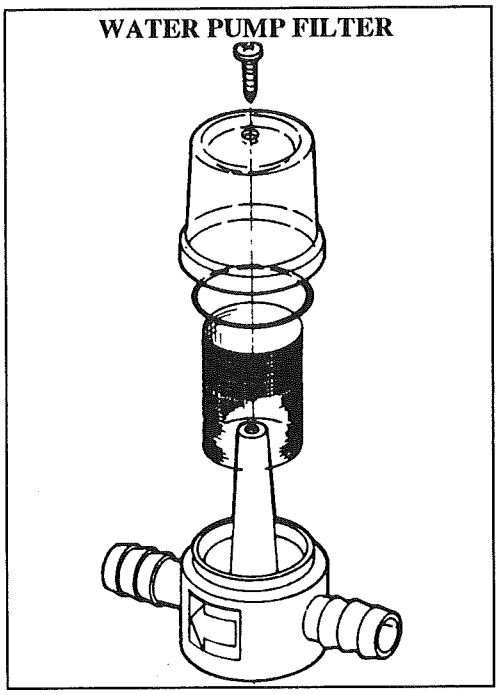
Once the system is filled with water and the faucets closed, the water pump will shut off. When a faucet is opened the pump will come back on automatically. If the faucet barely open it is normal for the pump t on and off rapidly.

G-7,8
23,24,25,26

CAUTION: The water pump must b pply and when you leave your Airstream unatt

WATER PUMP AND FILTER

The water pump and filter are located under the rear bed next to the water tank. Access is gained by removing the roadside drawer under the bed. (See drawer removal in the Interior Section of this manual). The filter screen should be cleaned periodically to prevent accumulation of dirt and sand. To remove the screen, disconnect the rubber hoses from both ends, separate the screen housing, remove the screen, clean and replace.



To Disassemble Pump Filter

*1. Remove screw through top.
2. Pull top from base. Do not damage "O" ring seal.
3. Remove screen to clean or replace.
4. Lift "O" ring from its cavity. Lubricate with silicone grease.
5. Assemble by reversing above procedure.

*Some may have tops that screw into base.

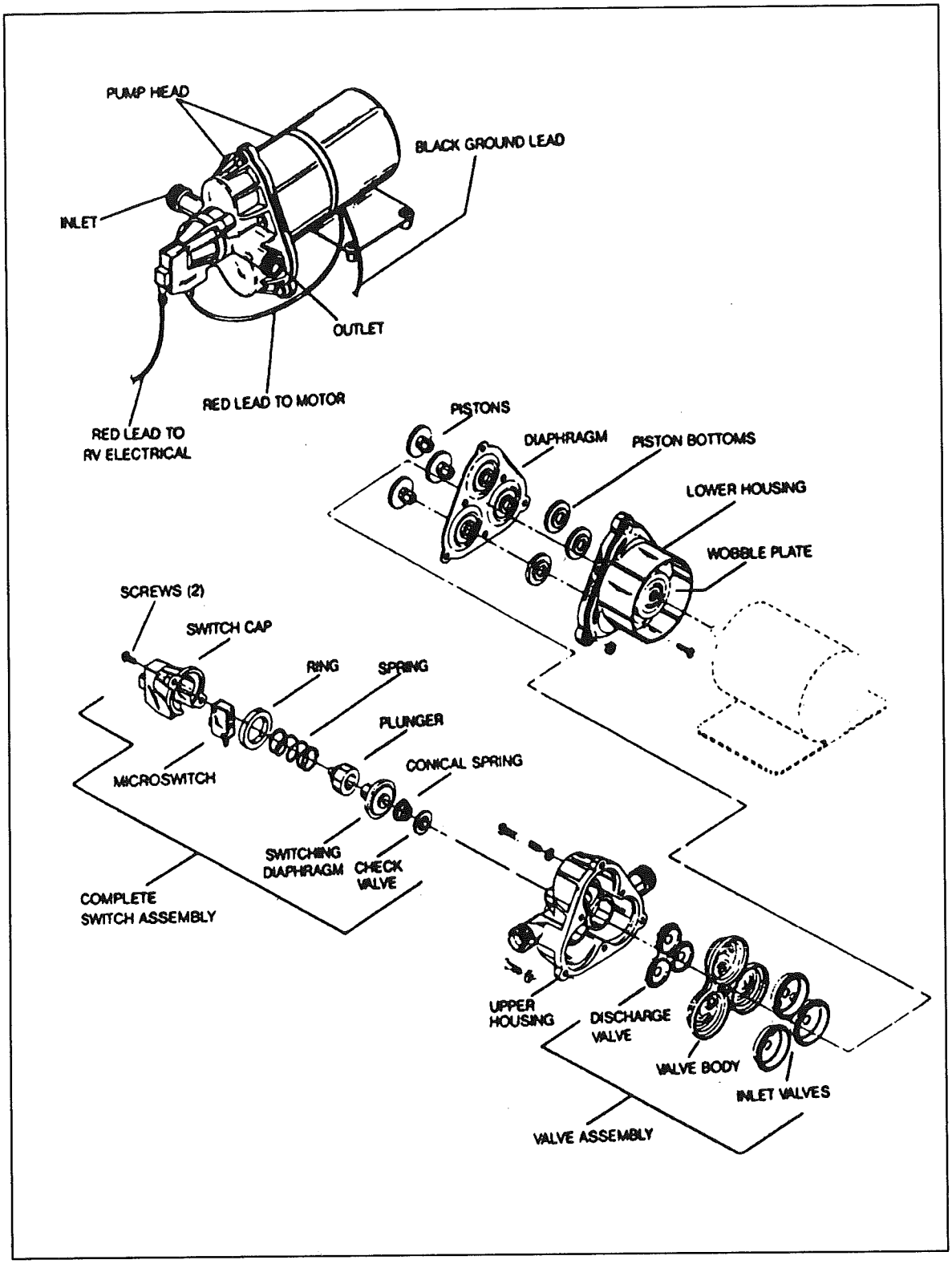
Cleaning Water Storage Tank

1. Prepare a sodium hypochlorite solution using potable water and household bleach (5 1/4 to 6%) in the ratio of 1/4 cup bleach to 1 gallon of water. (Common household bleaches are Purex and Chlorox.)
2. Pour 1 gallon of hypochlorite solution for each 15 gallons of capacity into the empty water tank.
3. Add enough potable water to completely fill the water system.
4. Allow closed system to stand for three hours.
5. Drain the hypochlorite solution from the system and refill with potable water.
6. Excessive hypochlorite taste or odor remaining in the water system is removed by rinsing the system with a vinegar solution mixed in the ratio of 1 quart of vinegar to 5 gallons of water.
7. Drain the system and flush with potable water.

NOTES

WATER PUMP

Manufacturer: Shur-FIo
1740 Markle Street
Elkhart, Indiana 46514
Phone: 219-294-7581



Switch and Check Valve Repair

The check valve, hydraulic switch mechanism and micro switch are accessible by removing the switch cover.

CAUTION: Care should be taken in removing the switch cover screws. Within the mechanism is a spring under compression.

Replacement of Micro Switch

Occasionally the micro switch fails or an electrode is broken off. Proceed as follows: Remove the two screws holding the cap to the main body. Remember, a spring under compression is retained by this cap. With both screws out, allow the spring to extend fully. Then carefully lift off cap and spring. If only the micro switch is at fault, avoid disturbing the hydraulic elements remaining in the head. If examination of the hydraulic parts is required, remove them carefully by pulling. Be sure to note the order of removal.

To replace the micro switch, remove the spring and pull out the black retaining ring. This will allow the micro switch to fall free. Replace parts in the reverse sequence: Micro switch, black retainer, and the spring.

Reassemble cover to the main body. Switch cap may be pointed up or down as desired, providing wire has not been shorted.

Having replaced the micro switch, be careful to rewire correctly.

Note: If the positive wire from the battery is connected to the "B" terminal, the switch is bypassed and the pump cannot shut off. Pressure will build up until the motor stalls. If the proper fuse has been used, it will blow. If a larger fuse than recommended has been used, the motor will stall and may burn out.

Check Valve Problems

Due to contamination from debris or lime build-up, the check valve may fail to properly seat. To correct, clean out the area and replace the check valve element. If checking the check valve with air be certain to moisten the check valve to get an accurate check. The rubber seals more effectively when wet.

Properly Installed, the Pump will:

PRIME: The pump will automatically prime itself.

AIR-LOCK: Pump will not air-lock as the compression stroke is powerful enough to pressurize the entrapped air and force the check valve open.

RUN DRY: Pump will run dry for extended periods without damage.

BATTERY DRAIN: At free flow, the pump draws a mere 7 to 7 1/2 amps.

CHECK VALVE: Built-in check valve prevents back flow and can protect the pump from the dangers of high city water pressure (up to 200 PSI).

FULLY AUTOMATIC: The pump will automatically come on when the faucet or valve is opened. It delivers a smooth, steady flow of water and shuts off automatically when the faucet is closed.

Trouble Shooting

MOTOR DOES NOT OPERATE.

- Is battery discharged?
- Are any wires disconnected?
- Are terminals corroded?
- Is switch in "ON" position?
- Is fuse good?
- Is water frozen in pump head?

MOTOR RUNS BUT NO WATER FLOWS.

- Is water tank empty?
- Are there kinks in the inlet hose?
- Is air leaking into inlet hose fittings?
- Is inlet line or in-line filter plugged?
- If using a filter, check the line just before the filter.
- Is outlet hose kinked?

MOTOR RUNS BUT WATER "SPUTTERS"
Check to be certain that air has been bled off the lines and water heater. Also check for air leaks in the input side of the pump.

PUMP CYCLES ON AND OFF WHEN ALL OUTLETS ARE CLOSED.
The pump will normally cycle (go on and off) when a faucet is partially opened. If, however, it cycles when all valves are closed, check for a leak in the lines. It may be a leaky toilet valve or a dripping faucet. Do not forget to check the outside city water entry valve. It may be leaking.

If no leak can be detected, shut pump off. Remove the output hose where it joins the system (not at the pump). Insert a plug in the hose and clamp it. (You can make a perfect plug from a barb fitting: 1/2" size with a cap tightly screwed on the threads.) Turn the pump switch on. The pump should come on, run a few seconds, and then shut off. If it remains off, the problem is NOT the pump. The problem is in the system. If, however, the pump goes on and off, there may be a problem in the pump.

There may be an internal leak in the pump which allows water to escape from the high pressure area back into the low pressure area. Look for a pump valve held open or a crack in the plastic parts.

PUMP DOES NOT ACHIEVE SHUT OFF

The wall switch may be used for temporary control of the pump. A low battery charge may be the cause. Or the pump switch mechanism may be stuck. Try tapping the switch cap on the end of the pump with the handle of a screwdriver. If the pump appears in all other respects to run normally, but fails to shut off, you may have to replace the switch mechanism.

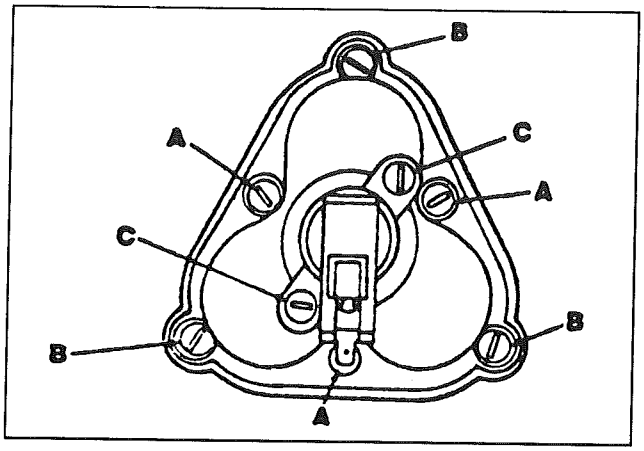
PUMP HEAD LEAKS

If the pump head leaks, first try to tighten the screws in the pump head assembly until they are snug.

CAUTION: Do not over tighten. The leak may be from a crack in the pump head assembly. If so, then replace.

One cause of the pump head cracking may be water freezing inside the pump head. If the leaking water is escaping back near the motor, check for a leaking or broken piston.

Pump Repair



Screws (A) hold the entire pump head assembly to the motor.

Screws (B) hold the pump head face to the pump head main body.

Screws (C) hold the switch assembly to the front of the pump head.

Screws (A) would be removed to correct a problem in the "drive train" between the motor and pump head.

Screws (A) and (B) would be removed to correct a problem in the pump head valves or pumping chambers.

Screws (C) would be removed to correct a problem in the automatic switch or check valve.

PUMP HEAD REPAIR

Motor and drive train area. Rarely does a problem occur in this area of the pump head. If a part does fail, it is quite easily replaced. Just be certain to follow closely the sequence of parts as shown in the figure. Also be careful to align the flat surface in the drive adapter with the flat surface on the motor shaft.

LUBRICATION

If the lubricant appears dried out it should be be wiped off the bearing assemblies. A small amount of automotive wheel bearing grease should be applied to both sides of each bearing.

FAILURE TO PRIME

Failure to prime can be caused by the presence of some foreign matter lodged in the valve preventing it from seating. To correct, remove any such foreign bodies.

CAUTION: Do not remove the stainless steel screens. These filter screens should be cleaned without removing them from the plastic housing.

PUMP CHAMBER REPAIR

Replacement of broken piston.

To remove a piston, back out the screw holding the defective piston.

Now lift the corner of the diaphragm and remove the broken piston. Insert the new piston through the diaphragm and slide the retaining ring on. Rotate the piston until it drops into place in the drive plate. Replace the screw and tighten until snug.

CAUTION: Do not attempt to re-use a piston once it has been removed. The plastic stem, if used a second time, may not hold securely. The second thread path removes additional material and there is then no real bite.

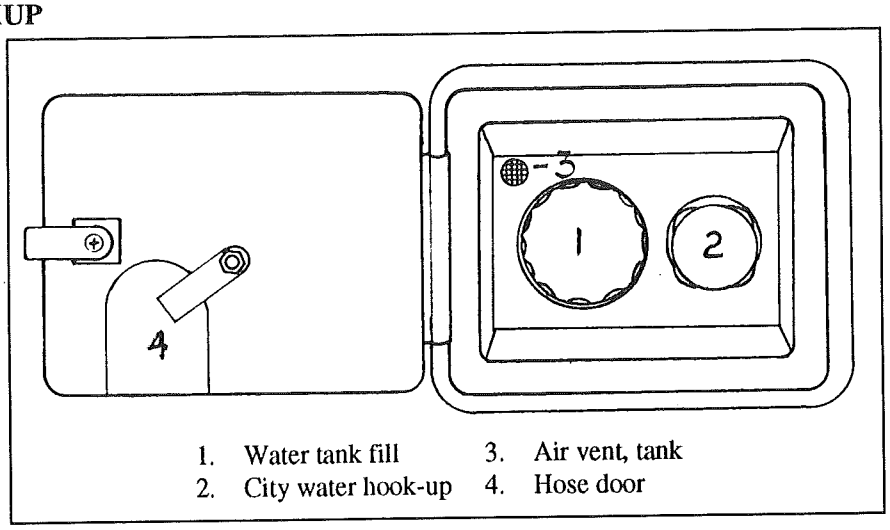
REPLACE A DIAPHRAGM

To replace a diaphragm follow the procedure used in removing the pistons. After removing the three pistons the diaphragm is loose and easily removed.

Screws (A) hold the piston.

Screws (B) hold the drive mechanism and should not be removed when replacing piston.

CITY WATER HOOKUP



1. Water tank fill
2. City water hook-up
3. Air vent, tank
4. Hose door

Use a high pressure hose of at least 1/2" diameter. It should be one that is tasteless, odorless and non-toxic designed for RV use. The city water inlet is a standard garden hose thread. We suggest you carry two lengths of hose. This way you have the ability to reach hookups further away than normal, plus you have a spare hose should one fail or become damaged unexpectedly. Turn the water heater bypass to the normal flow position as described under self contained.

After hooking up the hose and turning on the city water valve provided in the park, slowly open a faucet. There will be a lot of spurts and sputtering until all the air is expelled from the motorhome system. If the water heater is empty it will take some time before all the air is expelled and you get a steady flow of water at the faucet. Once a steady flow is achieved at one faucet the others should be opened long enough to expel the air in the lines going to them.

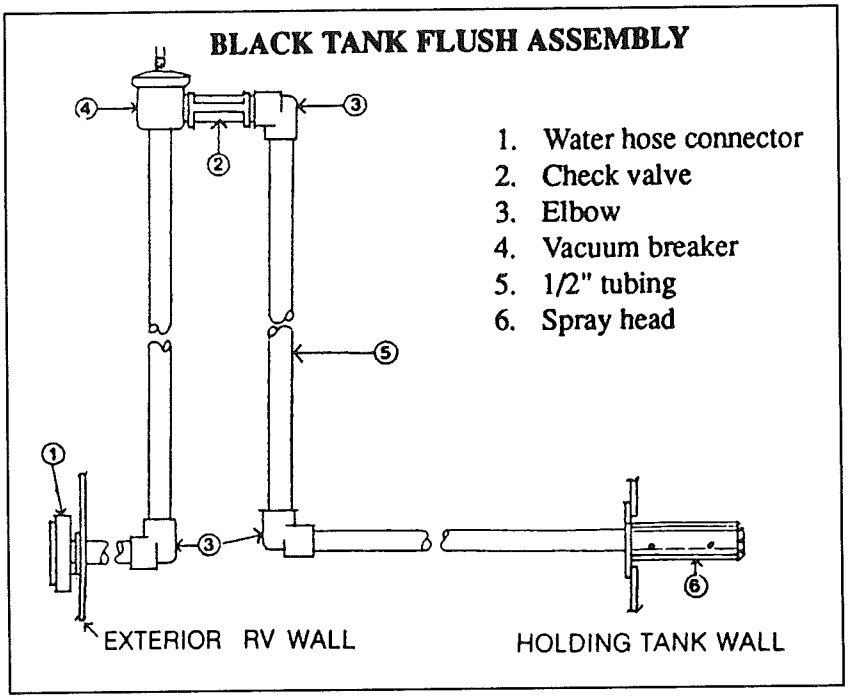
During city water operation the water pump switch should be in the off position. A check valve built into the pump protects it from city water pressure.

Your plumbing system has a built in pressure regulator to protect your lines and faucets from extremely high pressures on some city water systems.

BLACK TANK FLUSH

On the left rear lower side is a water hose connector marked "black tank flush". To use, hook-up hose and turn on full force. Within the tank a spray head with a multipled holed head will spray the interior surface of the tank.

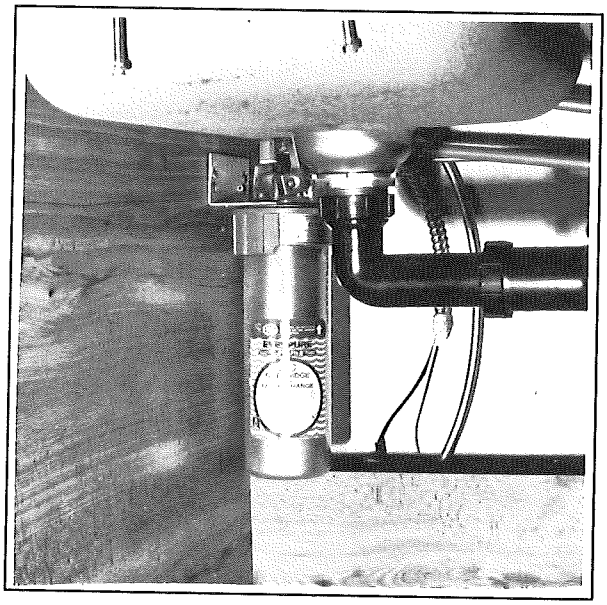
The gate valve should be closed for the first couple of minutes then opened to let the water out in a rush. Repeat as needed.



EXTERIOR WATER SERVICE

Next to the black tank is a second water hose hook-up with a shut off valve. This is plumbed in to the high pressure water system of the motorhome. This is an ideal place to rinse the sand off your feet after going to the beach, cleaning mud off your boots and hundreds of other messy jobs that are better done outside of your motorhome. During freezing weather this line should be drained. Shut off the valve in the lavatory cabinet and leave the exterior valve open.

EVERPURE WATER FILTER (OPTIONAL)



Everpure water Filter

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

To Remove Used Cartridge:

1. Shut off water by lifting valve handle counterclockwise as far as possible.
2. Turn colored ring all the way to the left. Ring will drop about 5/8".
3. Lift cartridge slightly and turn it further to the left until it can be disengaged.
4. Lower cartridge to disengage it from ring. Discard used cartridge.

To Install New Cartridge:

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

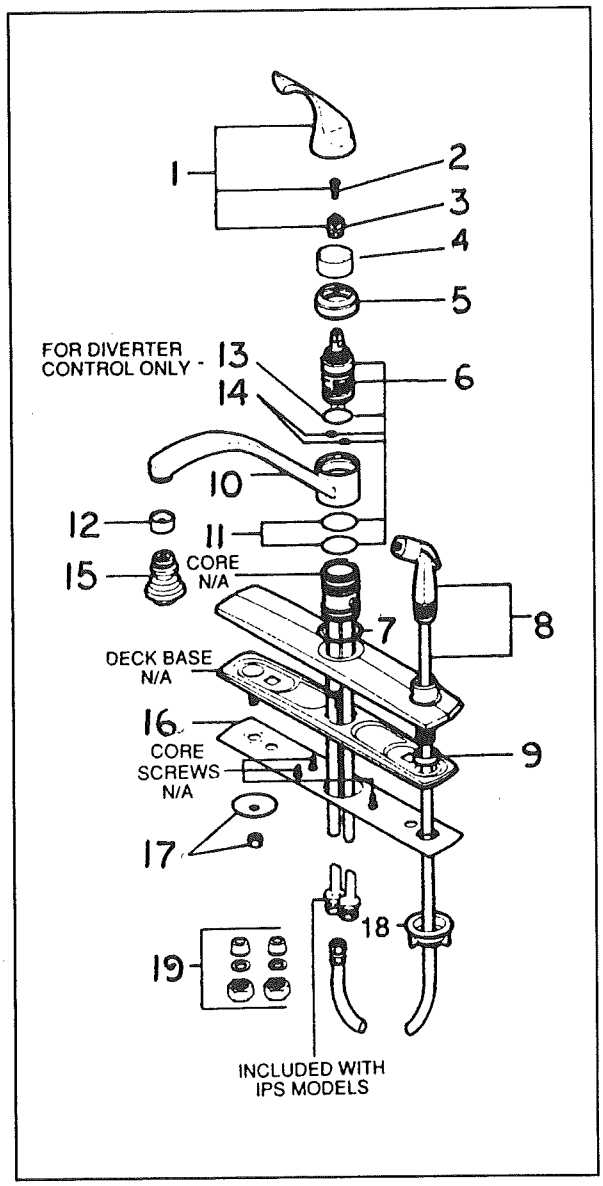
FAUCETS

Care and Cleaning

The surface of the faucets will stay bright and resist wear with a minimum of care. Strong detergents may tend to dull the finish. So when cleaning a faucet use only mild soap and water.

The finish on the faucets has been designed to retain its polished appearance without scouring. Stains and dirt remove easily without the use of scouring powders or abrasive polishes and cleaners. Use of such agents may cause scratches which mar the finish, and in time become dirt catchers and unattractive.

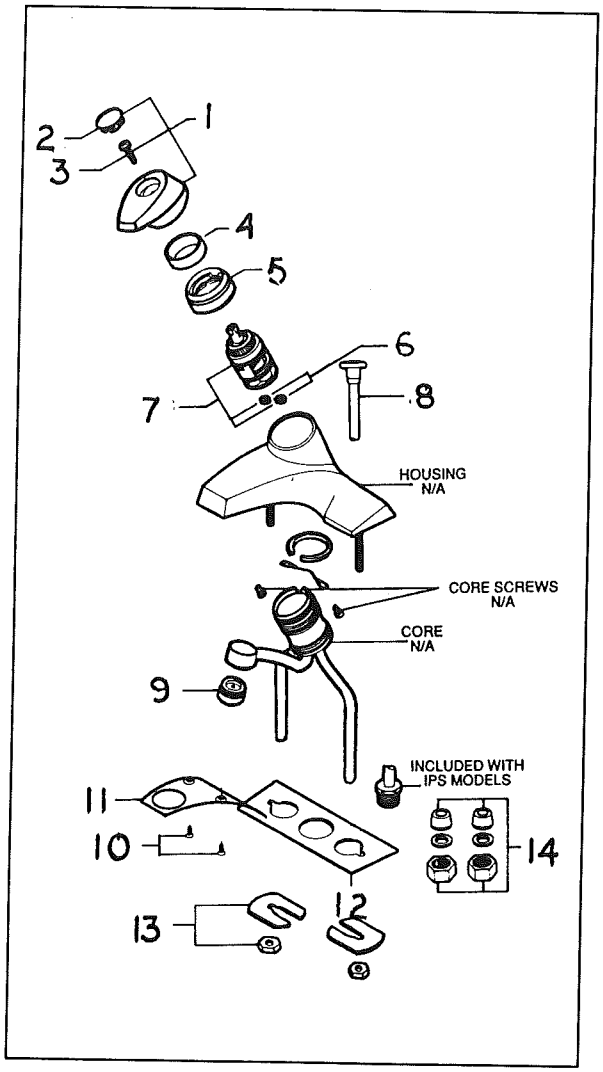
GALLEY FAUCET



1. Lever handle assembly
2. Screw, handle adapter
3. Handle adapter
4. Bonnet lock ring
5. Bonnet nut
6. Control assembly
7. Bearing hub
8. Spray and hose assembly
9. Spacer ring
10. Spout assembly
11. Spout "O" ring
12. Aerator
13. "O" ring
14. Port seal ring
15. Swivel spray
16. Gasket
17. Mounting nut/washer
18. Wing nut
19. Spacer ring

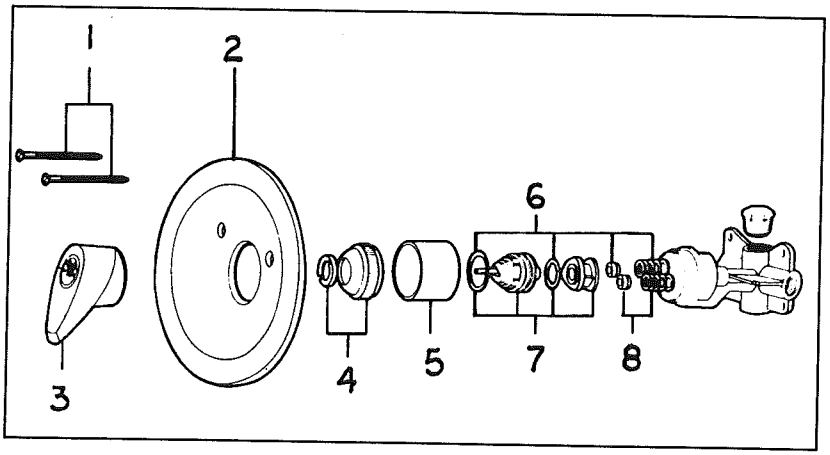
LAVATORY FAUCET

1. Handle
2. Plug button
3. Handle screw
4. Bonnet lock ring
5. Bonnet nut
6. Port seal ring
7. Control cartridge
8. Lift rod assembly
9. Aerator
10. Undercover pl. screws
11. Under cover plate
12. Gasket
13. Mounting nut/washer
14. IPS fitting



SHOWER MIXING VALVE ASSEMBLY

1. Escutcheon screws
2. Escutcheon assembly
3. Knob assembly
4. Bonnet assembly
5. Sleeve
6. Control repair kit
7. Control assembly
8. Seal and spring repair kit



DRAIN VALVES

There are eight water valves in the high pressure lines of your Land Yacht LE motorhome:

Three are used in the operation of the water heater by-pass, and their operation is described in the winterizing section. The vertical panel under the sink must be unscrewed for access.

Three more valves are located under the rear bed on the curbside. Access is gained by removing the bed drawer, or in some cases an access panel will be found in the bed top under the mattress. To remove the drawer, slide it out until it reaches the stop then lift up the front and slide it out to the wall. While holding the drawer out, slide the brackets on each side back under the bed until the drawer is free.

The two drain valves for the hot and cold lines are readily apparent as you look under the bed. The third valve, used to drain the water tank, is beside the tank forward of the drawer opening.

The other two valves are used in conjunction with the exterior water outlet. One is the obvious valve on the outside of the vehicle, where water service is located. The other valve is located under the lavatory. On 30 ft. models the back of the lavatory shelf tips down, and on 34 ft. models the bottom lavatory cabinet drawer is removed for access.

In normal operation the valve under the lavatory is left in the open position, so you have full use of the exterior service. While traveling in below freezing weather, close the valve under the lavatory and open the valve at the exterior service so the water can drain out of the exterior faucet and prevent freeze damage. For winterizing open both valves.

When draining the system it's a good idea to open the valves all the way, then close them about 1/4 turn. This way, in the spring, you'll be able to tell the position of the valves without forcing them.

STORAGE AND WINTERIZING

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

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

Living Area

The main consideration in winterizing is to guard against freezing damage to the hot and cold water systems, the waste drain system (including the traps), the waste holding tanks, the water heater and the batteries. To completely winterize your motorhome follow this procedure:

1. Level the motorhome from side to side and front to rear. Open all faucets.
2. Turn the water pump switch to the OFF position.
3. Open all drain valves. One drain valve on all models is located on the water heater exterior and is accessible through the water heater access door.
4. The toilet water valve should be left in open position while draining water.
5. While the water is draining from the system, depress the button on hand spray heads and drain all the water. Unscrew the heads on spray units and store.

6. After the water has stopped running from the drain lines, apply at least 60 lbs. of air pressure at the city water inlet. Be sure the toilet valve and all drain valves and faucets are open and pump outlet hose is disconnected. This can be accomplished at a service station and will force any remaining water from the water heater and remove any water which may be trapped in low areas.

7. Pour a cup of non-toxic antifreeze into the lavatory, sink, and tub drains to prevent freezing water in traps.

8. Be sure to open the waste holding tank drain valves, and drain and flush the tanks thoroughly. (This is very important, as the sewage in the tank, if frozen, could seriously damage the tank.)

9. Remove water filter canister and dump.

10. Remove the batteries from your motorhome and store in a cool dry place where there is no danger of freezing. It is very important for optimum life of your battery to check it periodically and to keep it fully charged. This is especially true in winter months, when the temperature may drop below freezing. If the period of storage is for 30 days or less, you may open the knife switch rather than remove the batteries.

    CAUTION: Make sure you close the knife switch prior to operating any appliances or accessories in the motorhome.

    Please refer to the battery section for more information on battery maintenance

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

For additional winterizing protection, add non-toxic antifreeze (approved for drinking water systems) to your water lines using the following procedure:

1. Reconnect all lines except the hose to the pump inlet port. Close all drain valves (See Step 3).

*2. Turn bypass valves to bypass position. Access to the bypass valve is gained by unscrewing the vertical panel under the sink directly behind the water heater.

3. Attach a length of hose to the pump inlet port. This piece of hose should be long enough for the free end to be inserted into and reach the bottom of the antifreeze container.

4. Dilute the antifreeze solution in accordance with the manufacturer's instructions.

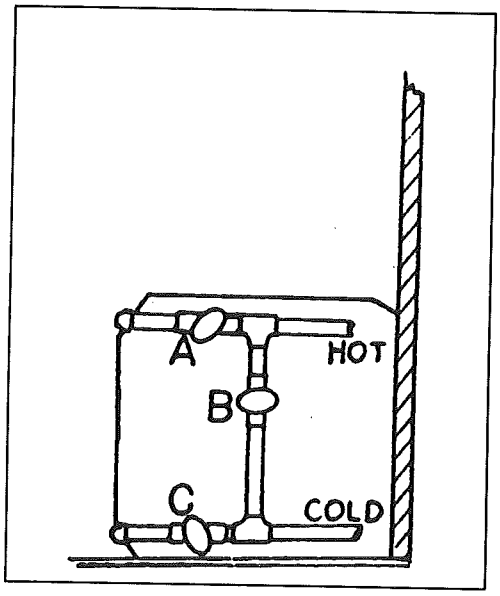
5. Open all water faucets.

6. Insert hose length into the antifreeze container, turn the pump switch on, and run the water pump until the antifreeze solution fills all water lines and the water heater. Flush toilet. Work shower hand spray while holding down in tub.

7. Shut off the pump and close all faucets.

8. Disconnect the hose length from pump inlet fitting and reconnect water system inlet line.

*To by-pass the water heater for winterizing, close valves A and C and open valve B (See illustration).



DRAIN AND WASTE SYSTEM

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

Monitor Panel

Check your monitor panel frequently. When the MAIN HOLDING TANK is completely full, sewage cannot be emptied from the toilet bowl. If the AUXILIARY HOLDING TANK is overfilled, drain water will "backup" into the tub and cause an unpleasant cleaning job. Never drain the tanks at any place other than an approved dumping station.

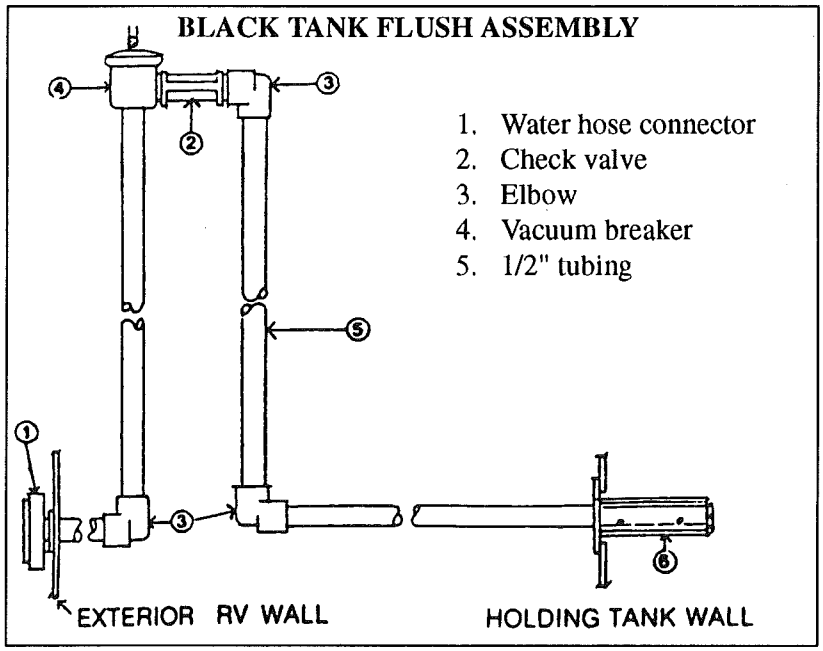
To empty both tanks, attach the sewer hose by pressing the bayonet fitting onto the outlet adapter and rotate clockwise until it feels solid and secure. Attach the outlet end of the hose to the sewage outlet, making sure that the hose is placed so that it will drain completely. The dump valves are located on the lower rear roadside corner of the motorhome. Pull the dump valve handle out as far as it will go and wait until the tank is drained. If the auxiliary tank is drained after the waste tank, the soapy water will help keep the sewer hose and outlet clean.

BLACK TANK FLUSH

The main holding tank must be flushed out until all paper and waste material is removed. Close the dump valve and refill the tank with 5 to 10 gallons of clean water and repeat until clean.

On the left rear lower side is a water hose connector marked "black tank flush." To use, hook-up hose and turn on full force. Within the tank a spray head with a multiple-holed head will spray the interior surface of the tank.

The gate valve should be closed for the first couple of minutes, then opened to let the water out in a rush. Repeat as needed.



When Parked and Connected to Sewer Outlet

When you are in a park and connected to a sewer outlet, keep the main holding tank dump valve closed, and empty the tank every few days or whenever it becomes almost full. ONLY BY SENDING A LARGE VOLUME OF LIQUID THROUGH THE MAIN HOLDING TANK AT A TIME WILL TOILET PAPER AND OTHER SOLIDS COMPLETELY WASH AWAY.

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

Draining the tanks as described will protect them from freezing during storage. When traveling in sub-freezing temperatures, use a winterizing solution designed for RV use. Follow the directions on the container.

CAUTION: Never put wet strength paper towels or tissues in your holding tank, since they won't dissolve and can "catch" in the mechanism of the dump valve. Colored toilet tissue is slower to dissolve than white. Most RV accessory stores offer tissue, designed for RVs, that will completely dissolve.

Drain Systems Cleaning

There are many deodorizers on the market in tablet, liquid, and powder form. These not only combat odor, but stimulate the bacteria that works to dissolve the solids in your tank. Picking a deodorizer with lubricating qualities will ease slide valve operation.

The only cleaning agents that can be used without causing harm to the system are household ammonia and trisodium phosphate in small quantities. Do not use any product that contains any portion of petroleum distillates. This attacks the rubber seals of your toilet and dump valve. Also, do not use any dish detergent or abrasive cleaners. All products should be marked approved for ABS drainage systems.

When winterizing drains use only recreational vehicle plumbing type antifreeze. These are sold through your dealer.

TOILET

Manufacturer: Thetford Corporation
7101 Jackson Road
Ann Arbor, MI 48103
313-769-6000

The RV toilet in your Airstream is a design that has been used for many years. There are two pedals. The large pedal opens and closes the slide mechanism, and the smaller pedal opens and closes a water valve.

In normal use, when you are hooked up to city water, both pedals are depressed together. This dumps the sewage and fresh water and flushes down the side of the bowl. Water will continue to run into the bowl for a short time after the pedals are released.

When you wish to conserve water, hold the handspray head over the bowl and hold down the thumb-operated lever. Now, when you depress the pedal, all the water is routed through the handspray.

CAUTION: When you dump the bowl of the toilet, make sure all paper and solids have cleared the slide mechanism before you allow it to close. Failure to do so can cause the groove for the slide to become jammed, and the slide will no longer close completely.

If the problem should occur, a small nail or bent clothes hanger can be used to "pick" the material out of the groove.

TROUBLE SHOOTING

PROBLEM: Water keeps running into bowl.

CAUSE: The blade in the bottom of the bowl is not closing completely, which in turn keeps the water control valve partially open. The groove into which the blade seats when completely closed is clogged with foreign material.

REMEDY: Insert the end of a coat hanger or similar object into the sealing groove and remove the foreign material. Avoid damaging the rubber seal while cleaning.

PROBLEM: Toilet leaks. There is water on the floor. Specify the problem. Determine if water is leaking from:

CAUSE:

a. Vacuum breaker.

b. The water-control valve.

c. Bowl to mechanism seal. (If this is the problem, the water would not stay in the bowl.)

d. Closet flange base seal.

REMEDY:

a. The vacuum breaker. If the vacuum breaker leaks when flushing the toilet, replace vacuum breaker.

b. If the vacuum breaker leaks when the toilet is not in operation, replace the water control valve.

c. Leaks at the bowl to mechanism seal. Remove mechanism and replace seal.

d. Leaks at closet flange area. Check front and rear closet flange nuts for tightness. If leak continues remove the toilet, check the closet flange height. The height should be between 1/4" and 7/16" above the floor. Adjust closet flange height accordingly and replace closet flange seal.

PROBLEM: Foot pedal operates harder than normal or the blade sticks.

REMEDY:

a. Apply a light film of Silicone spray to blade.

b. Check closet bolt tightness. If closet bolts are over tightened, the mechanism may be distorted.

PROBLEM: Bowl will not hold water; i.e., water leaks from bowl down into the holding tank.

REMEDY: Using a bent screwdriver or similar object, scrape the groove in front of the mechanism blade. Generally paper or other foreign material is lodged in this groove, causing the leak.

CAUTION: ***Use care not to damage the blade seal. Always make certain that the tool is under the lip of the seal, not above it.***

The tool can easily be made by bending a coat hanger or screwdriver over about 7/8".

MAINTENANCE

If the bowl sealing blade does not operate freely after extended use, it may be restored to its original, smooth operating condition by applying a light film of silicone spray to the blade. To clean the toilet use Thetford Aqua Bowl or any other high grade, non- abrasive cleaner. Do not use highly concentrated or high acid content household cleaners. They may damage the rubber seals.

REMOVAL

1. Shut off water valve behind toilet or main water supply.

2. Disconnect water supply line from toilet. You will probably find a small mirror very useful.

3. Depress pedal and remove nut located in pedal recess.

4. Reach behind toilet and remove nut on opposite side of base from pedals. In some situations you may want to remove the plug in top of the seat designed to give access from above to this nut.

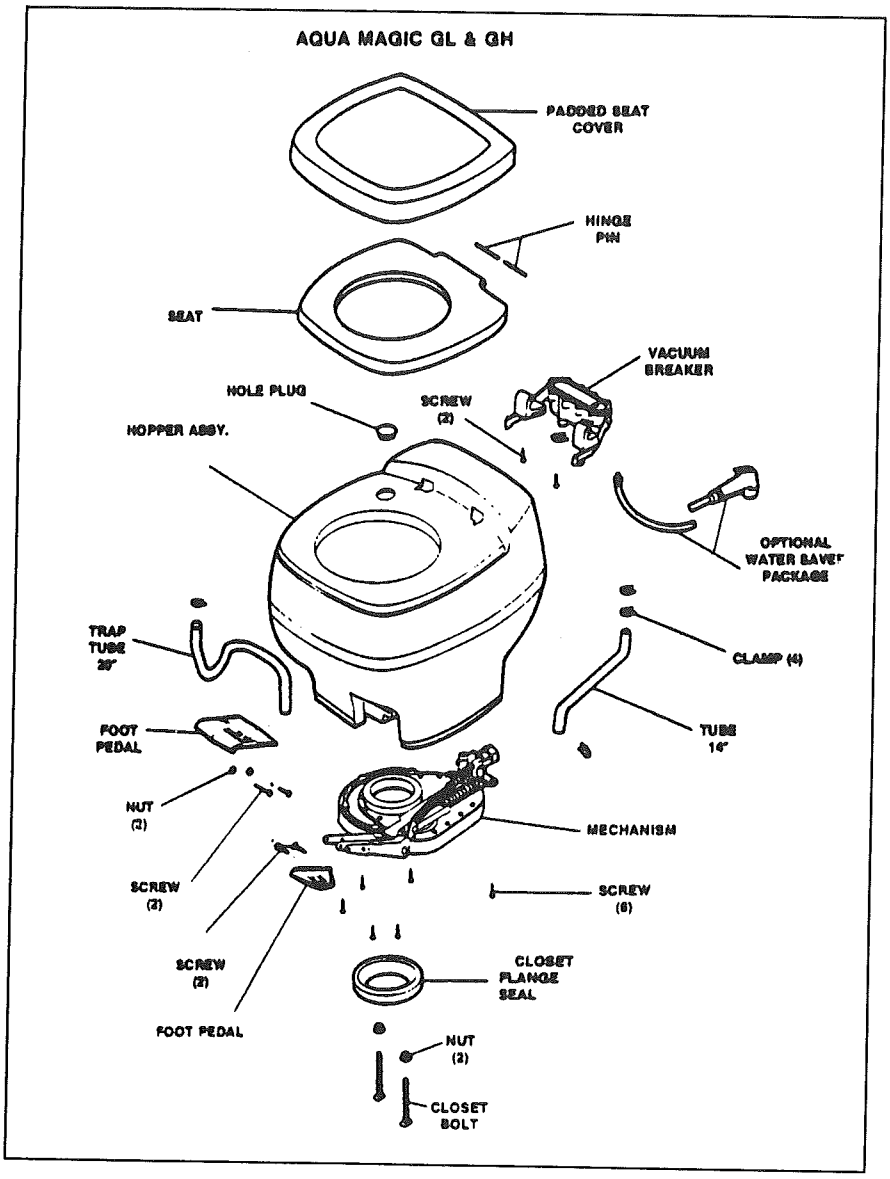
NOTE: Always replace flange seal when toilet has been removed.

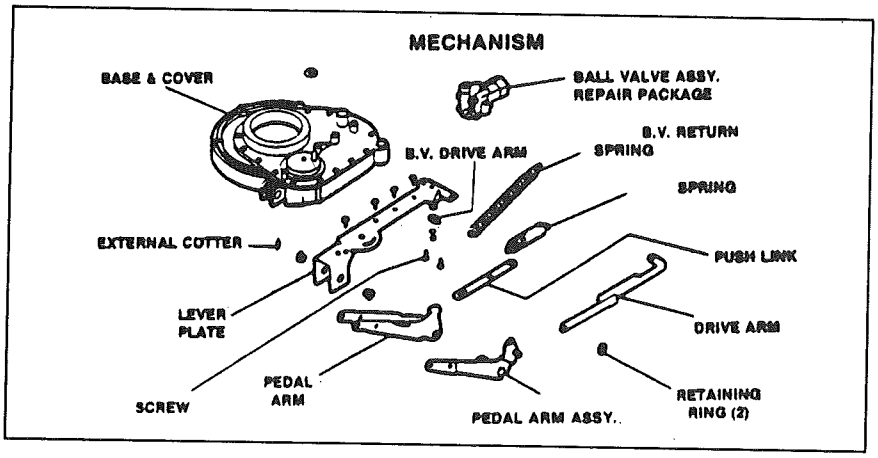
VACUUM BREAKER ASSEMBLY AND DISASSEMBLE

Remove vacuum breaker from toilet. Remove 10 screws holding the cover to the housing. This exposes the vacuum breaker float, float seal, and cover seal. The float is free in its chamber and is easily lifted or dumped out.

NOTE: When reassembling the unit, make sure the housing is free of dirt and the raised collar that the float sits on is clean and free of burrs.

When the cover is reinstalled, it is important that the screws be turned backwards until they jump, so that when they are tightened they are in the original thread.


AQUA MAGIC GL & GH
PADDED SEAT COVER
HINGE PIN
SEAT
VACUUM BREAKER
HOLE PLUG
SCREW (2)
HOPPER ASSY.
OPTIONAL WATER SAVER PACKAGE
TRAP TUBE 20"
CLAMP (4)
FOOT PEDAL
TUBE 14"
NUT (2)
MECHANISM
SCREW (2)
SCREW (6)
SCREW (2)
CLOSET FLANGE SEAL
FOOT PEDAL
NUT (2)
CLOSET BOLT


MECHANISM
BASE & COVER
BALL VALVE ASSY. REPAIR PACKAGE
B.V. RETURN SPRING
B.V. DRIVE ARM
SPRING
EXTERNAL COTTER
PUSH LINK
LEVER PLATE
DRIVE ARM
SCREW
PEDAL ARM
PEDAL ARM ASSY.
RETAINING RING (2)

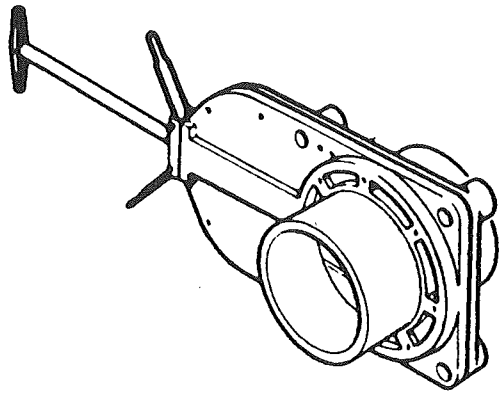
GATE VALVE REMOVAL AND REPLACEMENT

1. Make sure both tanks are empty.
2. Drill out rivet attaching extension handle on some valves.
3. Loosen hose clamp on caulder coupling (see illustration).
4. Remove 4 bolts attaching valve to tank adapter.
5. Twist 3 inch fittings to free from caulder coupling and remove complete assembly.

*6. Using hacksaw blade, cut valve off next to black drain pipe.

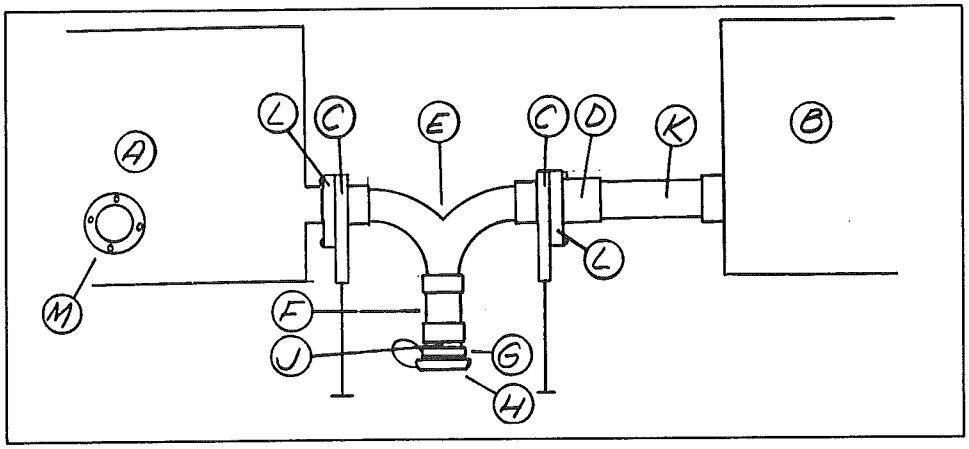
7. Remove the sawed off piece of valve from black pipe by driving a screwdriver into the glued joint about six places. Next drive the screwdriver in about 1/2" deep in six new places. Continue until white piece of cut off gate valve pops free from plumbing.
8. New valve may now be glued in place making sure its position allows the mounting bolts to line up with the tank adapter.

Termination Valve Assembly



***Note**: If the valve is being rebuilt instead of replaced, there's no need to saw it off. Simply rebuild the valve while it's still attached to plumbing line.

DRAIN LINES, BELOW FLOOR



A	Black Tank	1	E	3-way Ell	1	J	3" Diax 2 1/2"	1
B	Grey Tank	1	F	3", 45° St. Ell	1	K	3" Diax x 7 1/2"	1
C	3" Gate Valve	2	G	3" Bayonet Ring	1	L	Tank/Valve Adapter	2
D	3" Coupler	1	H	3" Bayonet Cap	1	M	4 x 3 Closet Flange	1

NOTES

ELECTRICAL SYSTEM

12 VOLT SYSTEM

BATTERIES

Your Airstream Land Yacht LE motorhome is equipped with three batteries: two engine batteries and two coach batteries.

Engine Battery

The engine battery is used for starting the engine and operating the headlights, tail-lights, running lights, instrument panel lighting, automotive air conditioning and other accessories. The engine battery is charged by the alternator while driving.

Coach Batteries

The coach batteries are used for interior lighting, exhaust fans, generator, water pump, central control panel, entertainment center, optional 12 volt convenience outlets, and the refrigerator when it is switched to 12 volt power. These batteries are charged by the engine's alternator when driving, or by the converter when plugged into 120 volt city power. They are also charged by the generator, when it is running, through the 120 volt city power system.

Interior Lights

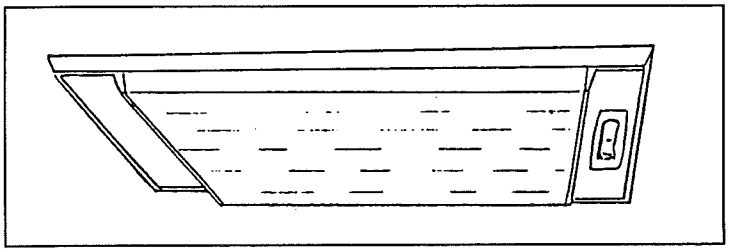
Many interior lights have been included in your motorhome to give you almost infinite variable light intensity.

Just inside the main door on the galley end panel are switches for the step, patio light and forward ceiling lights. The forward ceiling lights must have their switches on before the remote switch on the galley end panel will control them.

In the bathroom the water heater switch supplies power to the ignitor and gas valve. When turned on, it will flash red until flame is sensed, then the red light will be extinguished.

The bulbs in the interior lights are all easily replaced if they burn out. Round bulbs are replaced by depressing them into their base, then turning to the left about 1/4 turn. This will allow them to "pop" out part way, so they can be removed.

WARNING: If they are difficult to turn, use a folded rag to protect your hand when grasping the bulb in case it should unexpectedly shatter.



The ceiling and wardrobe light lenses are removed by squeezing the sides of the lens in until they clear the frame. In cold weather it is helpful to leave the light on for a while to soften the plastic and avoid cracking. Incandescent bulbs are removed by depressing and turning to the left about 1/4 turn. Fluorescent bulbs are removed by turning in either direction.

12 Volt Operation

The batteries are located in the front engine access compartment. When you raise the hood, you'll see the batteries with the "knife" switches.

The only thing you have to do is make sure the two auxiliary batteries don't run down. In normal usage there isn't any problem, since you would normally drive part of the day and be plugged into a camp ground at night. The alternator charges the batteries when you drive and when you're plugged into city power the convertor charges the batteries and carries much of the load.

Some nights you may not find a place to plug into city power. No problem; the batteries total about 210 amp-hours, so you can comfortably run your lights and vents in a normal fashion without depleting the batteries.

If you are not plugged into city power and you're not driving, you'll want to conserve your batteries by using as few lights and appliances as possible. If you notice the lights becoming dim, it's much easier on the batteries if you go ahead and start the engine or generator before the batteries run down.

There are two sets of fuses in your motorhome. The main interior circuits are in the 12-volt distribution panel just behind the interior engine cover. The brightly colored fuses pull straight out from the face of the panel. Replacement fuses are available at automotive stores and most service stations. On the panel covering the fuses is a diagram showing the function of each fuse or circuit breaker.

The second set of fuses is Chevrolet fuses to the left of the steering column. The function of most of the fuses is marked directly on the face of the fuse block. See your Chevrolet Drivers Manual for further information. An illustration in the following diagram section of this book shows the placement and function of wires added by Airstream.

Basic 12V Wiring

On the following fold out sheet is a drawing of the 12-V wiring used in the Land Yacht LE Series motorhome.

The knife switches at the batteries are intended to be used for long term storage. If you're not going to use your motorhome for a week or two, just leave the switch closed. If it's going to be more than a couple of weeks before using your coach, open the switch. This will assure your batteries will remain in the best condition possible. For long-term or winter storage, the batteries should be removed from the vehicle and stored where they can be recharged about every thirty days.

On the following pages are 12-volt wiring diagrams. The first drawing simply labeled "12V Wiring" will probably be the most useful. It shows how the power from the batteries reaches the main components.

The batteries, power distribution block, *50 amp breaker, auxiliary start solenoid, and isolator are all located under the front hood.

The converter is located behind the kick panel in front of the passenger cab seat. The 12-volt distribution panel is located directly behind the interior engine cover under an access door.

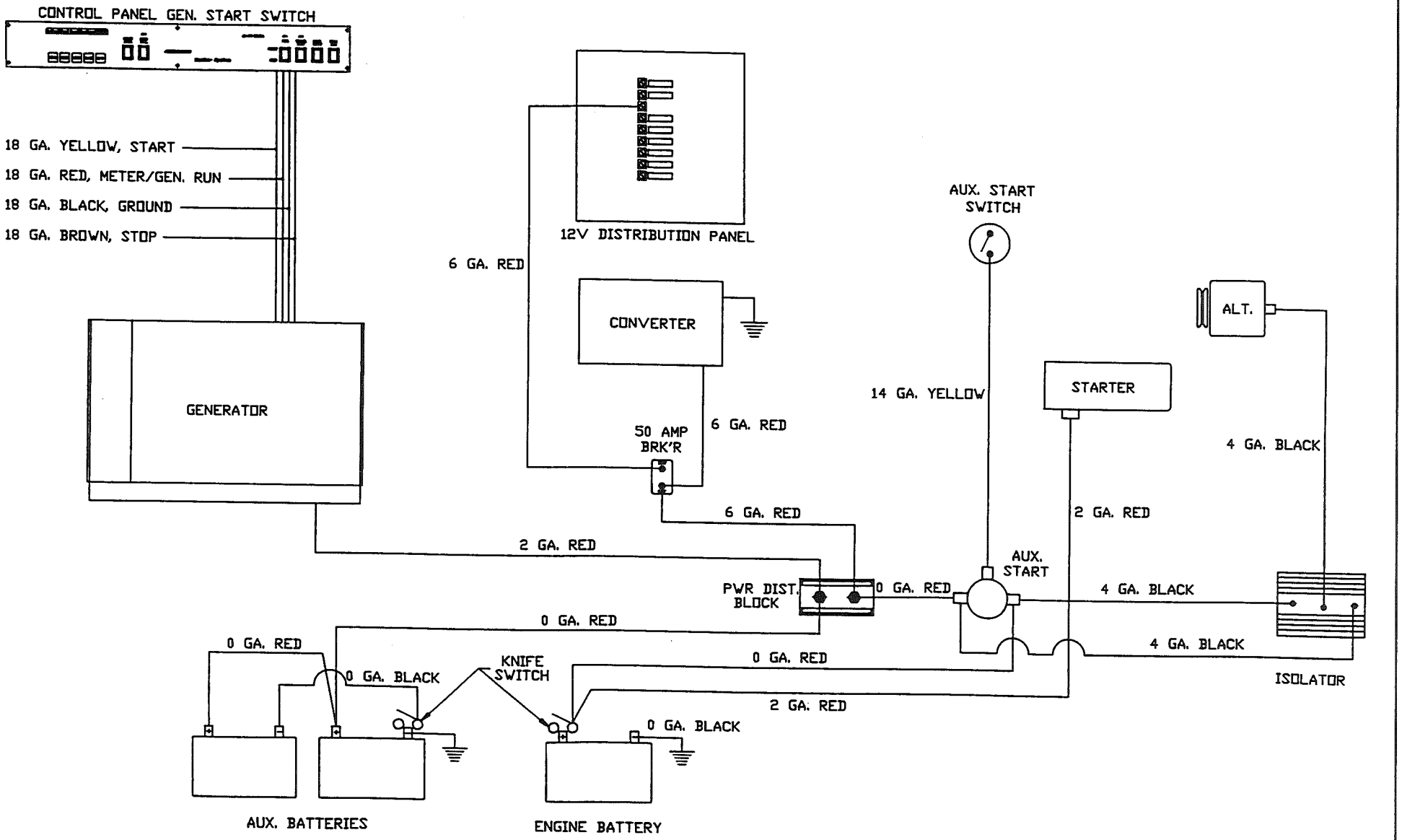
*In years past, most 12-volt circuit breakers were automatic – if they kicked out after a brief period of time they would reset themselves. Recently the automatic breakers have all been replaced with the type that must be manually reset. The reset button is in the end of the breaker and is depressed to reset. The button is small and in many cases directly under a wire so they can be difficult to see.

12V WIRING DIAGRAMS

- 12 volt wiring main
- 12 volt calculations, 30 ft.
- 12 volt calculations, 34 ft.
- 12 volt fuse panel, Airstream
- *12 volt fuse panel, Chevrolet
- 12 volt layout - firewall - 4 drawings
- 12 volt layout - chassis - 4 drawings
- 12 volt layout - body interior
- 12 volt schematic - "A" Pillar
- 12 volt layout - ceiling
- 12 volt harness - wiper/washer
- Harness, dash switches
- Harness, dash lights
- Harness, head lights
- Harness, clearance lights rear
- Harness, tail lights
- Harness, drivers door

*Used for Airstream Automotive Accessory

952383



TITLE: 12V WIRING				
SCALE: NONE	DATE: 09/04/91	DRAWING NUMBER: 952383	B	REV.

Circuit 1, 20 AMPS, Purple

Bedroom Wall Lamps (2)	6.00 Amps.
Bedroom Reading Lights (2)	2.08
Bedroom Ceiling Light	2.10
Wardrobe Light	1.00
Bedroom T.V.	5.00
Total	16.18 Amps.

Circuit 2, 20 AMPS, Yellow

Electronic Water Heater	1.00 Amps.
Bath Vent Fan	2.50
Double P.D. Bath Light	2.88
Total	6.38 Amps.

Circuit 3, None

Circuit 4, 20 AMPS, Brown

Docking Lights (6)	6.00 Amps.
Aisle Lights (4)	4.00
T.V.	7.00
Total	17.00 Amps.

Circuit 5, 20 AMPS, Blue

Double P.D. Dinette Light	2.88 Amps.
Single P.D. Living Area Light	1.44
Double P.D. Galley Light	2.88
Reading Lights (2)	2.08
Ceiling Vent Fan	2.50
Cool-O-Matic Vent	5.30
Total	17.08 Amps.

Circuit 6, 20 AMPS, Red

Furnace Lights	5.4 Amps.
Compartment Lights	8.0
Total	13.4 Amps.

Circuit 7, 20 AMPS, Black

Ceiling Lights (4)	11.52 Amps.
Porch Light	1.00
Entry Light	1.00
Step Light	1.00
Total	14.52 Amps.

Circuit 8, None

Circuit 9, 20 Amps, Green

Pump	7.00 Amps.
Range Vent W/Light	3.20
Oven Light	1.00
Total	11.20 Amps

Battery Charger 3 Amps. (Floating Type)

Total Amps: 98.76

1st. 20 Amps @ 100% = 20 Amps.
2nd. 20 Amps @ 50% = 10 Amps.
58.76 Amps @ 25% = 14.69 Amps.

44.69 Amp Converter Required by Calculation

Todd, PC-50, 50 Amp Converter Used

Note: All Wire is Stranded Copper, Type THNN or TEW 600 V, UL Wire

All Appliances are Installed per Mfgr's Instructions Per NEC 551-3(e-3)

ITEM	PART NUMBER	DESCRIPTION	QTY.
TOLERANCES (except as noted)	AIRSTREAM	DIVISION Engineering	
DECIMAL ±	PRODUCT LINE 30S.B. Legacy	SCALE	DRAWN BY T.C. / APPROVED BY
FRACTIONAL ±	TITLE 12V Calculations		
ANGULAR ±	NEXT ASSY.	DATE 8/91	DRAWING NUMBER 952388 / REV.

Circuit 1, 20AMPS, Purple

Bedroom Wall Lamps (2)	6.00 Amps.
Bedroom Reading Lights (2)	2.08
Bedroom Ceiling Light	2.10
Wardrobe Light	1.00
Bedroom T.V.	5.00
Total	16.18 Amps.

Circuit 2, 20 AMPS, Yellow

Electronic Water Heater	1.00 Amps.
Bath Vent Fan	2.50
Double P.D. BathLight	2.88
Total	6.38 Amps.

Circuit 3, None

Circuit 4, 20AMPS, Brown

Docking Lights (6)	6.00 Amps.
Aisle Lights (4)	4.00
T.V.	7.00
Total	17.00 Amps.

Circuit 5, 20 AMPS, Blue

Double P.D. Dinette Light	2.88 Amps.
Double P.D. Living Area Light	2.88
Double P.D. Galley Light	2.88
Reading Lights (2)	2.08
Ceiling Vent Fan	2.50
Cool-O-Matic Vent	5.30
Total	18.52 Amps

Circuit 6, 20 AMPS, Red

Furnace	5.4 Amps
Compartment Lights	10.0
TOTAL	15.4 Amps

*All Appliances are Installed per Mfgr's Instructions Per NEC 551-3(e-3)

Circuit 7, 20 AMPS, Black

Ceiling Lights (5)	14.40 Amps.
Porch Light	1.00
Entry Light	1.00
Step Light	1.00
Total	17.40 Amps.

Circuit 8, None

Circuit 9, 20 Amps, Green

Pump	7.00 Amps.
Range Vent W/Light	3.20
Oven Light	1.00
Total	11.20 Amps.

Battery Charger 3.0 Amps. (Floating Type)

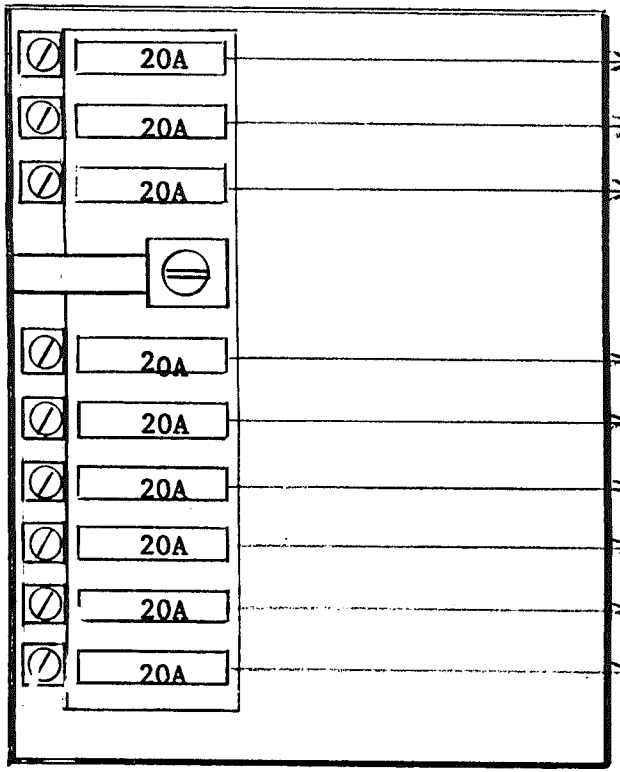
Total Amps: 105.08

1st. 20 Amps @ 100% = 20 Amps.
2nd. 20 Amps @ 50% = 10 Amps.
65.08 Amps @ 25% = 16.27 Amps.

46.27 Amp Converter Required by Calculation

Todd, PC-50, 50 Amp Converter Used

ITEM	PART NUMBER	DESCRIPTION	QTY.
TOLERANCES (except as noted)	AIRSTREAM	DIVISION Engineering	
DECIMAL ±	PRODUCT LINE 34 S.B.Legacy	SCALE	DRAWN BY T.C. / APPROVED BY
FRACTIONAL ±	TITLE 12V Calculations		
ANGULAR ±	NEXT ASSY.	DATE 10/91	DRAWING NUMBER 952392 REV.



Fuse 1, 20A Spare

Fuse 2, 20A Spare

Fuse 3, 20A Purple Circuit: Rear TV, Bedroom and Wardrobe Lt.

12Volt Power IN 6 Ga. Red

Fuse 4, 20A Yellow Circuit: WTR. HTR., Bath VT., Bath LT.

Fuse 5, 20A Brown Circuit: Docking and Aisle LTS., Front TV

Fuse 6, 20A Blue Circuit: Dinette, Living Area, Galley and Frt. Reading LTS., Ceiling VT., Cool-O-Matic Fan

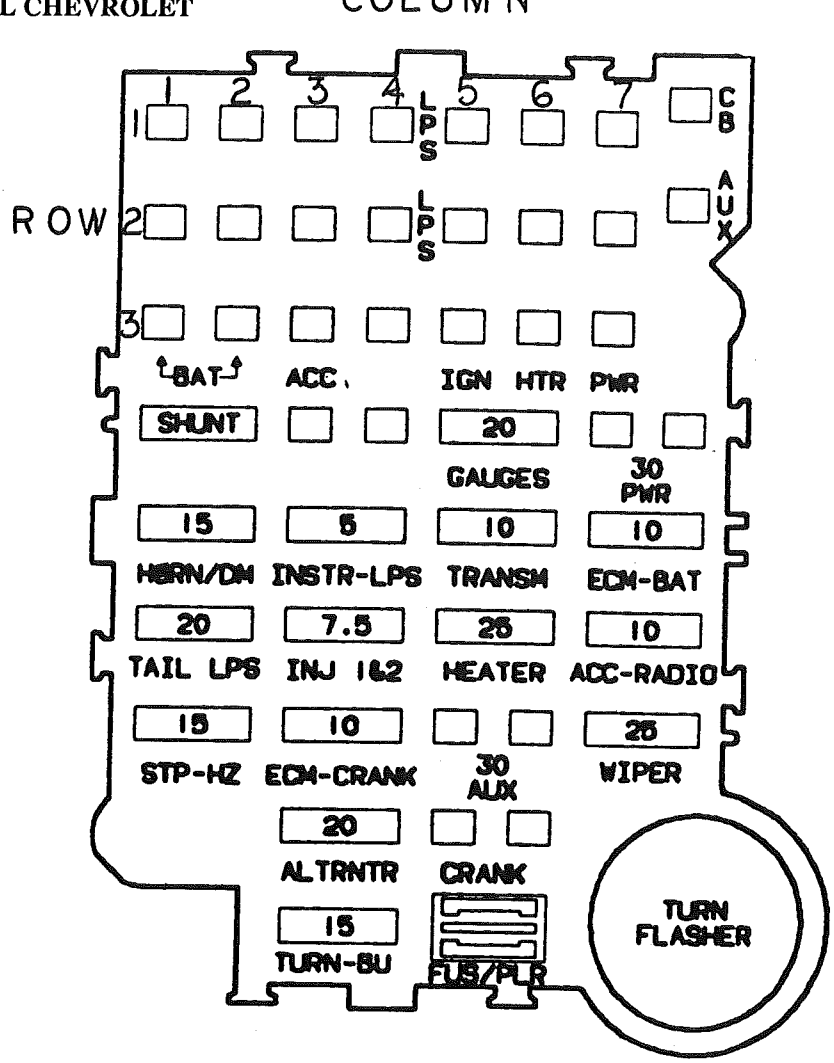
Fuse 7, 20A Red Circuit: Furnace, Compartment LTS., Refer LT.

Fuse 8, 20A Black Circuit: Ceiling LTS., Porch Entray and Step LTS.

Fuse 9, 20A Green Circuit: WTR. Pump, Range VT., Oven LT.

ITEM	PART NUMBER	DESCRIPTION	QTY.
TOLERANCES (except as noted)	AIRSTREAM	DIVISION Engineering	
DECIMAL ±	PRODUCT LINE 30' Legacy MH	SCALE	DRAWN BY T.C. / APPROVED BY
FRACTIONAL ±	TITLE 12 V Fuse Panel		
ANGULAR ±	NEXT ASSY.	DATE 9/91	DRAWING NUMBER 952389 REV.

12 VOLT FUSE PANEL CHEVROLET



CONN COLOR	LOCATION	FUSE NAME	FUSE SIZE	PROTECTED FUNCTION	WIRE
BLACK	ROW 1 COL. 1	HORN/DM	15	RADIO	14 YELLOW
BLACK	ROW 1 COL. 2	HORN/DM	15	BATTERY LEVEL	14 ORANGE
BLACK	ROW 2 COL. 1	HORN/DM	15	HOOD LT. & VISOR LT.	16 BLUE
BLACK	ROW 3 COL. 1	HORN/DM	15	DOOR LOCK	14 BLK/WHT
CLEAR	ROW 1 COL. 3	ACC-RADIO	10	TV CUTOUT RELAY	14 RED
CLEAR	ROW 2 COL. 3	ACC-RADIO	10	REAR MONITOR	14 YELLOW
CLEAR	ROW 3 COL. 3	ACC-RADIO	10	STEP (IGNITION)	16 RED
BLUE	ROW 1 COL. 4	INSTR.-LPS.	5	INSTR.-PANEL LTS.	16 GRAY
BROWN	ROW 1 COL. 5	GAUGES	20	DRIVING LIGHTS	14 BLUE
BROWN	ROW 2 COL. 5	GAUGES	20	POWER MIRRORS	14 ORANGE
GREEN	ROW 1 COL. 6	HEATER	25	REAR HEATER	12 BLUE
GREEN	ROW 2 COL. 6	HEATER	25	HEATER & A/C FAN LOW & MEDIUM SPEED	12 BLACK
RED	ROW 1 COL. 7	PWR.	30	STEP (CONSTANT)	10 RED
RED	ROW 2 COL. 7	PWR.	30	PWR. SEATS & WINDOWS	12 RED
RED	ROW 3 COL. 7	PWR.	30	LIGHTERS & SPOT LT.	12 ORANGE

511012L1

PAGE 1 OF 4

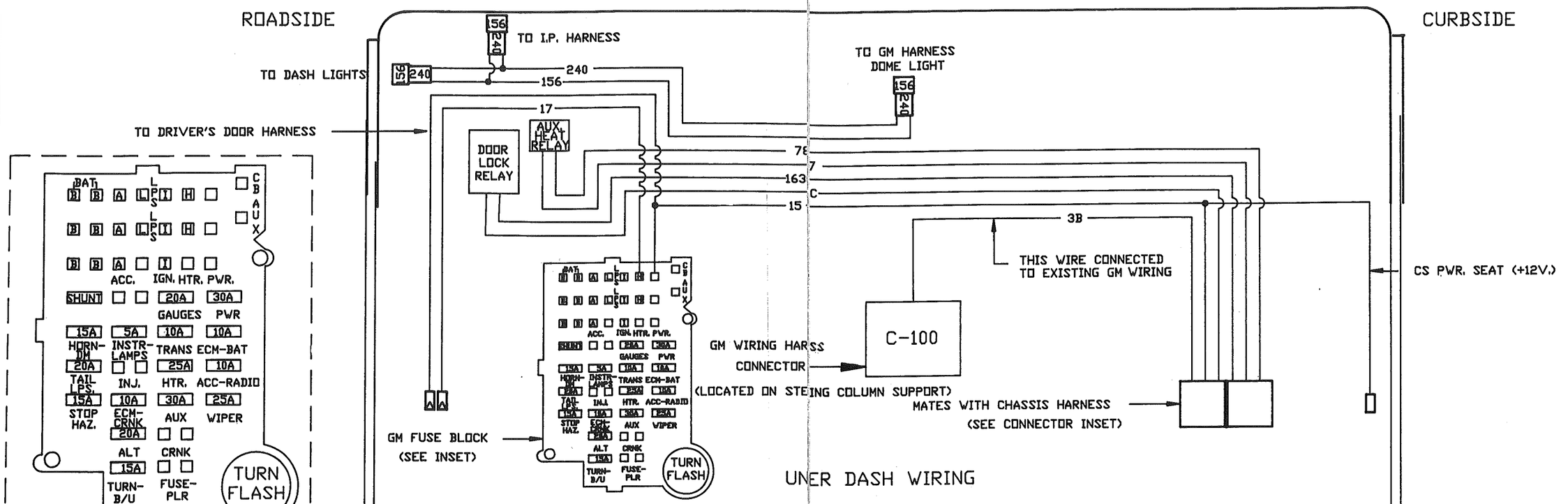
LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

FIREWALL HARNESS (AUX. HEAT,PWR. SEAT,COMP. LOCK WIRING)

FRNT

ROADSIDE

CURBSIDE

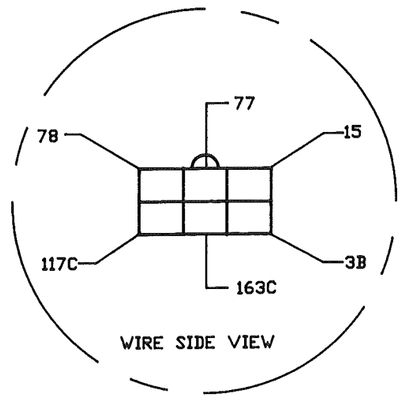


UNER DASH WIRING

No.	Ga	Color	Cutting Length	Function	No.	Ga	Color	Cutting Length	Function
05	18	ORANGE	"	AUTO BAT. LEVEL	156	16	GREEN	"	DOME LT. GROUND
08	16	GRAY	"	I.P. LTS.	171	14	BLACK/WHT.	"	+12V.DOOR LOCK
3	12	ORANGE	"	CIG. LIGHTERS	240	16	ORANGE	"	DOME LT. POWER
4	12	BROWN	"	+12V.	13	12	BLUE	"	+12V. AUX. HEATER
14	14	BLUE	"	+12V.(DRIVE LTS)	77	12	RED	"	AUX. HEAT (LO)
15	12	RED	"	+12V. SEATS/WIND.	77S	12	RED/ORNG.	"	AUX. HEAT SW.(LO)
17	14	ORANGE	"	MIRRORS	78	12	ORANGE	"	AUX. HEAT (HI)
18	14	YELLOW	"	MONITOR/JACKS	78S	12	ORNG./WHT.	"	AUX. HEAT SW.(HI)
19	14	BROWN	"	CLEARANCE LTS.	117C	14	PINK	"	DOOR LOCK (SW.)
20	14	BLUE/WHT.	"	DRIVE LT. RELAY	163	16	RED/ORNG.	"	DOOR UNLOCK
22	14	RED	"	+12V. IGN.	163C	16	PURPLE	"	COMP.UNLOCK(SW.)
28	12	PURPLE	"	DOCK LTS.	CP	10	RED	"	+12V. AIR COMP.
29	14	YELLOW	"	AUX. START SOL.	3B	14	YEL./RED	"	CENTER BRAKE LT.
30	14	PURPLE	"	TV	"	"	"	"	"
34	16	BLUE	"	HOOD/VISOR LT.	"	"	"	"	"
36	14	RED	"	DRIVE LT. PWR.	"	"	"	"	"
39A	10	RED	"	+12V. STEP	"	"	"	"	"
39C	16	RED	"	+12V. STEP (IGN.)	"	"	"	"	"
117	16	PINK/BLK.	"	ALL DOOR LOCK	"	"	"	"	"
163	16	RED/ORNG.	"	DOOR UNLOCK	"	"	"	"	"

Terminals

- Bullet .180 Male
- Bullet .180 Femal
- Butt Connector
- Ring .250 I.D.
- Spade .250 Fema
- Spade .250 Male
- Coax Connector

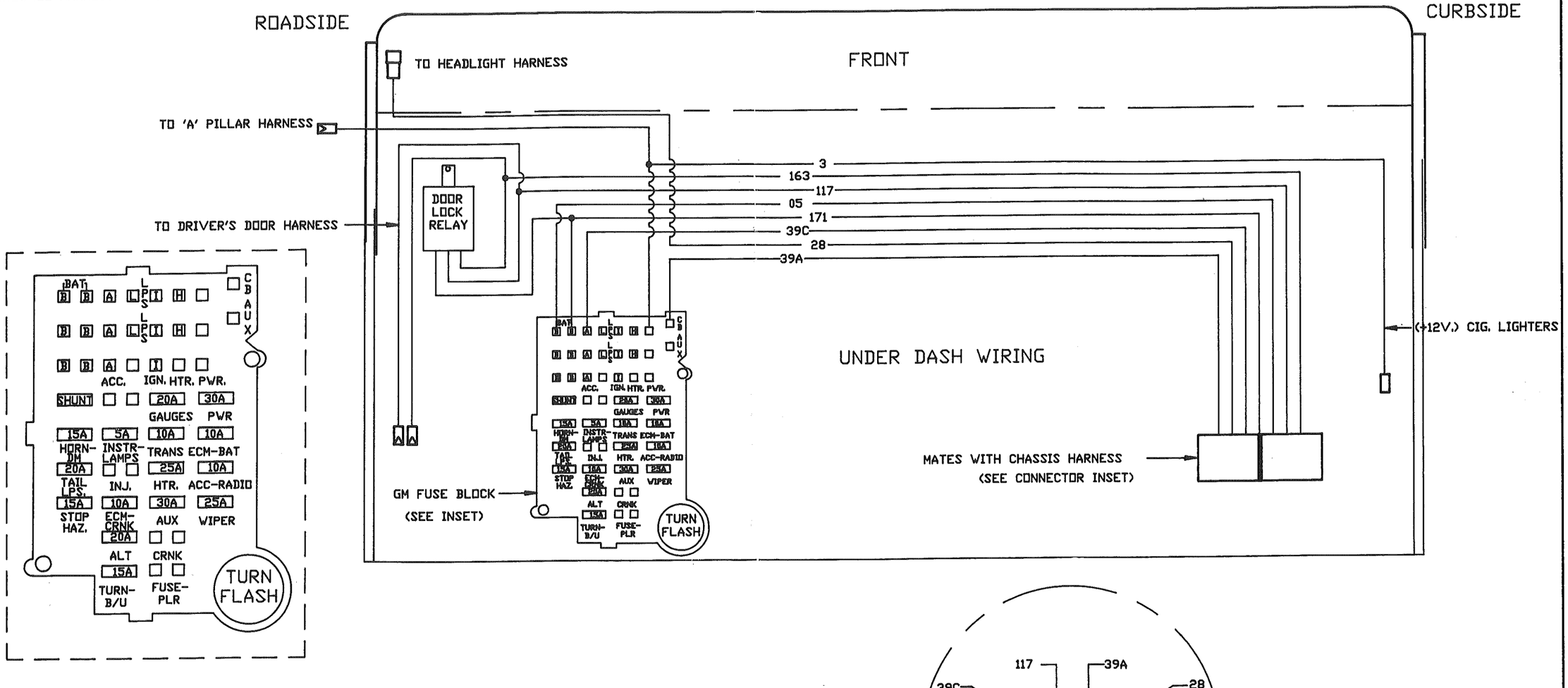


WIRE SIDE VIEW

ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±		Airstream	DRAWN BY RLA
NEXT ASS'Y		PRODUCT LINE L/Y-LEG-A/S MH'S.	APPROVED BY
TITLE	12V. LAYOUT-FIREWALL		
SCALE 1=4	DATE 09/92	DRAWING NUMBER 511012L1	D REV.

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

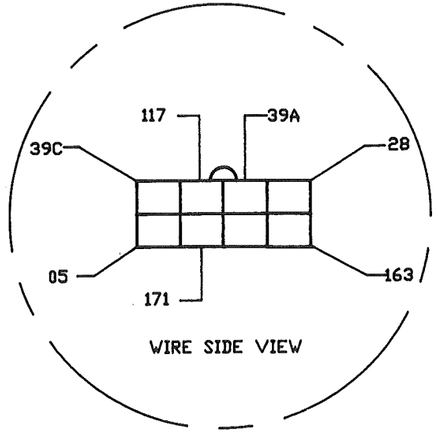
FIREWALL HARNESS (STEP,KEYLESS ENTRY,CONTROL PANEL WIRING)



No.	Ga.	Color	Cutting Length	Function	No.	Ga.	Color	Cutting Length	Function
05	18	ORANGE	"	AUTO BAT. LEVEL	156	16	GREEN	"	DOME LT. GROUND
08	16	GRAY	"	L.P. LTS.	171	14	BLACK/WHT.	"	+12V.DOOR LOCK
3	12	ORANGE	"	CIG. LIGHTERS	240	16	ORANGE	"	DOME LT. POWER
4	12	BROWN	"	+12V.	13	12	BLUE	"	+12V. AUX. HEATER
14	14	BLUE	"	+12V.(DRIVE LTS)	77	12	RED	"	AUX. HEAT (LO)
15	12	RED	"	+12V. SEATS/WIND.	77S	12	RED/ORNG.	"	AUX. HEAT SW.(LO)
17	14	ORANGE	"	MIRRORS	78	12	ORANGE	"	AUX. HEAT (HI)
18	14	YELLOW	"	MONITOR/JACKS	78S	12	ORNG./WHT.	"	AUX. HEAT SW.(HI)
19	14	BROWN	"	CLEARANCE LTS.	117C	14	PINK	"	DOOR LOCK (SW.)
20	14	BLUE/WHT.	"	DRIVE LT. RELAY	163C	16	PURPLE	"	COMP.UNLOCK(SW)
22	14	RED	"	+12V. IGN.	CP	10	RED	"	+12V. AIR COMP.
28	12	PURPLE	"	DOCK LTS.	3B	14	YEL/RED	"	CENTER BRAKE LT.
29	14	YELLOW	"	AUX. START SOL.	"	"	"	"	"
30	14	PURPLE	"	TV	"	"	"	"	"
34	16	BLUE	"	HOOD/VISOR LT.	"	"	"	"	"
36	14	RED	"	DRIVE LT. PWR.	"	"	"	"	"
39A	10	RED	"	+12V. STEP	"	"	"	"	"
39C	16	RED	"	+12V. STEP (IGN)	"	"	"	"	"
117	16	PINK/BLK.	"	ALL DOOR LOCK	"	"	"	"	"
163	16	RED/ORNG.	"	DOOR UNLOCK	"	"	"	"	"

Terminals

- Bullet .180 Male
- Bullet .180 Female
- Butt Connector
- Ring .250 I.D.
- Spade .250 Female
- Spade .250 Male
- Coax Connector



ITEM	PART NUMBER	DESCRIPTION	QTY

TOLERANCES ±

NEXT ASS'Y

Airstream

PRODUCT LINE L/Y-LEG-A/S MH'S.

DRAWN BY RLA

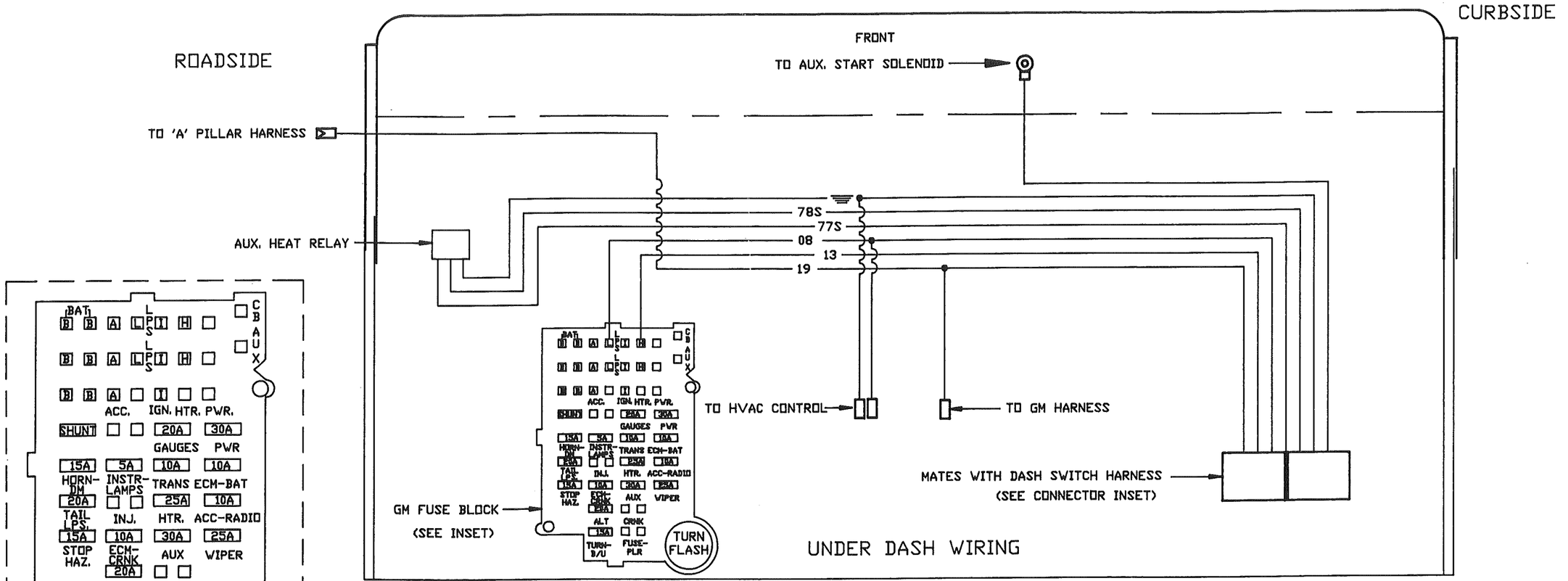
APPROVED BY

TITLE 12V. LAYOUT-FIREWALL

SCALE	DATE	DRAWING NUMBER	REV.
1=4	09/92	511012L2	D

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

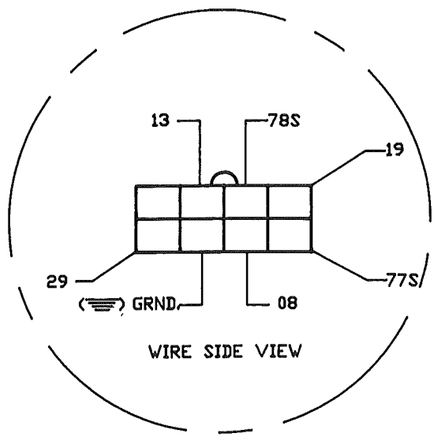
FIREWALL HARNESS (AUX. HEAT,AUX. START,I.P. LT. WIRING)



No.	Ga.	Color	Cutting Length	Function	No.	Ga.	Color	Cutting Length	Function
05	18	ORANGE	"	AUTO BAT. LEVEL	156	16	GREEN	"	DOME LT. GROUND
08	16	GRAY	"	I.P. LTS.	171	14	BLACK/WHT.	"	+12V.DOOR LOCK
3	12	ORANGE	"	CIG. LIGHTERS	240	16	ORANGE	"	DOME LT. POWER
4	12	BROWN	"	+12V.	13	12	BLUE	"	+12V. AUX. HEATER
14	14	BLUE	"	+12V.(DRIVE LTS)	77	12	RED	"	AUX. HEAT (LO)
15	12	RED	"	+12V. SEATS/WIND.	77S	12	RED/ORNG.	"	AUX. HEAT SW.(LO)
17	14	ORANGE	"	MIRRORS	78	12	ORANGE	"	AUX. HEAT (HI)
18	14	YELLOW	"	MONITOR/JACKS	78S	12	ORNG./WHT.	"	AUX. HEAT SW.(HI)
19	14	BROWN	"	CLEARANCE LTS.	117C	14	PINK	"	DOOR LOCK (SW.)
20	14	BLUE/WHT.	"	DRIVE LT. RELAY	163	16	RED/ORNG.	"	DOOR UNLOCK
22	14	RED	"	+12V. IGN.	163C	16	PURPLE	"	COMP.UNLOCK(SW.)
28	12	PURPLE	"	DOCK LTS.	CP	10	RED	"	+12V. AIR COMP.
29	14	YELLOW	"	AUX. START SOL.	3B	14	YEL./RED	"	CENTER BRAKE LT.
30	14	PURPLE	"	TV	"	"	"	"	"
34	16	BLUE	"	HOOD/VISOR LT.	"	"	"	"	"
36	14	RED	"	DRIVE LT. PWR.	"	"	"	"	"
39A	10	RED	"	+12V. STEP	"	"	"	"	"
39C	16	RED	"	+12V. STEP (IGN.)	"	"	"	"	"
117	16	PINK/BLK.	"	ALL DOOR LOCK	"	"	"	"	"
163	16	RED/ORNG.	"	DOOR UNLOCK	"	"	"	"	"

Terminals

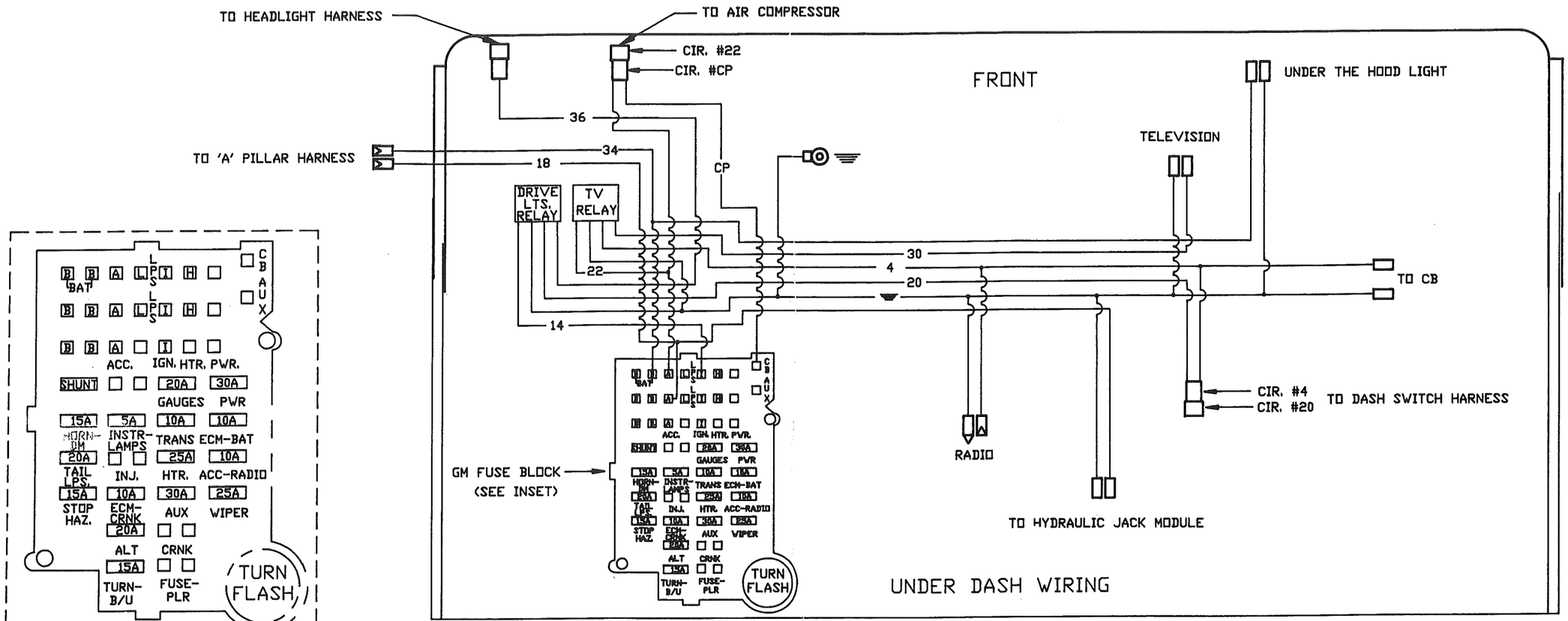
- Bullet .180 Male
- Bullet .180 Female
- Butt Connector
- Ring .250 I.D.
- Spade .250 Female
- Spade .250 Male
- Coax Connector



ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±		Airstream	DRAWN BY RLA
NEXT ASSY		PRODUCT LINE L/Y-LEG-A/S MH'S.	APPROVED BY
TITLE	12V. LAYOUT-FIREWALL		
SCALE 1=4	DATE 09/92	DRAWING NUMBER 511012L3	REV. D

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

FIREWALL HARNESS (RADIO,TV,HYDRAULIC JACK,AIR COMPRESSOR WIRING)



No.	Ga.	Color	Cutting Length	Function	No.	Ga.	Color	Cutting Length	Function
05	18	ORANGE	"	AUTO BAT. LEVEL	156	16	GREEN	"	DOME LT. GROUND
08	16	GRAY	"	I.P. LTS.	171	14	BLACK/WHT.	"	+12V. DOOR LOCK
3	12	ORANGE	"	CIG. LIGHTERS	240	16	ORANGE	"	DOME LT. POWER
4	12	BROWN	"	+12V.	13	12	BLUE	"	+12V. AUX. HEATER
14	14	BLUE	"	+12V.(DRIVE LTS)	77	12	RED	"	AUX. HEAT (LO)
15	12	RED	"	+12V. SEATS/WIND.	77S	12	RED/ORNG.	"	AUX. HEAT SW.(LO)
17	14	ORANGE	"	MIRRORS	78	12	ORANGE	"	AUX. HEAT (HI)
18	14	YELLOW	"	MONITOR/JACKS	78S	12	ORNG./WHT.	"	AUX. HEAT SW.(HI)
19	14	BROWN	"	CLEARANCE LTS.	117C	14	PINK	"	DOOR LOCK (SW.)
20	14	BLUE/WHT.	"	DRIVE LT. RELAY	163	16	RED/ORNG.	"	DOOR UNLOCK
22	14	RED	"	+12V. IGN.	163C	16	PURPLE	"	COMP.UNLOCK(SW.)
28	12	PURPLE	"	DOCK LTS.	CP	10	RED	"	+12V. AIR COMP.
29	14	YELLOW	"	AUX. START SOL.	38	14	YEL./RED	"	CENTER BRAKE LT.
30	14	PURPLE	"	TV	"	"	"	"	"
34	16	BLUE	"	HOOD/VISOR LT.	"	"	"	"	"
36	14	RED	"	DRIVE LT. PWR.	"	"	"	"	"
39A	10	RED	"	+12V. STEP	"	"	"	"	"
39C	16	RED	"	+12V. STEP (IGN)	"	"	"	"	"
117	16	PINK/BLK.	"	ALL DOOR LOCK	"	"	"	"	"
163	16	RED/ORNG.	"	DOOR UNLOCK	"	"	"	"	"

Terminals

- Bullet .180 Male
- Bullet .180 Female
- Butt Connector
- Ring .250 I.D.
- Spade .250 Female
- Spade .250 Male
- Coax Connector

ITEM	PART NUMBER	DESCRIPTION	QTY

TOLERANCES ±

NEXT ASS'Y

Airstream

PRODUCT LINE L/Y-LEG-A/S M.H'S.

DRAWN BY RLA

APPROVED BY

TITLE 12V. LAYOUT-FIREWALL

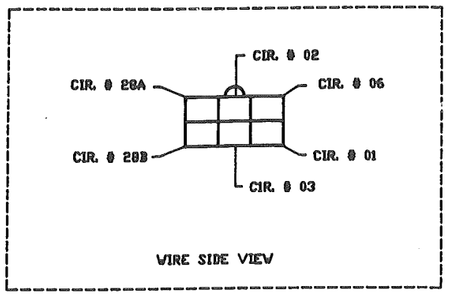
SCALE 1=4 | DATE 09/92 | DRAWING NUMBER 511012L 4 | D | REV.

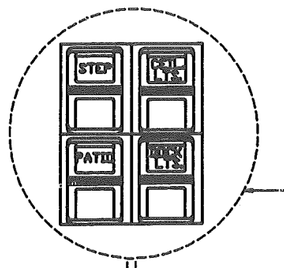
511011L1

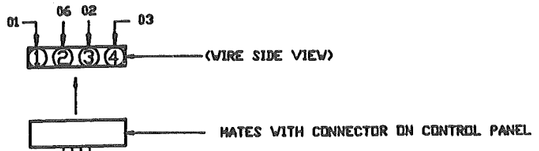
LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

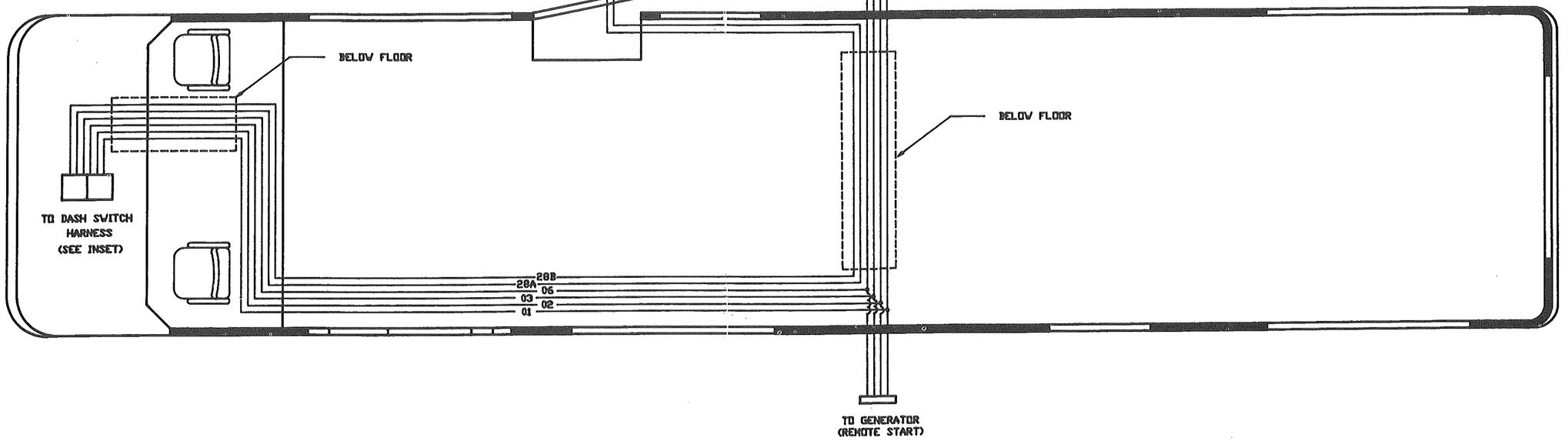
PAGE 1 OF 4

CHASSIS HARNESS (GENERATOR & DOCK LT. WIRING)









No.	Ga	Color	Cutting Length	FUNCTION
01	18	BLACK	*	GEN (GROUND)
02	18	BROWN	*	GEN (STOP)
03	18	YELLOW	*	GEN (START)
05	18	ORANGE	*	BAT COND.(ENG)
06	18	RED	*	GEN (HOUR METER)
16	12	BLACK	*	+ 12V
6	12	RED	*	+ 12V
21	12	GREEN	*	AISLE LT.
28	12	PURPLE	*	DOCK LT.
30	12	BLUE/WHT.	*	LPG GAUGE
37	18	BLACK/RED	*	DOOR LOCK LT.
39A	10	RED	*	+12V. (STEP)
39B	16	RED/WHT.	*	STEP SW.
39C	16	RED	*	+ 12V (STEP-IGN.)
39D	16	RED/WHT.	*	STEP SW.
39E	16	YELLOW	*	+ 12V (STEP-IGN.)
15	12	RED	*	+ 12V.
77	12	RED	*	AUX. HEAT (LO)
78	12	ORANGE	*	AUX. HEAT (HI)
*	*	*	*	*

No.	Ga	Color	Cutting Length	FUNCTION
163C	14	PURPLE	*	COMP. UNLOCK SW.
117	14	PINK/BLK.	*	COMP. LOCK
117C	14	PINK	*	COMP. LOCK SW.
118	14	PINK/ORNG.	*	UNLOCK DRIVE DR.
119	16	PINK/YEL.	*	LOCK INPUT
120	16	PINK/GRN.	*	UNLOCK INPUT
163	14	RED/ORNG.	*	UNLOCK MAIN DR.
171	14	BLACK/WHT.	*	+ 12V.
4	12	BROWN	*	+ 12V.
3B	14	YEL/RED	*	CNTR. BRAKE LT.
28A	12	PURP/WHT.	*	DOCK LT. SW.
28B	12	PURP/WHT.	*	DOCK LT. SW.

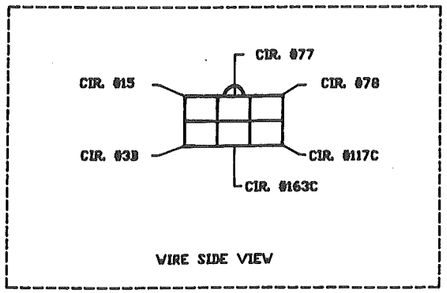
ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±	Airstream		DRAWN BY RLA
NEXT ASSY	PRODUCT LINE L,Y,LEG,A,S,M,H,S.		APPROVED BY
TITLE 12V. LAYOUT-CHASSIS			
SCALE 1=16	DATE 09/02/92	DRAWING NUMBER 511011_1	REV. D

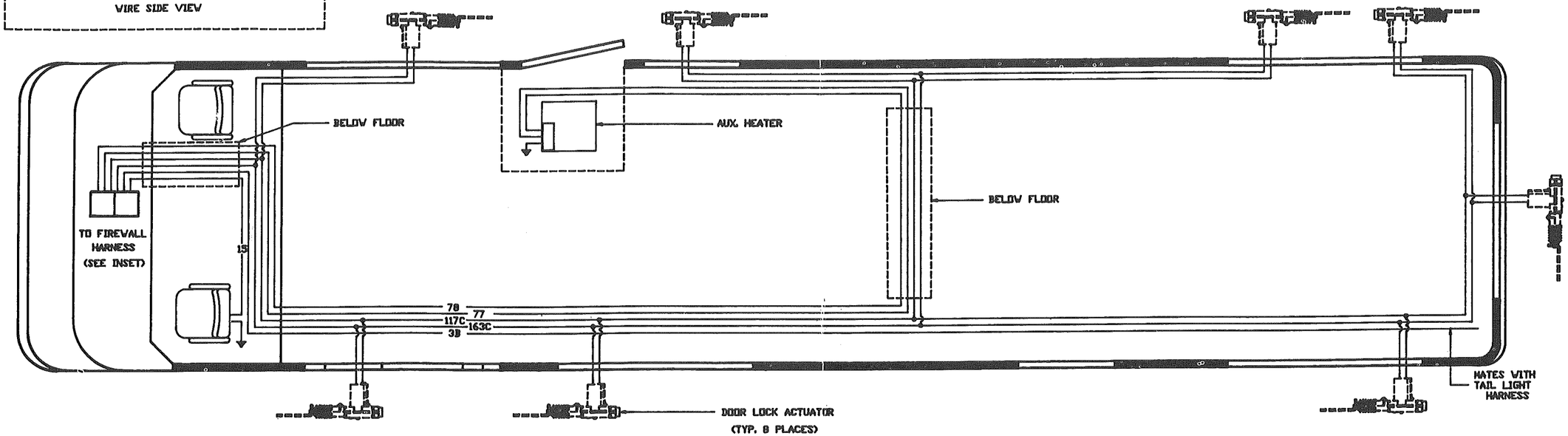
511011L2

PAGE 2 OF 4

CHASSIS HARNESS (AUX. HEAT,PWR. SEAT,CENTER BRAKE LT,COMP. LOCK WIRING)

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA





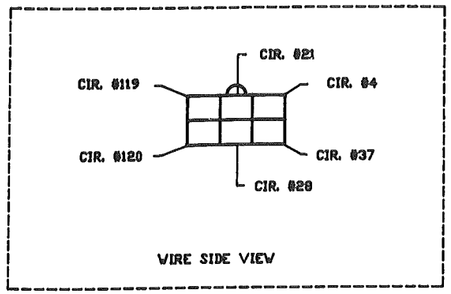
No.	Ga	Color	Cutting Length	FUNCTION
01	18	BLACK	*	GEN (GROUND)
02	18	BROWN	*	GEN (STOP)
03	18	YELLOW	*	GEN (START)
05	18	ORANGE	*	BAT COND.(ENG)
06	18	RED	*	GEN (HOUR METER)
16	12	BLACK	*	+ 12V
6	12	RED	*	+ 12V
21	12	GREEN	*	AISLE LT.
28	12	PURPLE	*	DOCK LT.
30	12	BLUE/WHT.	*	LPG GAUGE
37	18	BLACK/RED	*	DOOR LOCK LT.
39A	10	RED	*	+12V. (STEP)
39B	16	RED/WHT.	*	STEP SW.
39C	16	RED	*	+ 12V (STEP-IGN.)
39D	16	RED/WHT.	*	STEP SW.
39E	16	YELLOW	*	+ 12V (STEP-IGN.)
15	12	RED	*	+ 12V.
77	12	RED	*	AUX. HEAT (LO)
78	12	ORANGE	*	AUX. HEAT (HI)
*	*	*	*	*

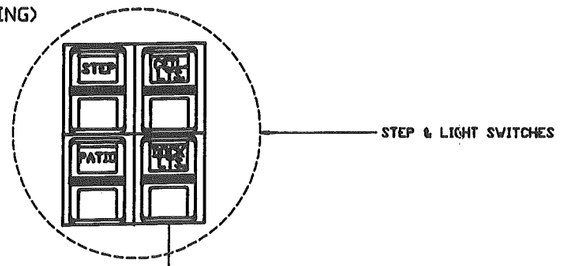
No.	Ga	Color	Cutting Length	FUNCTION
163C	14	PURPLE	*	COMP. UNLOCK SW.
117	14	PINK/BLK.	*	COMP. LOCK
117C	14	PINK	*	COMP. LOCK SW.
118	14	PINK/ORNG.	*	UNLOCK DRIVE DR.
119	16	PINK/YEL.	*	LOCK INPUT
120	16	PINK/GRN.	*	UNLOCK INPUT
163	14	RED/ORNG.	*	UNLOCK MAIN DR.
171	14	BLACK/WHT.	*	+ 12V.
4	12	BROWN	*	+ 12V.
3B	14	YEL/RED	*	CNTR. BRAKE LT.
28A	12	PURP/WHT.	*	DOCK LT. SW.
28B	12	PURP/WHT.	*	DOCK LT. SW.

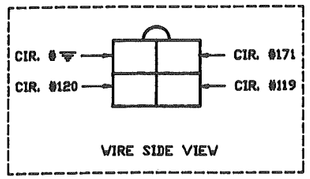
ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±	Airstream		DRAWN BY RLA
NEXT ASS'Y	PRODUCT LINE L,Y,LEG,A,S,M,H,S.		APPROVED BY
TITLE 12V. LAYOUT-CHASSIS			
SCALE 1=16	DATE 08/17/92	DRAWING NUMBER 511011L2	REV. D

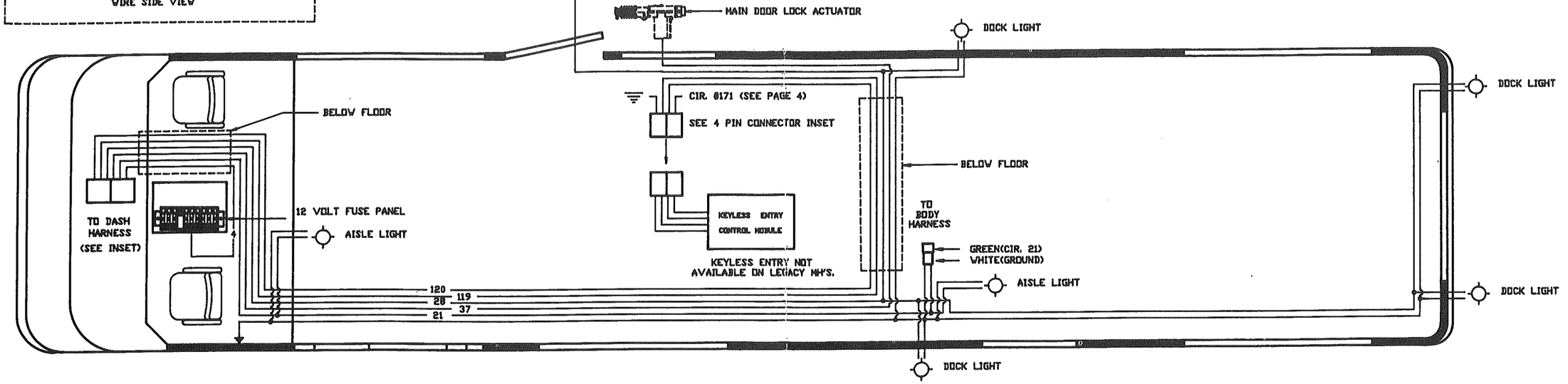
CHASSIS HARNESS (DOOR LOCK SW,AISLE LT, DOCK LT. WIRING)

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA









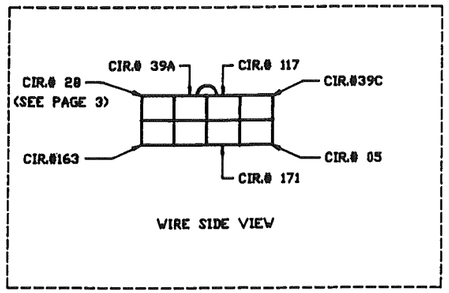
No.	Ga	Color	Cutting Length	FUNCTION
01	18	BLACK	*	GEN (GROUND)
02	18	BROWN	*	GEN (STOP)
03	18	YELLOW	*	GEN (START)
05	18	ORANGE	*	BAT COND.(ENG)
06	18	RED	*	GEN (HOUR METER)
16	12	BLACK	*	+ 12V
6	12	RED	*	+ 12V
21	12	GREEN	*	AISLE LT.
28	12	PURPLE	*	DOCK LT.
30	12	BLUE/WHT.	*	LPG GAUGE
37	18	BLACK/RED	*	DOOR LOCK LT.
39A	10	RED	*	+12V. (STEP)
39B	16	RED/WHT.	*	STEP SW.
39C	16	RED	*	+ 12V (STEP-IGN.)
39D	16	RED/WHT.	*	STEP SW.
39E	16	YELLOW	*	+ 12V (STEP-IGN.)
15	12	RED	*	+ 12V.
77	12	RED	*	AUX. HEAT (LO)
78	12	ORANGE	*	AUX. HEAT (HI)
*	*	*	*	*

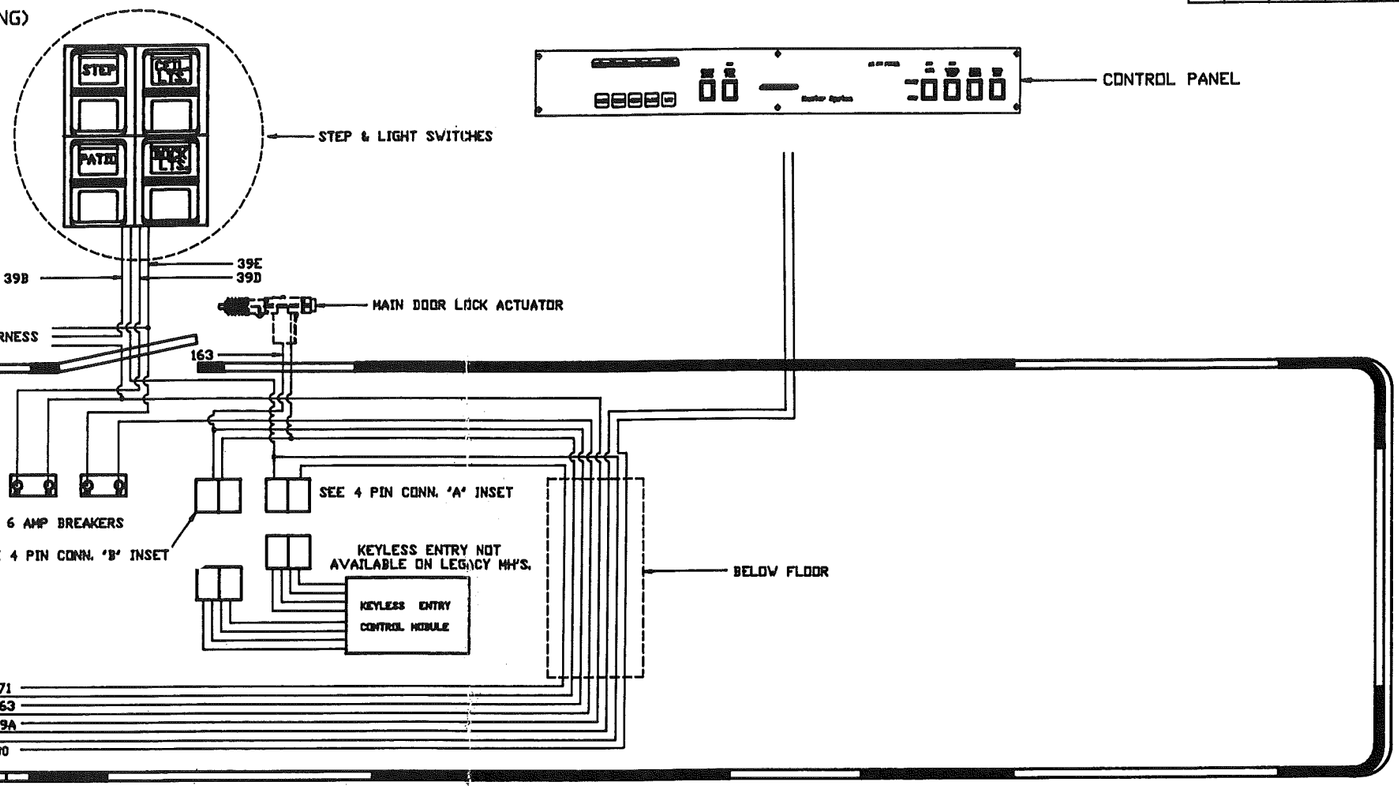
No.	Ga	Color	Cutting Length	FUNCTION
163C	14	PURPLE	*	COMP. UNLOCK SW.
117	14	PINK/BLK.	*	COMP. LOCK
117C	14	PINK	*	COMP. LOCK SW.
118	14	PINK/ORNG.	*	UNLOCK DRIVE DR.
119	16	PINK/YEL.	*	LOCK INPUT
120	16	PINK/GRN.	*	UNLOCK INPUT
163	14	RED/ORNG.	*	UNLOCK MAIN DR.
171	14	BLACK/WHT.	*	+ 12V.
4	12	BROWN	*	+ 12V.
3B	14	YEL/RED	*	CNTR. BRAKE LT.
28A	12	PURP/WHT.	*	DOCK LT. SW.
28B	12	PURP/WHT.	*	DOCK LT. SW.

ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±	Airstream		DRAWN BY RLA
NEXT ASS'Y	PRODUCT LINE L,Y,LEG,A,S,M,H,S.		APPROVED BY
TITLE 12V. LAYOUT-CHASSIS			
SCALE 1=16	DATE 08/17/92	DRAWING NUMBER 511011L3	REV. D

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA

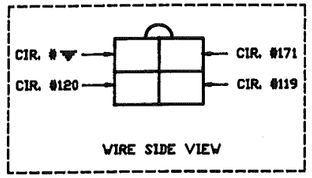
CHASSIS HARNESS (STEP,KEYLESS ENTRY,CONTROL PANEL WIRING)



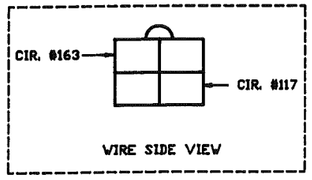


No.	Ga	Color	Cutting Length	FUNCTION
01	18	BLACK	*	GEN (GROUND)
02	18	BROWN	*	GEN (STOP)
03	18	YELLOW	*	GEN (START)
05	18	ORANGE	*	BAT COND.(ENG)
06	18	RED	*	GEN (HOUR METER)
16	12	BLACK	*	+ 12V
6	12	RED	*	+ 12V
21	12	GREEN	*	AISLE LT.
28	12	PURPLE	*	DOOR LT.
30	12	BLUE/WHT.	*	LPG GAUGE
37	18	BLACK/RED	*	DOOR LOCK LT.
39A	10	RED	*	+12V. (STEP)
39B	16	RED/WHT.	*	STEP SW.
39C	16	RED	*	+ 12V (STEP-IGN.)
39D	16	RED/WHT.	*	STEP SW.
39E	16	YELLOW	*	+ 12V (STEP-IGN.)
15	12	RED	*	+ 12V.
77	12	RED	*	AUX. HEAT (LO)
78	12	ORANGE	*	AUX. HEAT (HI)
*	*	*	*	*

No.	Ga	Color	Cutting Length	FUNCTION
163C	14	PURPLE	*	COMP. UNLOCK SW.
117	14	PINK/BLK.	*	COMP. LOCK
117C	14	PINK	*	COMP. LOCK SW.
*	*	*	*	*
119	16	PINK/YEL.	*	LOCK INPUT
120	16	PINK/GRN.	*	UNLOCK INPUT
163	14	RED/ORNG.	*	UNLOCK MAIN DR.
171	14	BLACK/WHT.	*	+ 12V.
4	12	BROWN	*	+ 12V.
3B	14	YEL/RED	*	CNTR. BRAKE LT.
28A	12	PURP/WHT.	*	DOOR LT. SW.
28B	12	PURP/WHT.	*	DOOR LT. SW.



CONNECTOR 'A'

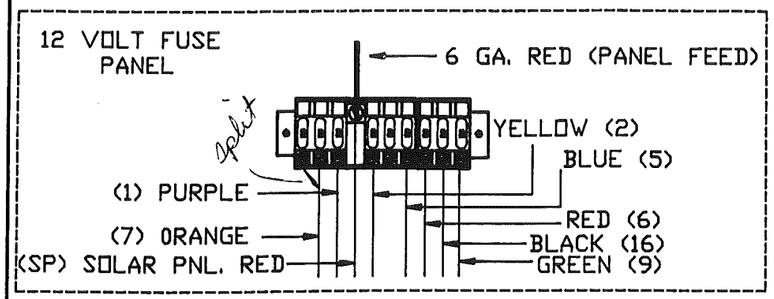


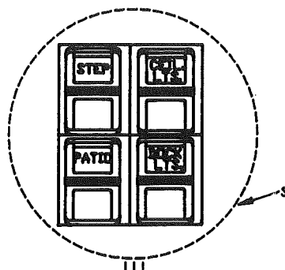
CONNECTOR 'B'

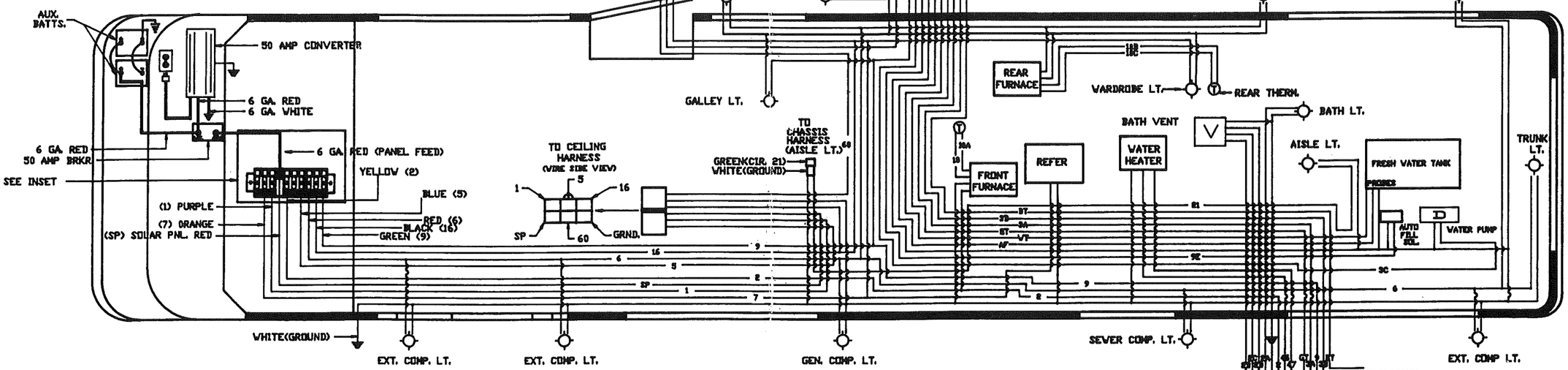
ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±	Airstream		DRAWN BY RLA
NEXT ASS'Y	PRODUCT LINE L,Y,LEG,A,S,M,H,S.		APPROVED BY
TITLE 12V. LAYOUT-CHASSIS			
SCALE 1=16	DATE 08/17/92	DRAWING NUMBER 511011L4	REV. D

511009L

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA







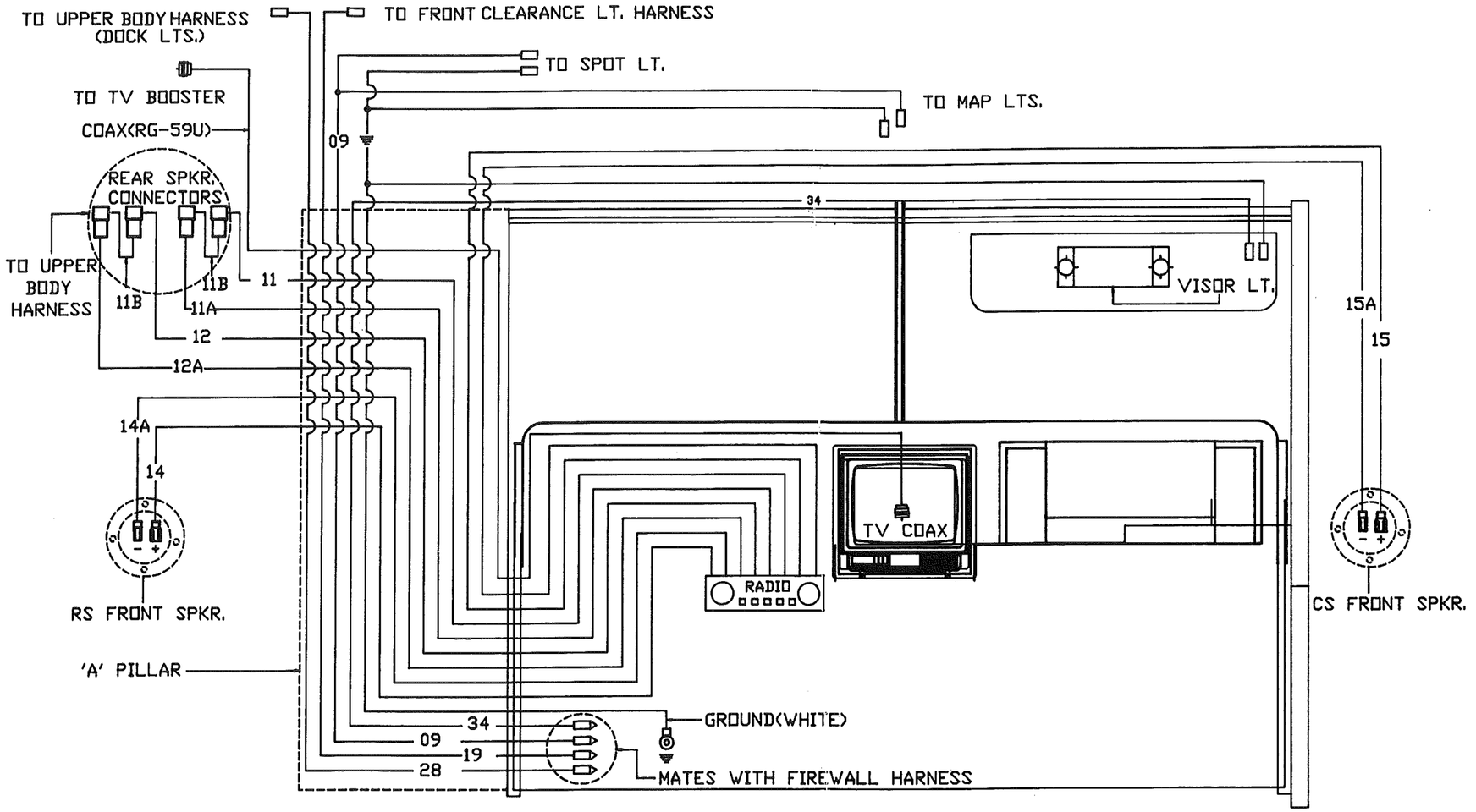
No.	Ga	Color	Cutting Length	FUNCTION
1	12	PURPLE	■	+ 12V.
2	12	YELLOW	■	+ 12V.
2A	12	RED/YEL.	■	BATH LT.
2B	12	BLUE	■	BATH FAN
2C	12	RED	■	BATH FAN
2D	12	BLACK	■	BATH FAN
3A	12	ORANGE	■	WTR. PUMP SW.
3B	12	ORANGE	■	WTR. PUMP SW.
3C	12	ORNG/WHT.	■	WATER PUMP
16	12	BLACK	■	+ 12V.
5	12	BLUE	■	+ 12V.
6	12	RED	■	+ 12V.
7	8	ORANGE	■	+ 12V.
9	12	GREEN	■	+ 12V.
9E	20	BLUE/YEL.	■	AUTO FILL SOL.
10	18	BLUE/WHT.	■	FRNT. FURN. THERM
10A	18	BLUE/WHT.	■	FRNT. FURN. THERM
10B	18	BLUE/WHT.	■	REAR FURN. THERM.
10C	18	BLUE/WHT.	■	REAR FURN. THERM.
21	12	GREEN	■	AISLE LTS.

No.	Ga	Color	Cutting Length	FUNCTION
29	12	BRN/WHT.	■	PATIO LT.
46	12	BROWN	■	WTR. HEATER
47	12	BLUE	■	WTR. HEATER
60	12	BLACK/WHT.	■	CEILING LTS.
AF	18	GRAY	■	AUTO FILL SENSE
BT	18	BROWN	■	BLACK TANK
GT	18	GREEN	■	GRAY TANK
WT	18	RED	■	FRESH WTR. TANK
SP	12	RED	■	SOLAR PANEL
■	■	■	■	■

ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±		Airstream	DRAWN BY RLA
NEXT ASSY		PRODUCT LINE L,Y,LEG,A,S,M,H,S.	APPROVED BY
TITLE	12V. LAYOUT-BODY INT.		
SCALE 1=16	DATE 08/17/92	DRAWING NUMBER 511009L	REV. D

510941L

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	Production Release	RA



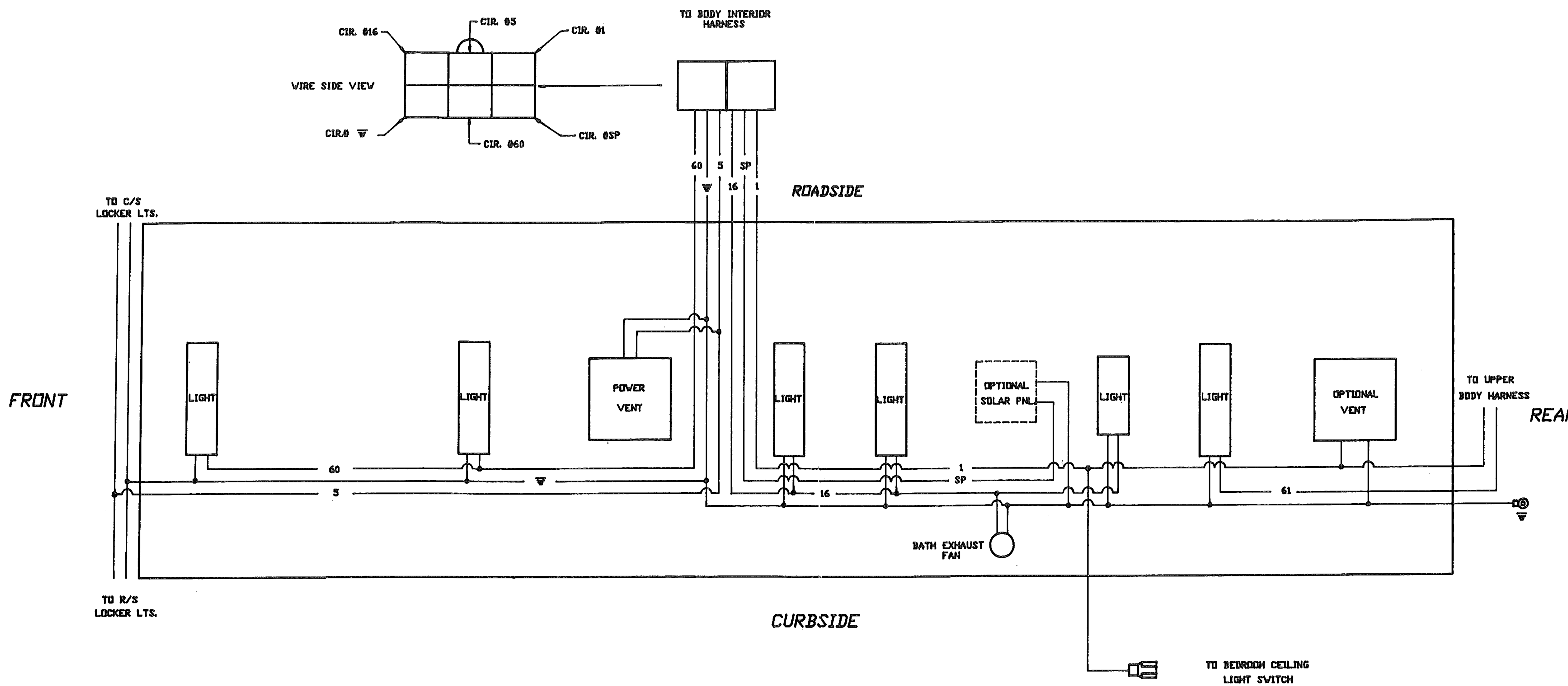
No.	Ga	Color	Cutting Length	Function
09	12	YELLOW	*	SPOT/MAP LTS.
11	18	GRAY	*	LT. SPKR. REAR(+)
11A	18	BLACK	*	LT. SPKR. REAR(-)
11B	18	YELLOW	*	SPEAKER WIRE
12	18	ORANGE	*	RT. SPKR. REAR(+)
12A	18	BLACK/WHT.	*	RT. SPKR. REAR(-)
14	18	BLUE	*	LT. SPKR. FRONT(+)
14A	18	BLACK	*	LT. SPKR. FRONT(-)
15	18	RED	*	RT. SPKR. FRONT(+)
15A	18	BLACK/WHT.	*	RT. SPKR. FRONT(-)

No.	Ga	Color	Cutting Length	Function
18	14	YELLOW	*	MONITOR
19	14	BROWN	*	CLEARANCE LTS.
27	14	BLUE	*	MONITOR
28	12	PURPLE	*	DOCK LTS.
34	16	BLUE	*	VISOR LT.
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*

ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES ±		Airstream	DRAWN BY RLA
NEXT ASSY		PRODUCT LINE L/Y.LEG. MOTORHOME	APPROVED BY
TITLE	SCHEMATIC-12V "A" POST		
SCALE 1=4	DATE 08/07/92	DRAWING NUMBER 510941L	REV. D

511014L

LET	DATE	E.C.N.	REVISION RECORD	BY
	9/92	4395	PRODUCTION RELEASE	RA



No.	Ga.	Color	Cutting Length	Function
1	12	PURPLE	*	+12V.
16	12	BLACK	*	+12V.
5	12	BLUE	*	+12V.
60	12	BLACK/WHT.	*	CEIL. LTS.(FRONT)
61	12	PURPLE/WHT.	*	BD. RM. CEIL. LT.
SP	12	RED	*	SOLAR PANEL
⏚	12	WHITE	*	GROUND
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*

Terminals

- Bullet .180 Male
- Bullet .180 Female
- Butt Connector
- Ring .250 I.D.
- Spade .250 Female
- Spade .250 Male
- Coax Connector

ITEM	PART NUMBER	DESCRIPTION	QTY

TOLERANCES ±
NEXT ASS'Y
Airstream
PRODUCT LINE L/Y,LEG. MOTORHOME
DRAWN BY
APPROVED BY

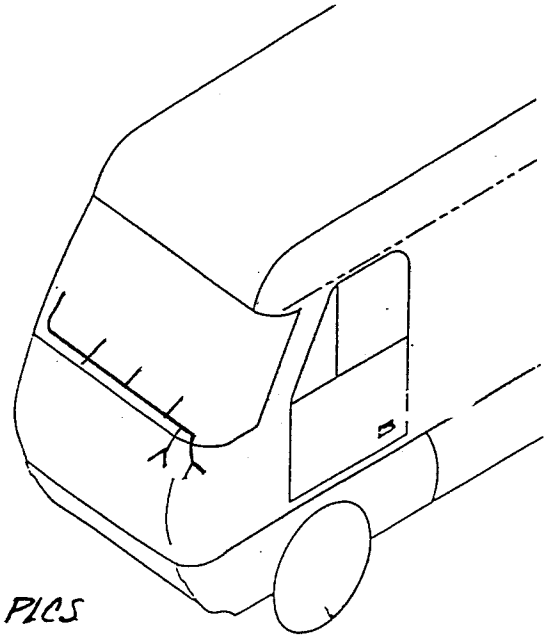
TITLE 12V. LAYOUT-CEILING

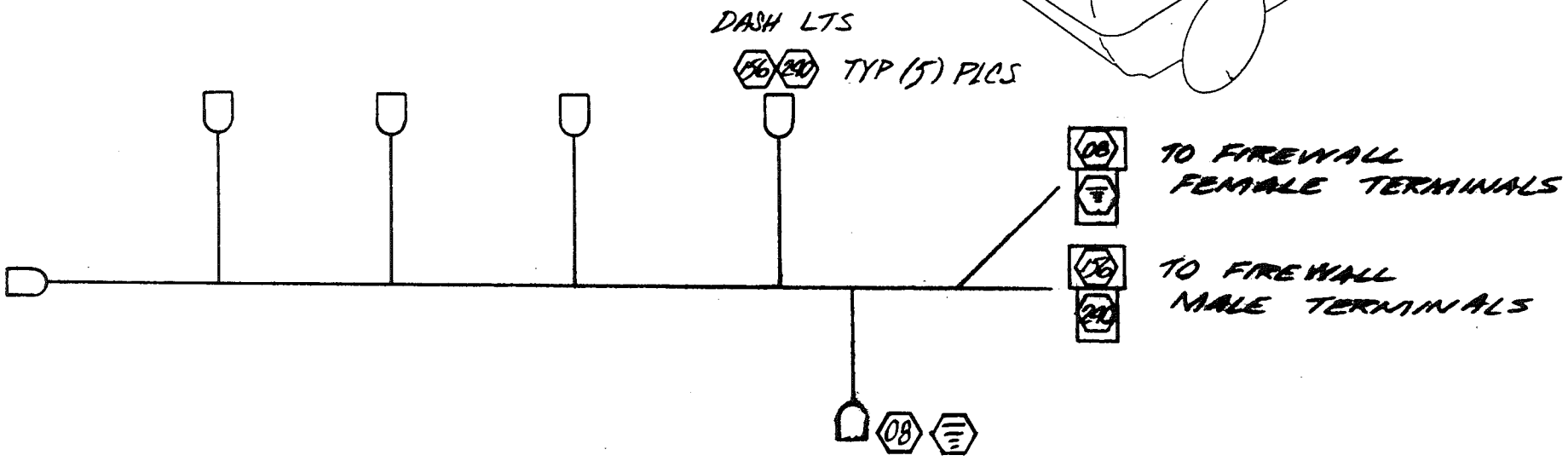
SCALE	DATE	DRAWING NUMBER		REV.
1=16	08-21-92	511014L	D	

HARNESS, DASHLIGHTS

WIRE CHART

Circ.	Ga.	Color	Function
156	16	Green	Dash Lts, Ground
240	16	Orange	Dash Lts, +12
08	16	Gray	Instrument Lts. +12

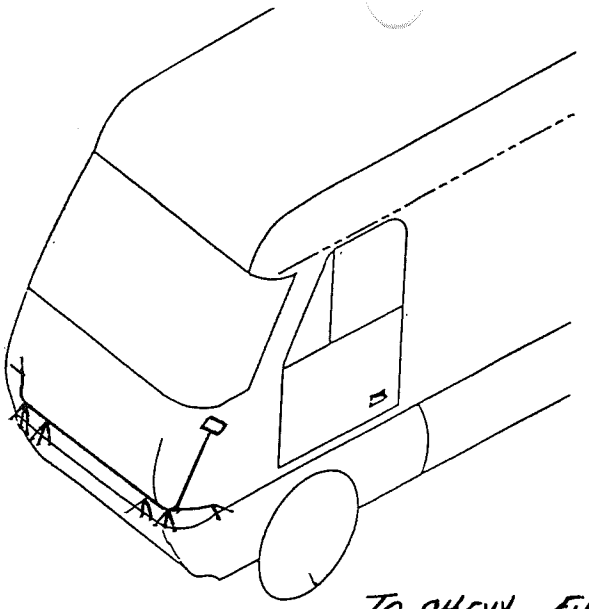


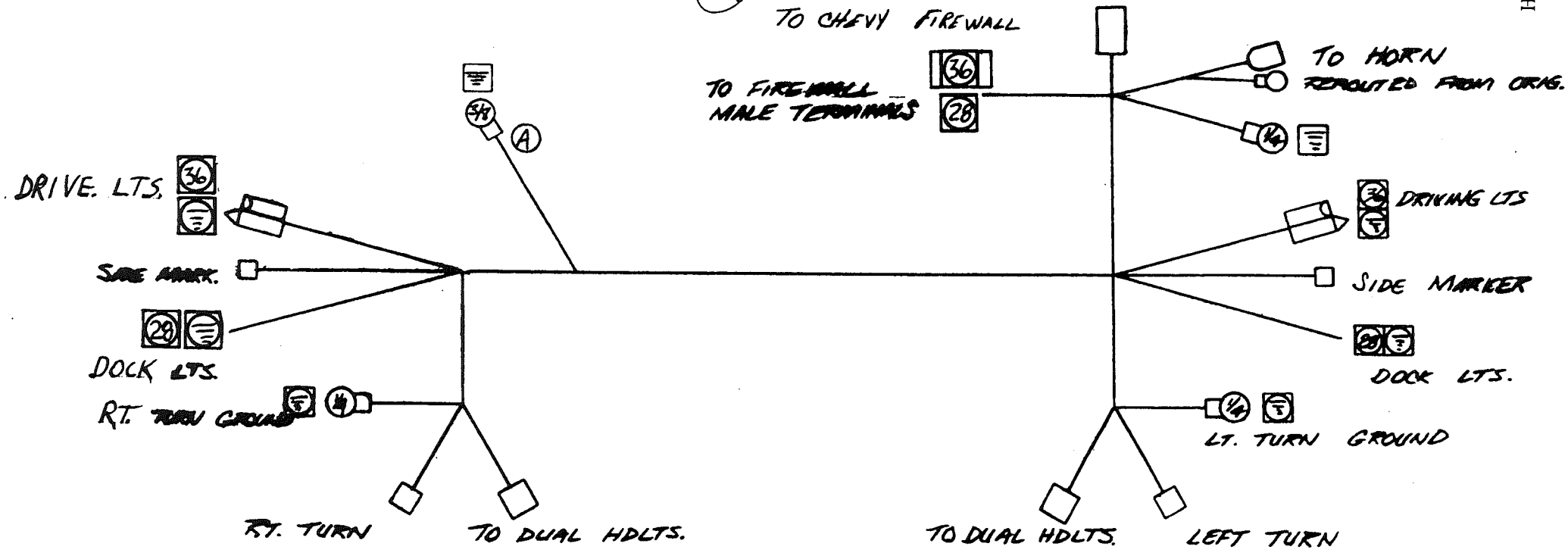


HARNESS, HEAD LIGHTS

WIRE CHART

Circ.	Ga.	Color	Function
28	14	Purple	Dock Lts.
36	14	Red	Driving Lts.

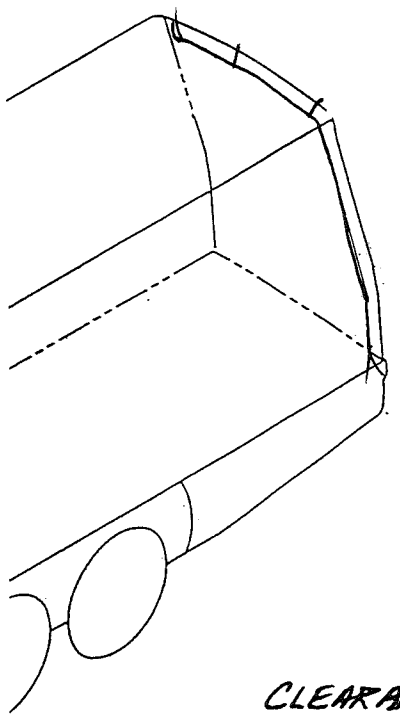


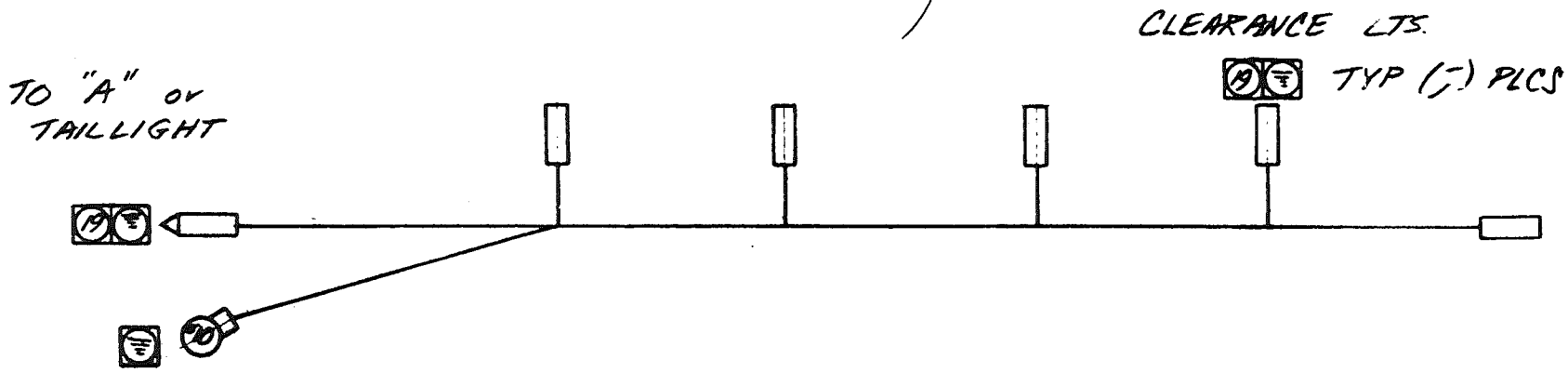


HARNESS, CLEARANCE LIGHTS, REAR

WIRE CHART

Circ.	Ga.	Color	Function
19	14	Brown	Clearance Lts.

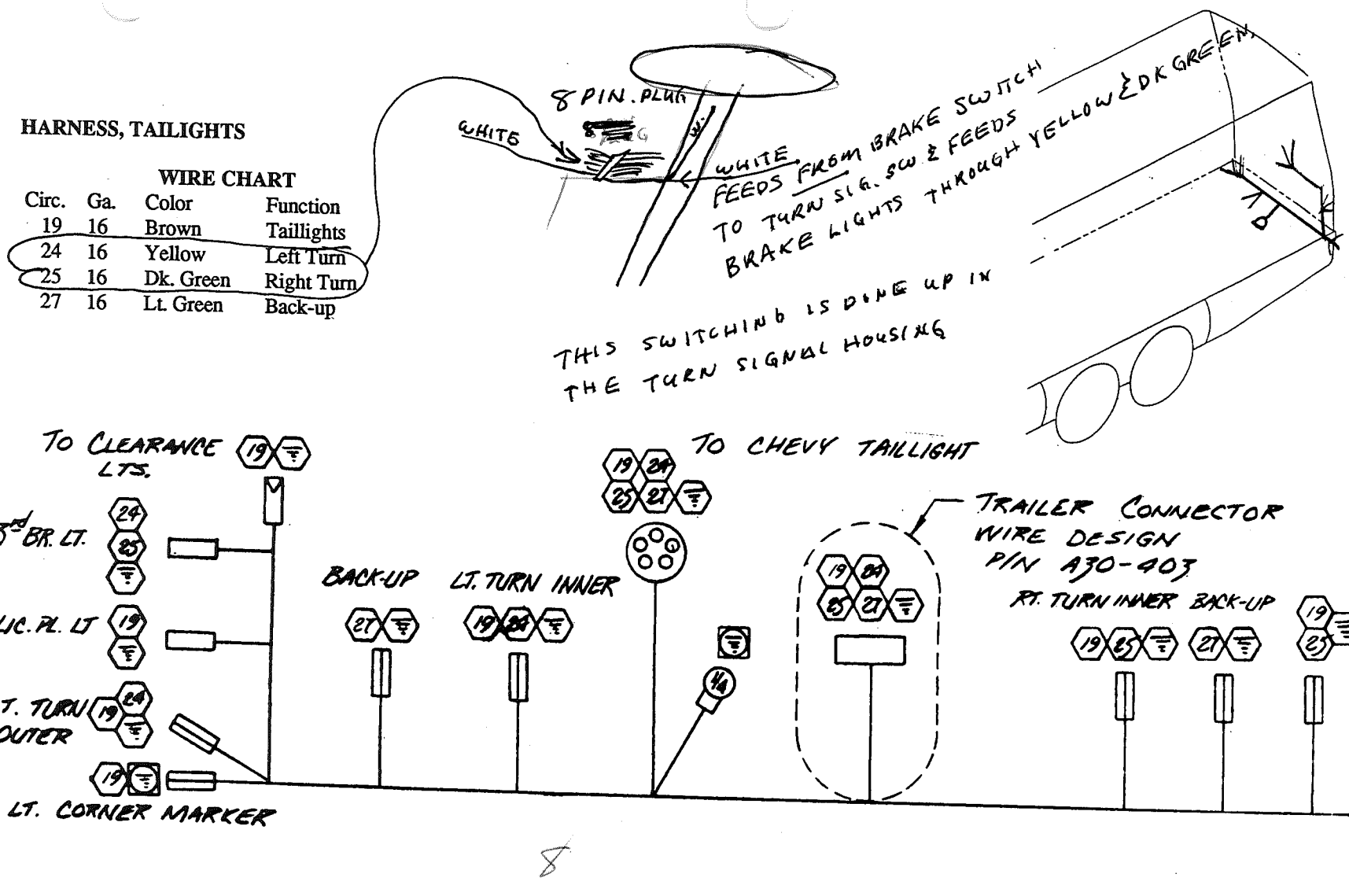




HARNESS, TAILIGHTS

WIRE CHART

Circ.	Ga.	Color	Function
19	16	Brown	Taillights
24	16	Yellow	Left Turn
25	16	Dk. Green	Right Turn
27	16	Lt. Green	Back-up

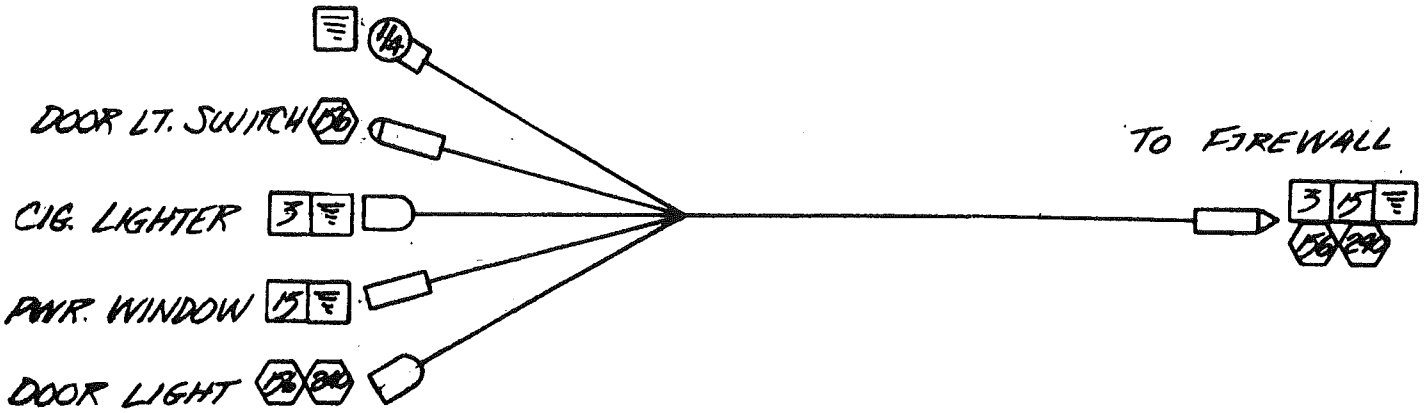


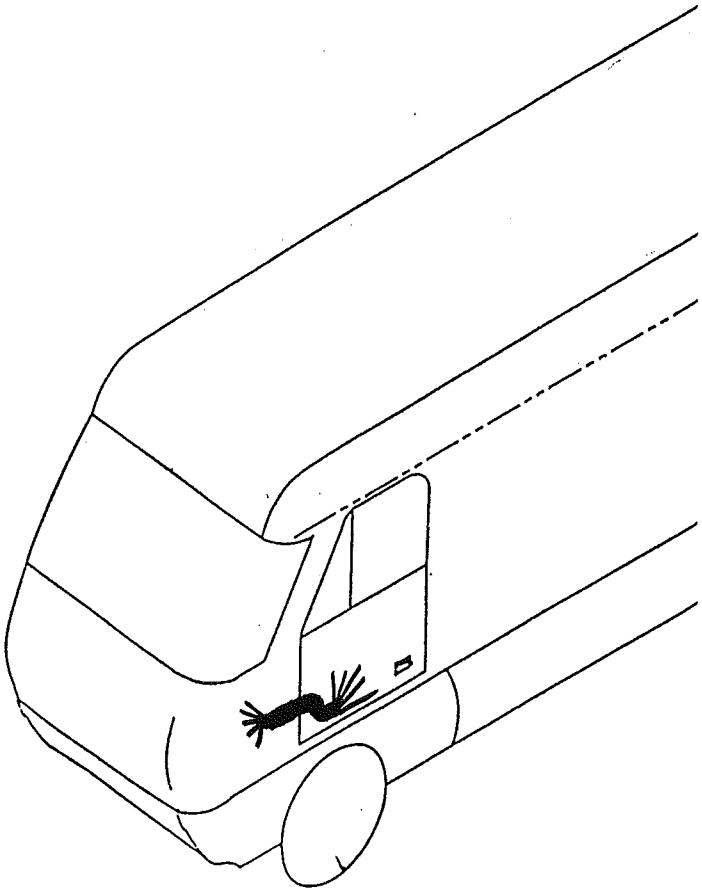
8

HARNESS, DRIVERS DOOR

WIRE CHART

Circ.	Ga.	Color	Function
3	12	Orange	Cig. Lighter
15	12	Red	Pwr. Window
156	16	Green	Dash Lts, Ground
240	16	Orange	Dash Lts, 42





MONITOR PANEL

Operation

To check tank capacities or battery condition,, depress the switch marked "test." In order to obtain a true reading on the batteries, you must be unplugged from city power and disconnected from your tow vehicle.

The red indicator light on the left marked "AC Power" will be illuminated when 120 volt alternating current is available. The light will be illuminated whether you're plugged into city power or if your generator is running. There is a built in delay if you're switching back and forth between the two power sources.

The two speed "Hood Fan" has an exterior door that must be unlatched to be effective. You'll see the two small twist latches if you look at the fan from outside the motorhome. In most circumstances you can leave the door unlatched. During storage or adverse weather conditions, latching the door is recommended.

Trouble Shooting Guide

Be sure the wiring to the panel is correct and that the house battery is well charged. All electrical connections must be correct.

NOTE: RV's are subjected to a lot of vibration from traveling on the highways, so always look for broken wires and loose or broken connections.

NOTE: If a RV has exposed holding tanks under the vehicle and the vehicle is operated in the rain, sleet or snow, the panel may show incorrect tank levels due to electrical conductivity on the outside of the tanks. Washing the tanks and sealing the connections on the outside of the well nuts with silicon sealer should correct this condition.

PROBLEM: Fan does not operate.

CAUSE:
A. No voltage to switch.
B. Defective switch, defective motor.

REMEDY:
1. Check for voltage, test switch, test motor.

PROBLEM: Fan operates on high speed but not on low speed.

CAUSES:
A. Defective circuit board.

REMEDY:
1. Replace circuit board.

PROBLEM: Hood light does not operate.

CAUSES:
A Burned out bulbs..
B. No voltage to switch.
C. Defective switch.

REMEDY:
1. Test for voltage.
2. Test switch.
3. Test bulbs.

PROBLEM: Water pump does not operate.

CAUSES:
A. No voltage to pump.
B. Defective switch or pump.
C. Pump not grounded.

REMEDY:
1. Test for voltage at switch.
2. Check ground.

PROBLEM: Water pump operates but red indicator light does not come on.

CAUSES:
A. Faulty LED.
B. Faulty circuit board.

REMEDY:
1. Replace circuit board.

PROBLEM: "E" LED shows but indicator lights for amount of liquid in tank don't show.

CAUSES:
A. Faulty connection in lead to tank.
B. Faulty circuit board.

REMEDY:
1. Check leads and connections at tank.
2. Replace circuit board.

PROBLEM: Condition of battery is not indicated when switch is pushed.

CAUSES:
A. Faulty switch.
B. Faulty circuit board.
C. Circuit board not grounded.
D. Dead battery.

REMEDY:
1. Test Test switch, check ground.
2. Change circuit board.
3. Charge battery.

PROBLEM: No "E" light on water tanks when switch is pushed.

CAUSES:
A. No power to panel.
B. Defective circuit board.

REMEDY:
1. Check fuses and power leads.
2. Repair or replace panel.

PROBLEM: Improper level indication on one or two tanks.

CAUSES:
A. Faulty wiring from panel to sensors.
B. Faulty circuit board.
C. Dirty sensors and/or tank.

REMEDY:
1. Check wiring to sensors.
2. Clean sensors and tank.
3. Replace tank sensor harness.
4. Replace or repair circuit board.

PROBLEM: Improper level indication on all water tanks.

CAUSES:
A. Faulty circuit board.

REMEDY:
1. Replace or repair circuit board.

PROBLEM: Panel shows LPG tank to be full all of the time.

CAUSES:
A. Connection between tank and panel faulty.
B. Poor or no ground between tank and vehicle.
C. Faulty tank sending unit or faulty circuit board.

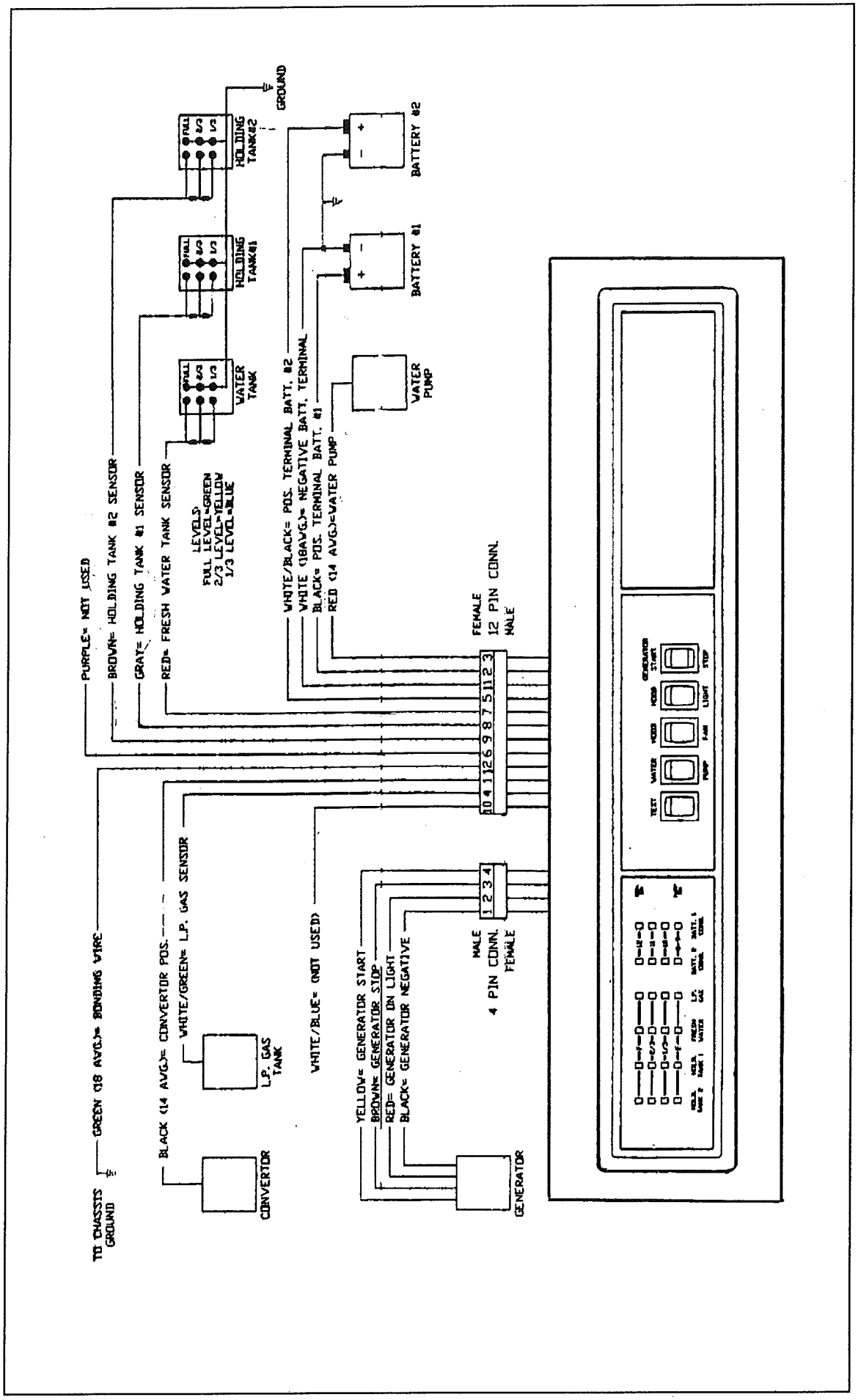
REMEDY:
1. Check and repair wiring from tank to panel and tank to ground.
2. Repair or replace tank sending unit.
3. Repair or replace circuit board.

PROBLEM: Panel shows LPG tank to be empty all of the time.

CAUSES:
A. Short to ground in wire between panel and tank sending unit.
B. Faulty tank sending unit.
C. Faulty circuit board.

REMEDY:
1. Repair shorted wire.
2. Repair or replace sending unit.
3. Repair or replace circuit board.

NOTE: If the wire from the panel is removed from the tank, the panel indicator should show the tank full. If the panel wire to the tank is grounded, the panel should show the tank empty.

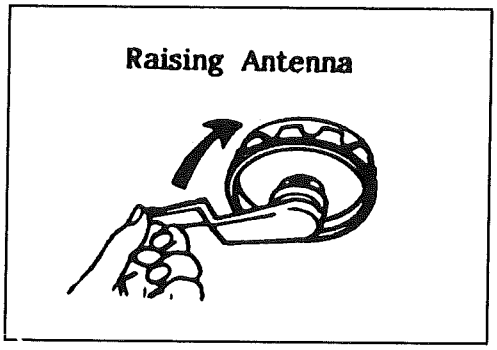

PURPLE= NOT USED
BROWN= HOLDING TANK #2 SENSOR
GRAY= HOLDING TANK #1 SENSOR
RED= FRESH WATER TANK SENSOR
LEVELS
FULL LEVEL=GREEN
2/3 LEVEL=YELLOW
1/3 LEVEL=BLUE
WATER TANK
HOLDING TANK#1
HOLDING TANK#2
GROUND
WHITE/BLACK= POS. TERMINAL BATT. #2
WHITE (18AWG)= NEGATIVE BATT. TERMINAL
BLACK= POS. TERMINAL BATT. #1
RED (14 AWG)=WATER PUMP
WATER PUMP
BATTERY #1
BATTERY #2
FEMALE
12 PIN CONN.
MALE
GREEN (18 AWG)= BONDING WIRE
TO CHASSIS GROUND
BLACK (14 AWG)= CONVERTOR POS.
WHITE/GREEN= L.P. GAS SENSOR
L.P. GAS TANK
CONVERTOR
WHITE/BLUE= (NOT USED)
YELLOW= GENERATOR START
BROWN= GENERATOR STOP
RED= GENERATOR IN LIGHT
BLACK= GENERATOR NEGATIVE
MALE
4 PIN CONN.
FEMALE
GENERATOR

TV ANTENNA

Manufacturer: Winegard Company
3000 Kirkwood Street
Burlington, Iowa 52601
Phone: 800-843-4741

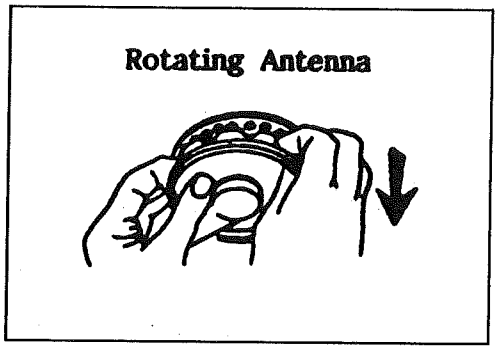
Raising Antenna to Operating Position

Turn elevating crank in "UP" direction until some resistance to turning is noted. Antenna is now in operating position. Check to make sure switch on front TV jack is on.



Rotating Antenna

Make sure antenna is in "UP" position. Pull down on directional handle with both hands until it disengages ceiling plate and rotate for best picture and sound on television set.

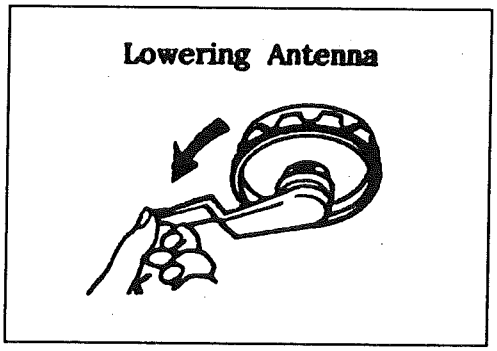


Lowering Antenna to Travel Position

Rotate antenna until pointer on directional handle aligns with pointer on ceiling plate.

WARNING: Antenna must be in "down" position while traveling to prevent damage.

Turn elevating crank in the "Down" direction until resistance is noted. Antenna is now locked in travel position.



Checking Operation

1. Tune TV receiver to nearest station and rotate antenna for **lowering Antenna** best picture and sound.
2. Turn off switch on power supply. Picture on TV receiver should be considerably degraded with power off.

DO'S

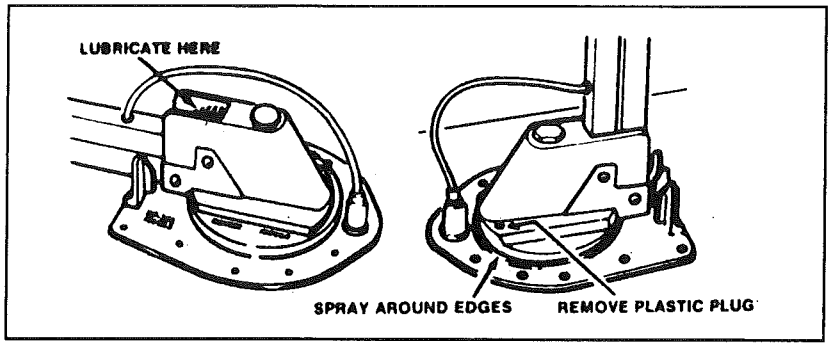
1. Do check parking location for obstructions before raising antenna.
2. Do carefully raise, lower and rotate - if difficult, check for cause.
3. Do rotate slowly when selecting station and check fine tuning on TV set to make sure it is properly adjusted.
4. Do lower antenna before moving vehicle.

DON'TS

1. Don't force elevating crank up or down. Check for cause of trouble.
2. Don't rotate directional handle hard against stops.
3. Don't travel with lift in up position.
4. Don't leave lift part way up or down.
5. Don't apply sealing compound or paint over top of base plate or anywhere on lift.

Maintenance

Lubrication



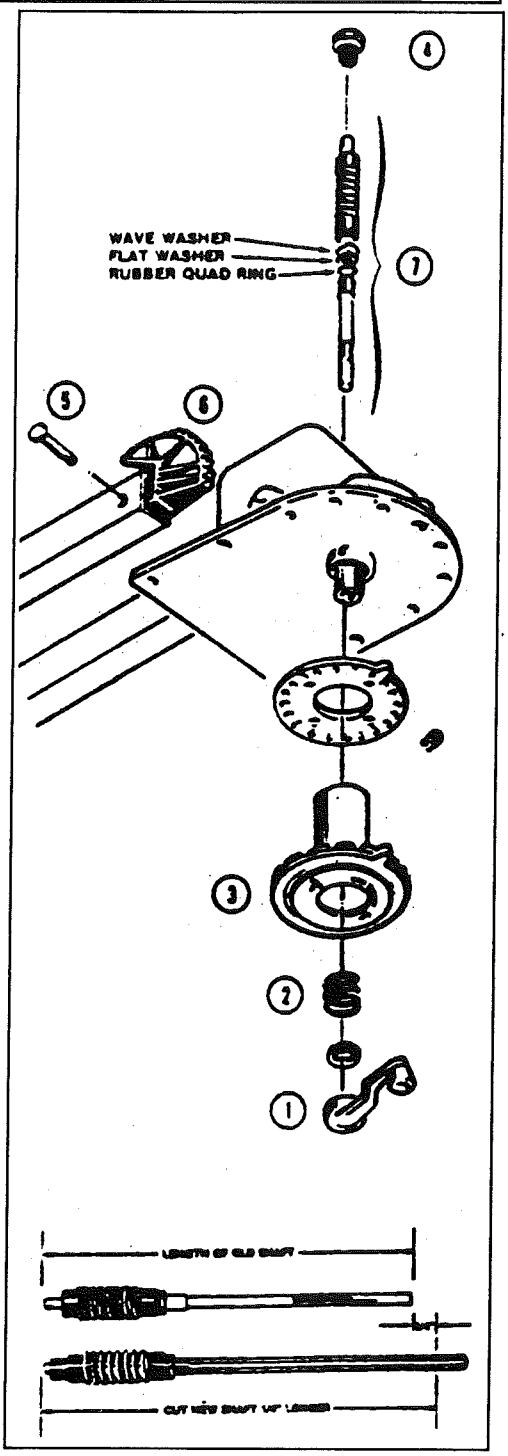
To lubricate the elevating gear apply a liberal amount of silicone spray lubricant to the elevating gear with the lift in the down position, then run the lift up and down a few times to distribute lubricant over gears.

Lubricating Rotating Gear Housing

In the event that rotating the antenna becomes difficult, normal operation can be restored by lubricating the bearing surface between the rotating gear housing and the base plate. Any spray type silicone lubricant may be used.

Elevate antenna and remove set screw from rotating gear housing as shown. Spray lubricant into hole and around edges of gear housing. Rotate gear housing until lubricant coats bearing surfaces and antenna rotates freely.

Elevating Shaft Worm Gear Assembly Replacement Procedure



STEP 1: Lower antenna to travel position and refer to drawing to identify parts indicated in steps below.

STEP 2: Loosen set screw on elevating crank (#1) and remove crank (#1), spring (#2), directional handle (#3).

STEP 3: Go to roof of vehicle and Qs remove retaining ring from pin (#5) holding top elevator tube in rotating gear housing and remove pin.

STEP 4: Remove bearing plug (#4) from top of rotating gear housing. Disengage elevating gear (#6) and remove elevating shaft assembly (#7).

Note: Make sure all parts below worm gear are removed from rotating gear housing. These include bearing, quad ring and one or two washers.

STEP 5: Cut new shaft 1/4" longer than old shaft. See Illus: Discard old bearing plug item (#4).

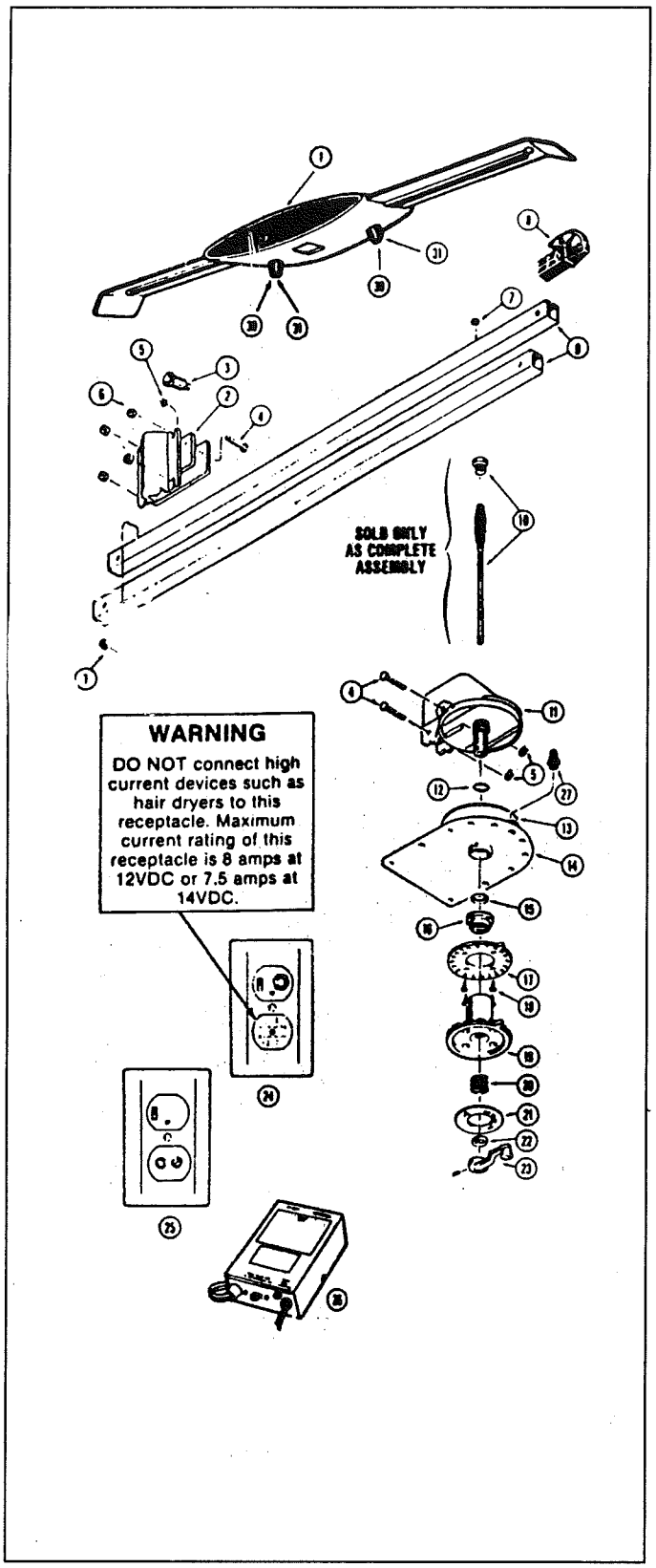
STEP 6: Lubricate worm gear on new elevating shaft assembly with spray silicone lubricant, make sure quad ring, washer and wave washer are on lower bearing and insert assembly in housing.

STEP 7: Install new plastic bearing plug in top of housing. Re-engage elevating gear in worm gear. Replace pin and retaining ring.

STEP 8: Replace directional handle, spring and elevating crank. Make sure set screw contacts flat on shaft before tightening.

PARTS DESCRIPTION

1. Antenna Head
2. LM-300 Leveling Mount
3. Boot, Coax Cable
4. Pin, Headed/Grooved
5. Ring, Retaining Snap
6. Spacer, Plastic
7. Grommet, Plastic
8. EG-87 Elevating Gear
9. Tube, Square Elevator
10. Elevating Shaft Assy
11. Housing, Rotating Gear
12. Ring, Quad Seal
13. Bearing, Nylon
14. Housing, Base Plate
15. Bearing, Nylon
17. Plate, Ceiling
18. Screw
19. Handle, Directional
20. Spring, Handle
21. Decal, Crank Cover
22. Bearing, Nylon
23. Elevating Crank/Set Screw
27. Boot, Gear Housing
30. Bumper, Rubber
31. Screw



110 VOLT POWER

The 110-volt system works very much like your home. When you're plugged into city power or start your generator, power is supplied to the 110-volt circuit breakers. The circuit breakers, located above the roadside rear night stand, then supply the power to the receptacles and appliances.

If a circuit is over loaded or a short circuit occurs, the breakers will "kick" out. To reactivate the circuits, turn the breaker to off, reduce the load or correct the short, and turn the breaker back to on.

One of the breakers is a GFI (Ground Fault Interrupter) breaker. The intent of this breaker is to sense any loss of ground before a harmful shock could occur, and kick the breaker out. These sensitive breakers are installed in the circuit feeding the bathroom, outside receptacle, and galley area. These are the areas where the use of water or the wet ground could put a person in danger of shock. Since the GFI breaker is so sensitive, it is not unusual to have it kick out for no apparent reason.

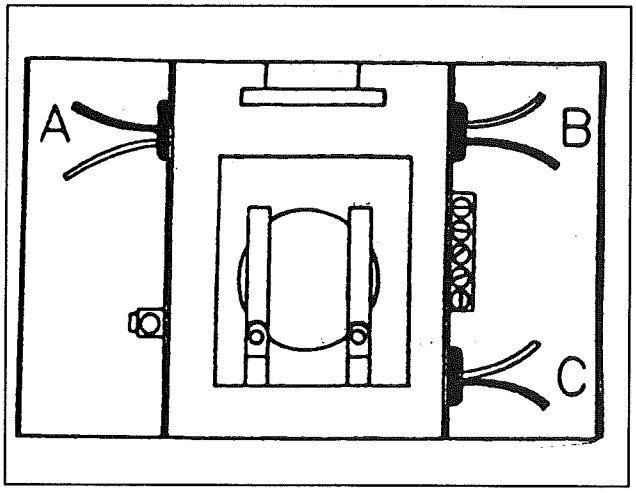
Getting power to your 110 volt circuits breakers is ***nothing*** like your home. Since you have two sources of 110 volt power, an automatic switch-over box is used. This prevents both sources of power from feeding your circuits at the same time and prevents your generator power from feeding the city circuits and shocking an unsuspecting line man.

Generator/City Power

A. to 110 volt circuit breakers

B. to generator 30 amp circuit

C. to city power



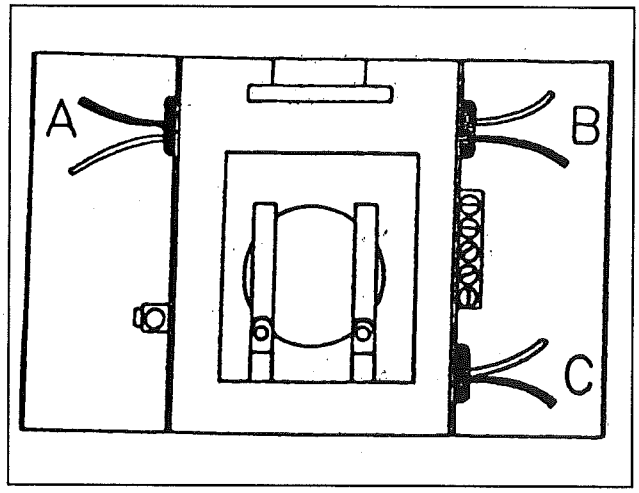
When plugged into city power, the current path is from C to A. When you start your generator and unplug from city power, the points switch and the power flow is from B to A. If you're plugged into city and you start the generator, city power has the priority, so the current flow is C to A.

Rear Air Conditioner

A. to rear air conditioner

B. generator 20 amp circuit

*C. to front/rear air conditioner priority switch



*If you have the optional 50-amp power cord service, C would go to the 20-amp leg of this service.

When plugged to city power with the optional 50-amp service cord or the front/rear priority switch is turned to rear, current flow is C to A.

Locating Shorts and Opens

The key in locating shorts and opens is isolation. The first step is to isolate the circuit with the short or open. The second step is to then isolate the section of the circuit with the fault. Once the section is identified, the specific problem can be located. The cause may be a loose or corroded connection, cut wire, worn insulation, defective component, etc. The following procedure is one method for isolating shorts and opens.

SHORTS

1. Isolate the circuit which has the short by noting which circuit breaker has tripped.
2. Disconnect the power inlet cord from the power source.
3. Using the 120V schematic as a reference, disconnect outlet boxes one at a time starting at the box furthest from the distribution panel. After disconnecting each box, check for continuity between the black wire and ground or common (white) wire on the distribution panel side of the circuit. When a continuity light or ohmmeter indicates no continuity, the short is either in the receptacle just removed or the section of Romex wire between this receptacle and the previous receptacle removed.
4. Examples of a short are: A) The black wire of the 120V system contacting the white wire, bare wire or grounded surface. B) An internal short in a 120V appliance.

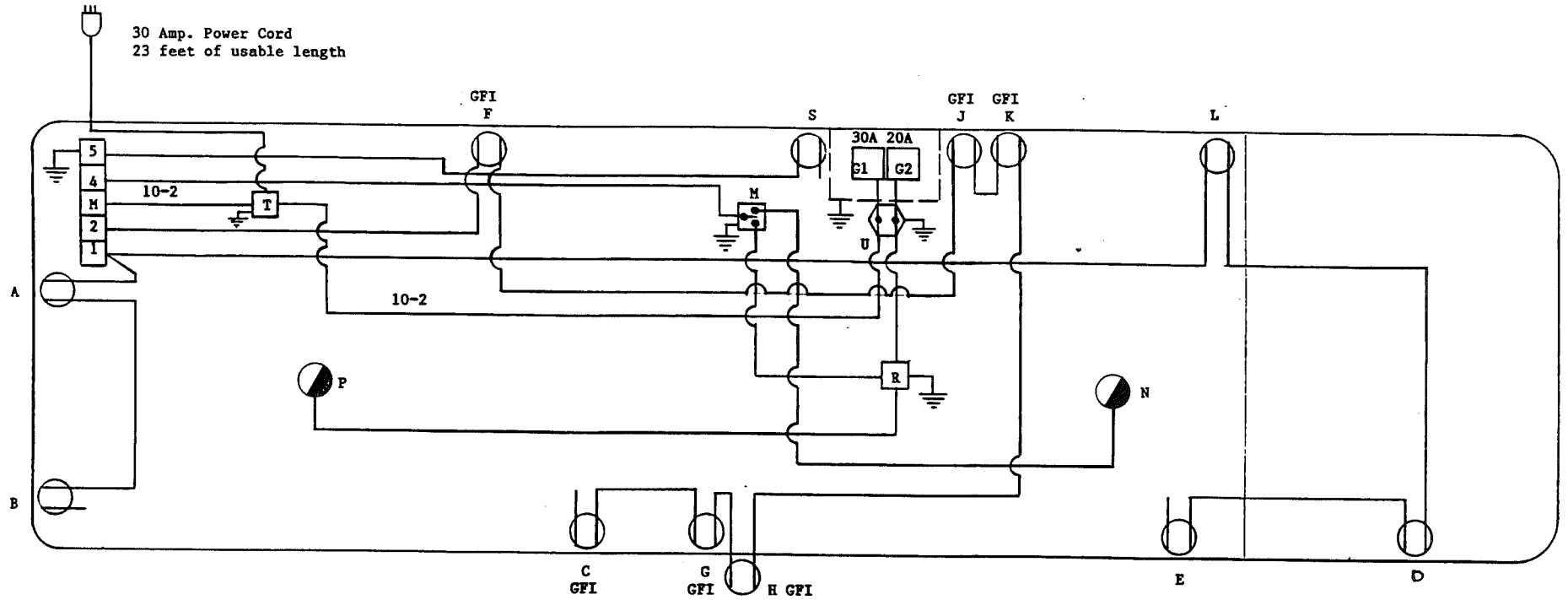
Any damaged wire must be replaced. The National Electrical Code does not permit splicing 120V wiring outside an outlet box or junction box. Also, the wire must not be exposed to an area such as a sharp metal edge which may damage the wire.

OPENS

1. Check all receptacles and components for voltage on the circuit which has the open.
2. If all receptacles and components of the circuit are without power, begin to look for open in the distribution panel.
3. Inspect for loose or corroded connections and a faulty circuit breaker.
4. Check for power on both ends of circuit breaker. If there is no power on the inlet side of the circuit breaker, the open is between the power cord's male connector and the distribution panel.
5. The open can be isolated by noting the outlets which do not have power. Example: If the bath outlet in the rear bath model has power and the converter has no power, the open is between the bath outlet and converter outlet.
6. Examples of an open are: A) Loose or corroded connections. B) A wire disconnected from a terminal. C) Contacts in the circuit breaker which do not make contact. D) A broken wire.

120V WIRING DIAGRAMS

- **120 volt distribution - 30 foot**
- **120 volt distribution panel - 30 foot**
- **120 volt wiring - 34 foot**
- **120 volt distribution panel - 34 foot**
- **Optional rear air conditioning wiring - 30 foot**



Circuit 1, 20 Amp. HACR Breaker, 12-2 Romex W/Ground.

A. Roadside Bedroom Recept	1.00	Amp.
B. Curbside Bedroom Recept	1.00	
D. Converter Recept	8.00	
E. Folding Table Recept	1.00	
L. VCP Recept.	.23	
Total	11.23	AMPS

Circuit 2, 20 Amp. GFI Breaker, 12-2 Romex W/Ground.

F. Bath Recept	1.00	Amp.
G. Dining Area Recept	1.00	
H. Outside Recept	1.00	
J. Kitchen Area Recept	1.00	
K. Kitchen Area Recept	1.00	
C. Refer Recept	2.70	
Total	7.70	AMPS

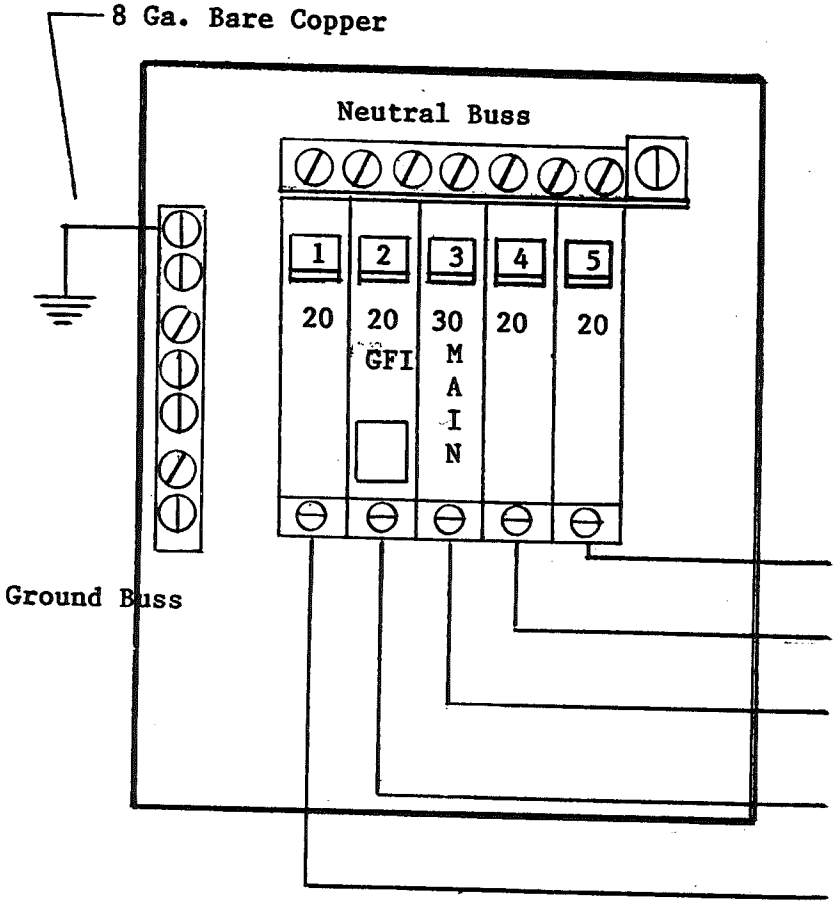
Circuit 3, 30 Amp. Main Breaker

Circuit 4, 20 Amp. HACR Breaker, 12-2 Romex W/Ground.
This circuit when operating from shoreline supplies power to single pole, double throw priority switch "M" which will operate either the front air conditioner "N" or the rear air conditioner "P". (16 Amps. Max.) depending on the switch position. When the generator is operating automatic switchover relay "R" will overide shoreline and operate the rear air conditioner with power supplied through generator circuit G-2. If priority switch "M" is in the front air conditioner position it will operate the front air conditioner with power supplied through generator circuit G-1.

Circuit 5, 20 Amp. HACR Breaker, 12-2 Romex W/Ground.
Microwave Oven 12.5 Amps.

Generator Circuit G-1.
From the 30 Amp. Breaker (supplied with the generator) 10 ga. stranded wire is run in flexible metal conduit to j-box "U". From this j-box, 10-2 romex w/ground is run to the breaker box through automatic switchover relay "T".

Generator Circiut G-2.
From the 20 Amp. breaker (supplied with the generator) 12 ga. stranded wire is run in flexible metal conduit to j-box "U". From this j-box, 12-2 romex with ground is run to automatic switchover relay "R". When the generator is operating, relay "R" will override shoreline and will run the rear air conditioner.



Circuit 5, 20 Amp. HACR Breaker: Microwave Oven.

Circuit 4, 20 Amp. HACR Breaker: Front or Rear Air Conditioner.

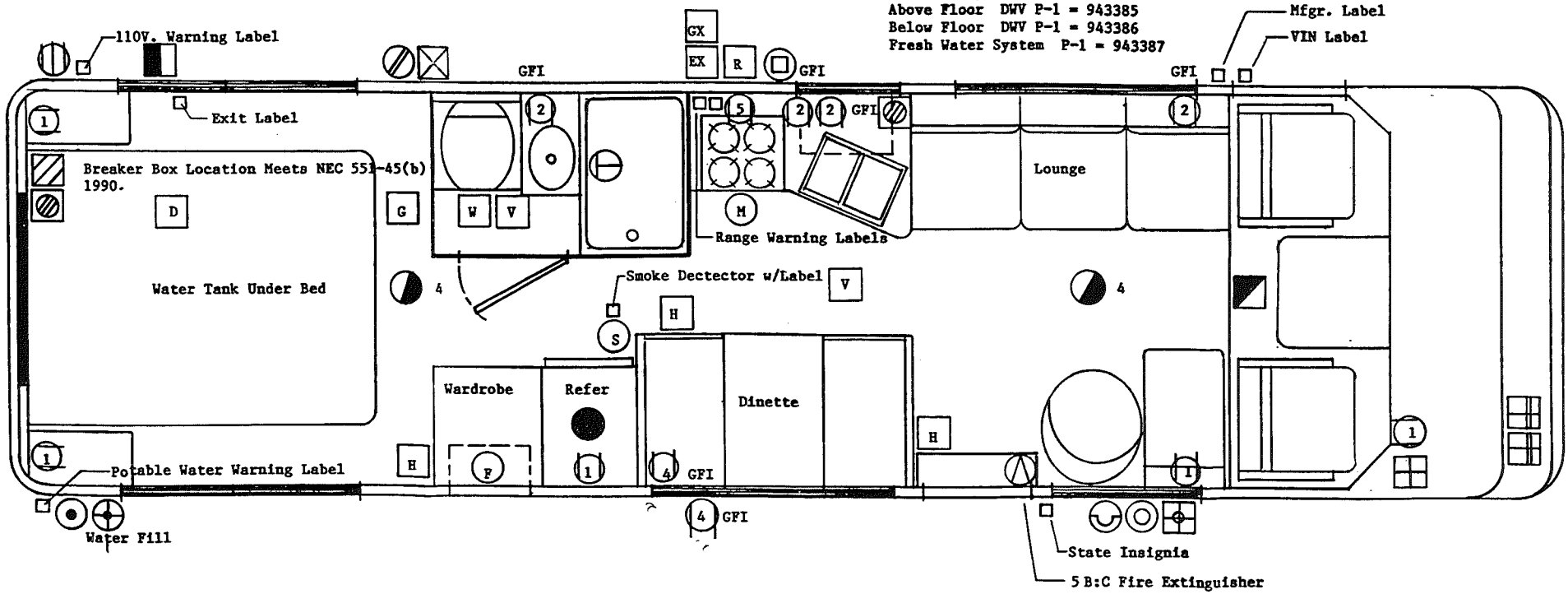
Circuit 3. 30 Amp. Main Breaker.

Circuit 2, 20 Amp. GFI Breaker: Bath, Outside, Dining Area, Kitchen Area, and Refer Recepts.

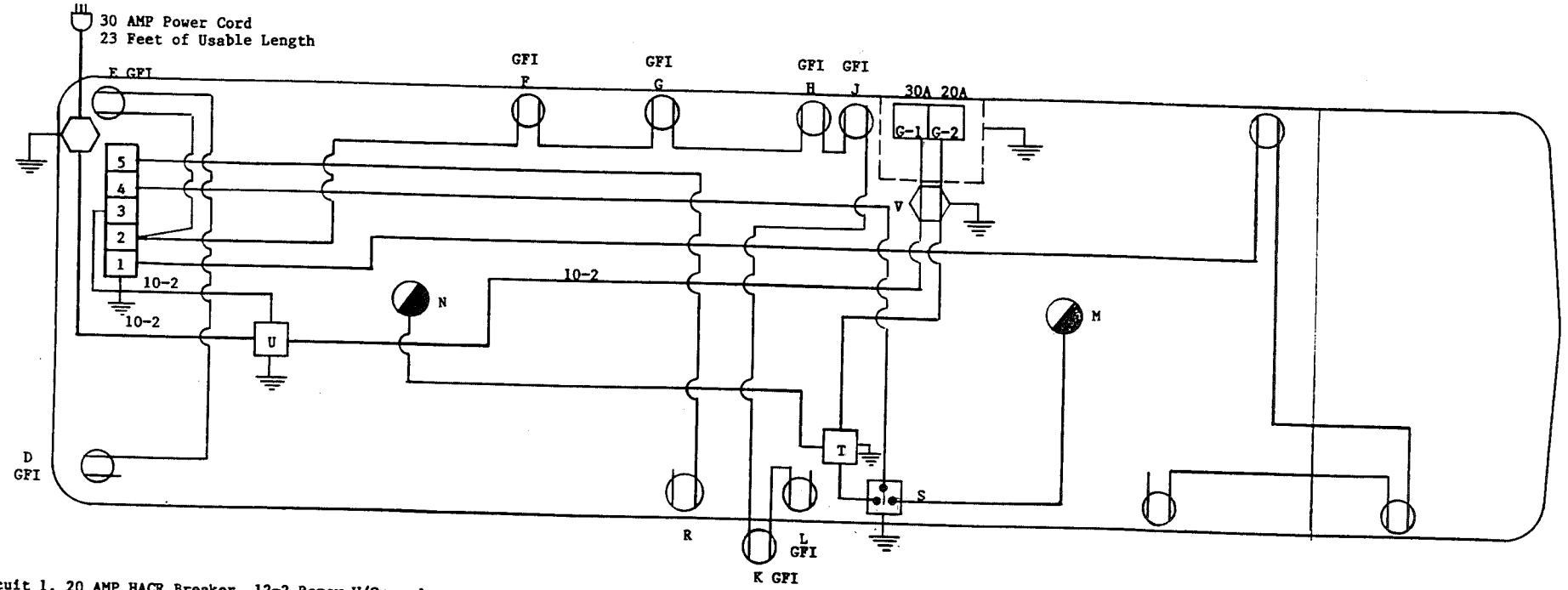
Circuit 1, 20 Amp. HACR Breaker: Bedroom, Converter, Folding Table & VCP Recept.

Panelboard manufactured by Square D Co.
Cat. No. Q04-7FM70TT[illegible] tes G-1
Type 1 Enclosure
120 Volt A.C. 1 PH. 2W
Main 70 Amp. Max.

110V Layout E-3 = 952384
110V Layout - Ariz. & Wash. E-3 = 952386
110V Panelboard E-3 = 952385
110V Panelboard Ariz. & Wash. E-3 = 952387
12V Fuse Panel E-10 = 952389
12V Wiring E-10 = 952383
12V Calculation E-10 = 952388
L.P. Gas System M-6 = 943384
Above Floor DWV P-1 = 943385
Below Floor DWV P-1 = 943386
Fresh Water System P-1 = 943387



Circuit 1, 20 Amp., Bedroom, refer, dining and converter.
Circuit 2, 20 Amp., GFI circuit.
Circuit 3, Main.
Circuit 4, 20 Amp., Air Conditioners. Units are controlled by a priority switch. See 110V layout dwg.
Circuit 5, 20 Amp., Microwave Oven. NOTE: ON ARIZONA AND WASHINGTON THE MICROWAVE IS ADDED TO CIRCUIT 4.



Circuit 1, 20 AMP HACR Breaker, 12-2 Romex W/Ground

A.	VCP Recept.	0.23 AMPS
B.	Converter Recept.	8.00
C.	Credenza Recept.	1.00
	Total	9.23 AMPS

Circuit 2, 20 AMP GFI Breaker, 12-2 Romex W/Ground

D.	Curbside Bedroom Recept.	1.0 AMP
E.	Roadside Bedroom Recept.	1.0
F.	Bathroom Recept.	1.0
G.	Refer Recept.	2.7
H.	Dining Area Recept.	1.0
J.	Dining Area Recept.	1.0
K.	Outside Recept.	1.0
L.	Kitchen Recept.	1.0
	Total	9.7 AMPS

Circuit 3, 30 AMP Main Breaker

Circuit 4, 20 Amp. HACR Breaker, 12-2 Romex W/Ground

This circuit when operating from shoreline supplies power to single pole, double throw priority switch "S" which will operate either the front A/C "M" or rear A/C "N" (16 Amps. Max.) depending on the switch position. When the generator is operating, automatic switchover relay "T" will override shoreline and operate the rear A/C with power supplied through generator circuit G-2. If priority switch "S" is in the front A/C position it will operate the front A/C with power supplied through generator circuit G-1.

Circuit 5, 20 Amp. HACR Breaker, 12-2 Romex W/Ground

R. Microwave Oven Recept 12.5 Amps.

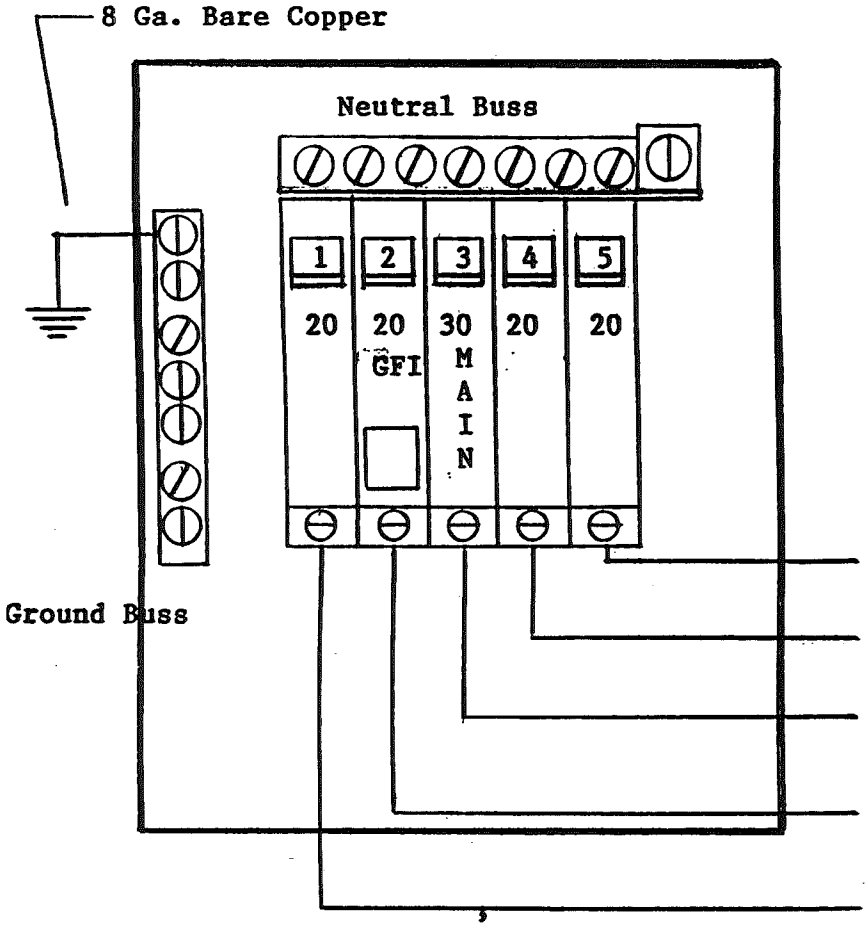
Generator Circuit G-1

From the 30 Amp. breaker (supplied with the generator) 10 ga. stranded wire is run in flexible metal conduit to j-box "V". From this j-box, 10-2 romex with ground is run to the breaker box through automatic switchover relay "U".

Generator Circuit G-2

From the 20 Amp. breaker (supplied with the generator) 12 ga. stranded wire is run in flexible metal conduit to j-box "V". From the j-box 12-2 romex w/ground is run to automatic switchover relay "T'. When the generator is operating, relay "T" will override shoreline and will run the rear A/C.

ITEM	PART NUMBER	DESCRIPTION	QTY
TOLERANCES (except as noted)	AIRSTREAM	DIVISION Engineering	
DECIMAL ±	PRODUCT LINE 34' Legacy MH	SCALE	DRAWN BY TC / APPROVED BY
FRACTIONAL ±	TITLE 110 V. Layout 48 States		
ANGULAR ±	NEXT ASSY.	DATE 10/91	DRAWING NUMBER 95?391 REV.



Circuit 5, 20 Amp. HACR Breaker: Microwave Oven.

Circuit 4, 20 Amp. HACR Breaker: Front or Rear Air Conditioner

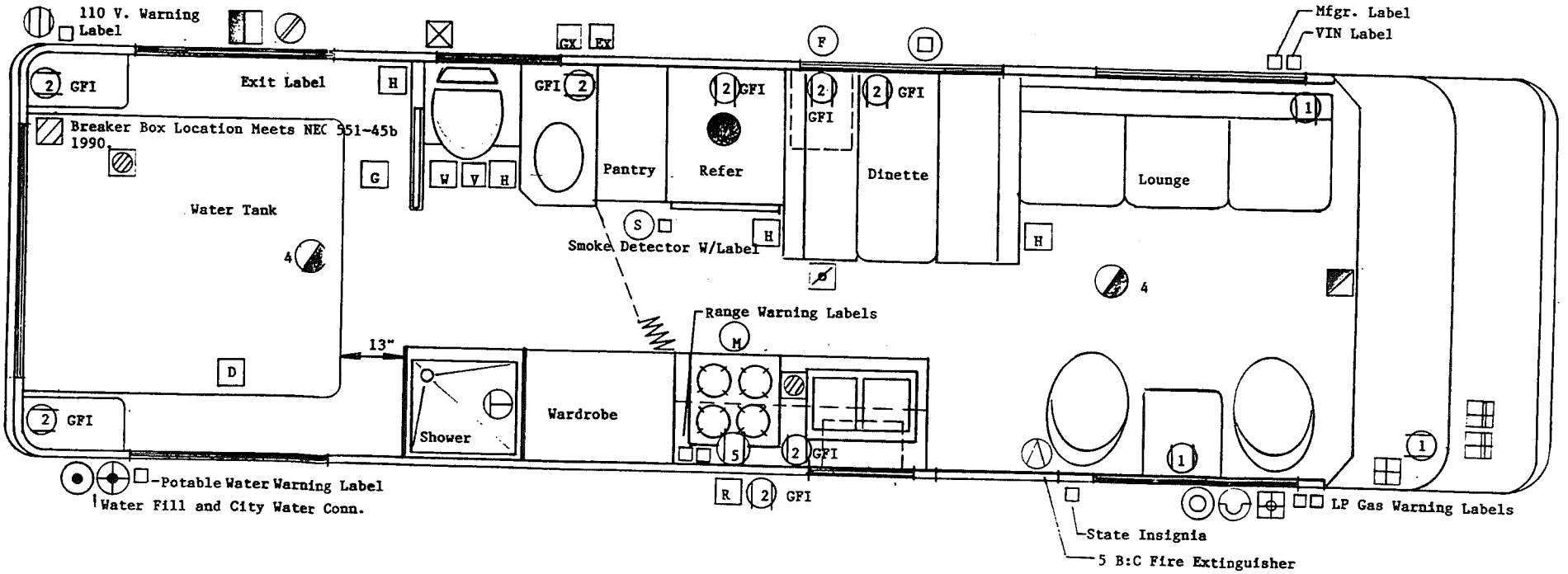
Circuit 3. 30 Amp. Main Breaker.

Circuit 2, 20 Amp. GFI Breaker: Bath, Outside, Dining Area, Kitchen Area, Refer and Bedroom Recepts.

Circuit 1, 20 Amp. HACR Breaker: Credenza, Converter and VCP Recepts.

Panelboard manufactured by Square D Co.
Cat. No. Q04-7FM70TTS, Series G-1
Type 1 Enclosure
120 Volt A.C. 1 PH. 2W
Main 70 Amp. Max.

ITEM	PART NUMBER	DESCRIPTION		QTY.
TOLERANCES (except as noted)	AIRSTREAM		DIVISION Engineering	
DECIMAL ±	PRODUCT LINE 34 ' SB Legacy		SCALE None	DRAWN BY TC / APPROVED BY
FRACTIONAL ±	TITLE 110 V. Panelboard			
ANGULAR ±	NEXT ASSY.	DATE 8/91	DRAWING NUMBER 952390	REV.



H-41

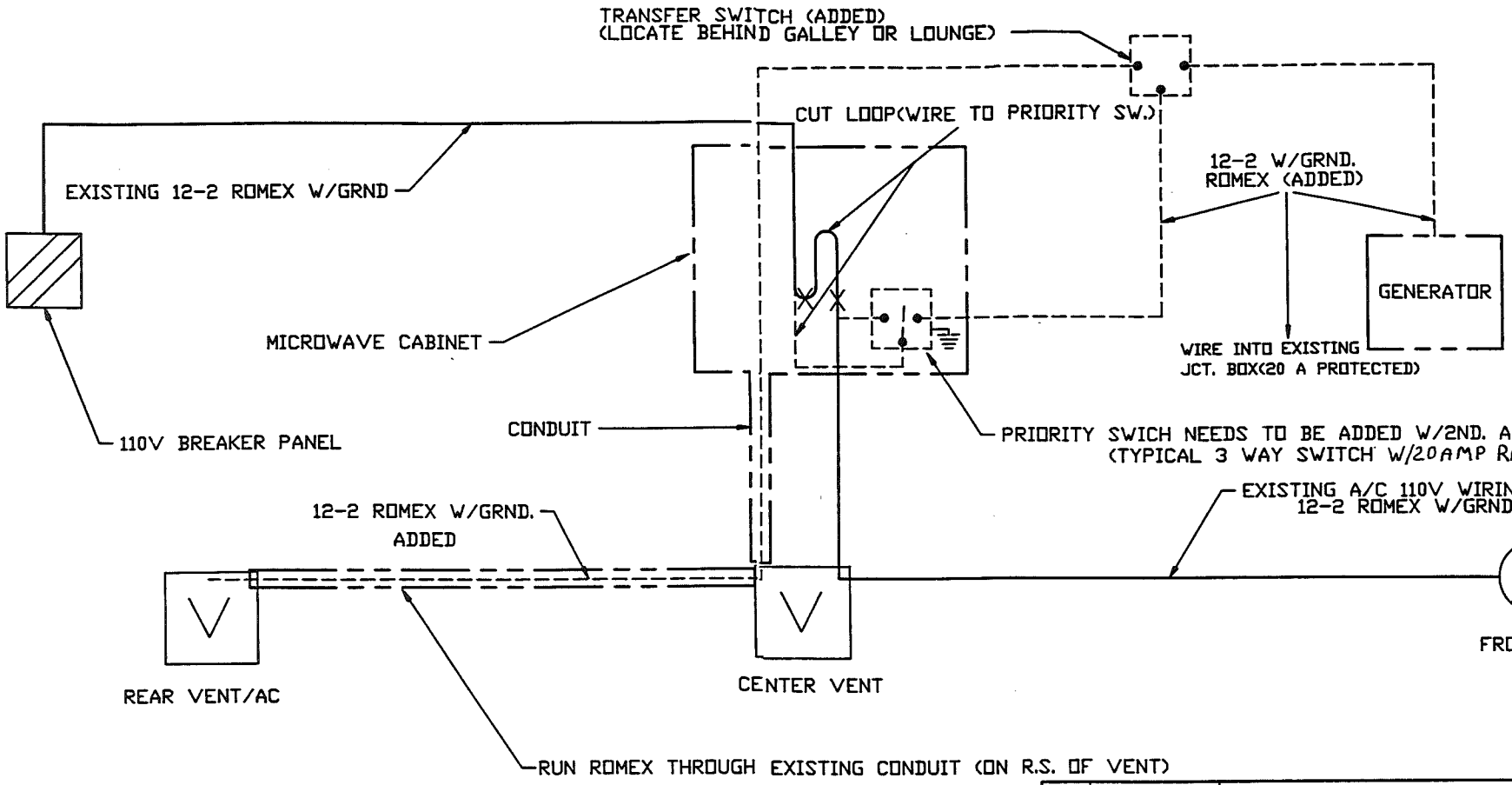
Circuit 1, 20 Amp. VCP, Converter and Credenza Recepts.
Circuit 2, 20 Amp., GFI Circuit.
Circuit 3, 30 Amp., Main .
Circuit 4, 20 Amp., Air Conditioners. Units are controlled by a priority switch.
Circuit 5, 20 Amp., Microwave Oven. NOTE: ON ARIZONA AND WASHINGTON UNITS THE MICROWAVE OVEN IS ADDED TO CIRCUIT 4.

110V Layout	952391	12V Calculations	952392	Fresh Water	943392
110V Layout (Wash & AR)	952393	12V Fuse Panel	952389		
110V Panelboard	952390	L.P. Gas System	943389		
110V Panelboard (Wash & AR)	952394	Above Floor DWV	943390		
12V Wiring	952383	Below Floor DWV	943391		

PART NUMBER	DESCRIPTION	QTY
AIRSTREAM	DIVISION Engineering	
PRODUCT LINE 34' S.B. Legacy M.H.	SCALE	DRAWN BY T.C.
		APPROVED BY
TITLE Floor Plan - USA MH-18		
NEXT ASSY.	DATE 11-91	DRAWING NUMBER / REV.

WIRE-A/C

LET	DATE	E.C.N.	REVISION RECORD	BY
	*	*	Production Release	RA



NOTE:
ROMEX FROM REAR A/C TO TRANSFER SWITCH
AND ROMEX FROM TRANSFER TO PRIORITY SWICH
NEEDS TO BE PULLED THROUGH CAVITY BETWEEN
GALLEY PANEL AND SHOWER STALL.

ITEM	PART NUMBER	DESCRIPTION	QTY

TOLERANCES ±	Airstream	DRAWN BY RLA
NEXT ASS'Y	PRODUCT LINE 30' LEGACY M.H.	APPROVED BY

TITLE OPT. REAR A/C WIRING

SCALE	DATE	DRAWING NUMBER	REV.
1=1	12/09/92	WIRE-A/C	B

NOTES

NOTES

NOTES

APPLIANCES

AIR CONDITIONER

Manufacturer: Dometic Sales Corporation
2320 Industrial Parkway
P.O. Box 490
Elkhart, IN 46515
Phone: 219-295-5228

Note: Review the air conditioning literature supplied in your Owner's Packet before proceeding.

The roof air conditioner used on Airstream Legacy motorhomes is one of the most popular on the market today. In your Owner's Packet is a set of literature covering all operating and maintenance instructions. If the literature is misplaced, please contact the air conditioner manufacturer or your Airstream dealer for replacement. A detailed service guide may be ordered from the manufacturer.

Because of the amount of power drawn by the air conditioners, it is only possible to operate one at a time when plugged into city power. A wall switch, located above the kitchen counter, allows you to operate either the front or rear air conditioner, but not both at the same time.

Another appliance drawing a lot of current is the microwave. Operating the microwave and an air conditioner at the same time will put your electrical system at the edge of maximum draw. If the air conditioner goes into a "start up" cycle, the additional current will probably cause your main circuit breaker to kick out. If this situation occurs it is best to leave the air conditioner off for the few minutes the microwave is normally operated.

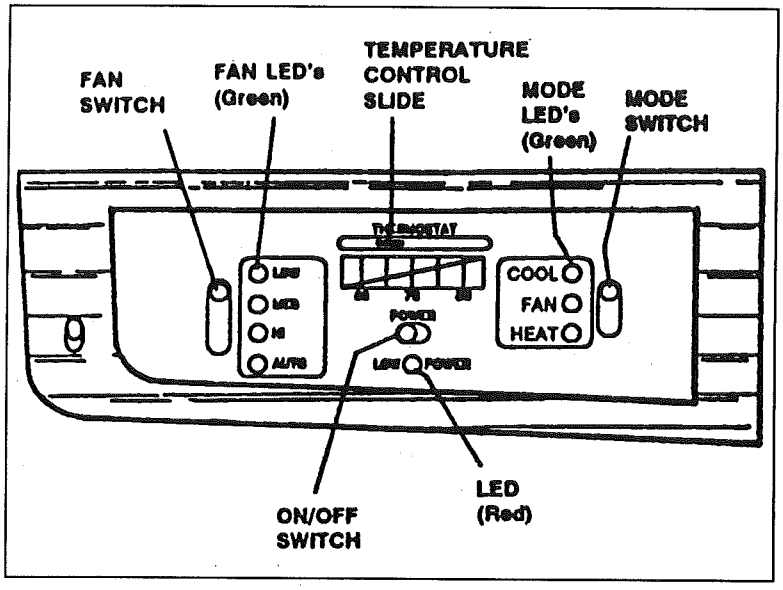
Both air conditioners may be operated when the generator is running or if you have optional 50 amp service. Set the priority switch to the front air conditioner and it is powered through the normal circuit. The generator powers the rear air conditioner through a separate circuit.

The voltage to the air conditioner is critical. We commonly refer to 110 or 120 volts, but a check with a volt meter may find voltage much lower. Your air conditioner will probably not function if the current drops below 105 volts. Low voltage is usually associated with older or poorly maintained trailer parks, but many people have found their homes, built only twenty or thirty years ago, may not be capable of operating the air conditioner on some receptacles. Parking your motorhome so the power cord can be plugged into a receptacle close to the fuse or circuit breaker box can alleviate the problem. Avoid extension cords and adapters whenever possible. If an extension cord must be used, it should be as short and heavy as possible to provide the most current to the air conditioner.

If high temperatures are expected, you should make an effort to park in a shaded area. Starting the air conditioner early in the morning also helps. It is much easier to hold a comfortable temperature than it is to lower the temperature after the interior of the motorhome is already hot.

OPERATING INSTRUCTIONS (Model 610015.405)

CONTROL DESCRIPTION:



1. Power Switch:

   a. Located lower center of control.
   b. Turns air conditioner ON to set condition of FAN and MODE switch.
   c. Turns air conditioner OFF.
   d. Green LED lights next to FAN and MODE switch light up to indicate power ON.
   e. No LED lights on when control is OFF.

2. Mode Switch:

   a. Three position switch located on right side of control.
   b. Used to select COOLING, FAN or HEAT mode of air conditioner operation.
   c. Mode selected is indicated by green LED light when control is turned on.

3. Fan Switch:

   a. Four position switch located on left side of control.
   b. Used to select HIGH, MEDIUM, LOW or AUTOMATIC FAN operation.
   c. Fan speed selected is indicated green LED light when control is turned on.

4. Temperature Slide:

   a. Located top center of control.
   b. Moveable arm on control selects temperature at which the refrigerant compressor or electric heater (if so equipped) is turned ON and OFF.
   c. User sets to position to maintain temperature level desired.

5. Low Power Light:

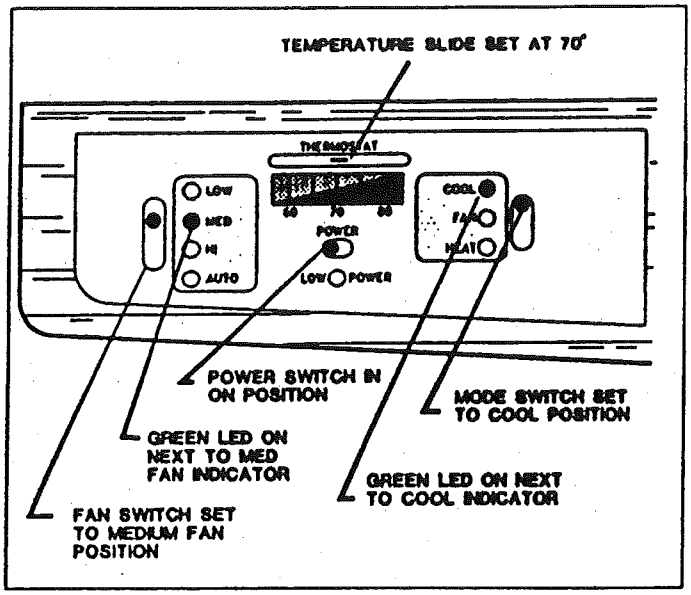
   a. Red indicator light located lower center of control.
   b. When on it indicates AC voltage is below 97 volts AC.
   c. Unit continues to operate (see Special Control Features E.4)

6. Remote Power Switch Connection:

   a. Two screw terminals located on back side of control.
   b. Used to connect a remote ON/OFF switch.
   c. Remote ON/OFF switch, if used, operates same as power switch. (See Special Control Features)

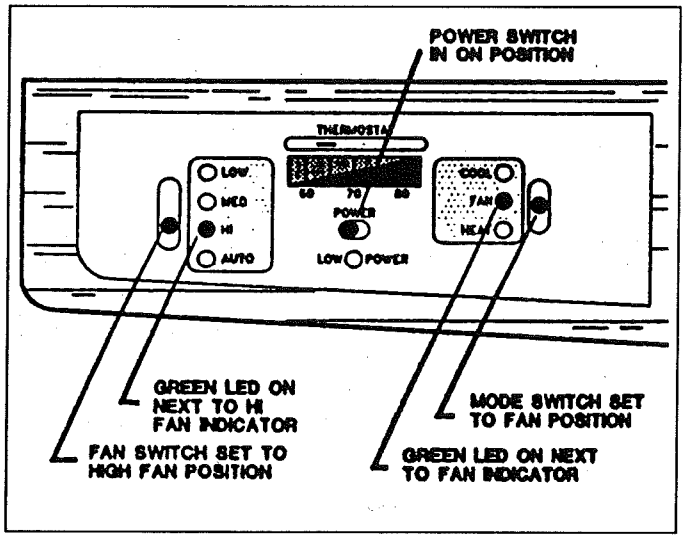
SPECIAL CONTROL FEATURES:

COOLING MODE OPERATION



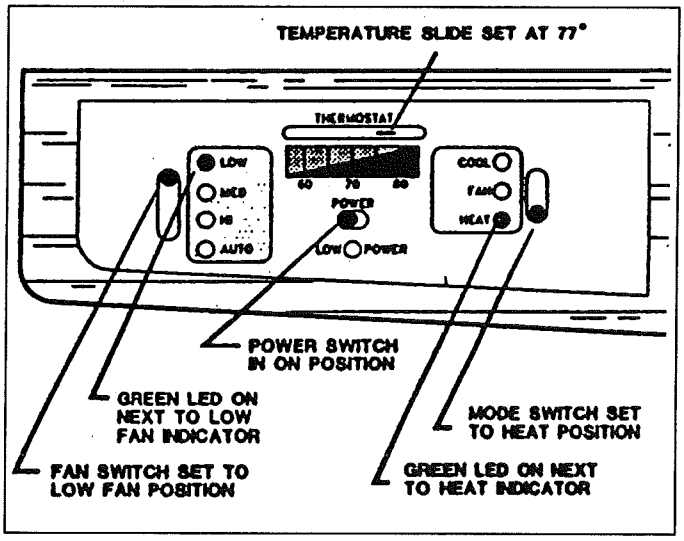
1. Turn POWER switch (or REMOTE switch if used) to ON position.
2. Place mode switch COOL position.
3. Set temperature slide switch to your desired temperature level.
4. Select your desired fan speed. NOTE: See Special Features Section E.1 for AUTO fan operation.
5. The fan starts immediately and after a delay of approximately two minutes, the compressor will start.
6. The fan runs continuously with the compressor cycling ON/OFF per the set point to maintain an even comfort range.

FAN MODE OPERATION



1. Turn POWER switch (or REMOTE switch if used) to ON position.
2. Place MODE switch in FAN position.
3. Select the desired fan speed: HI-MED-LOW-AUTO. NOTE: in AUTO position the fan operates only at low speed in FAN mode of operation.

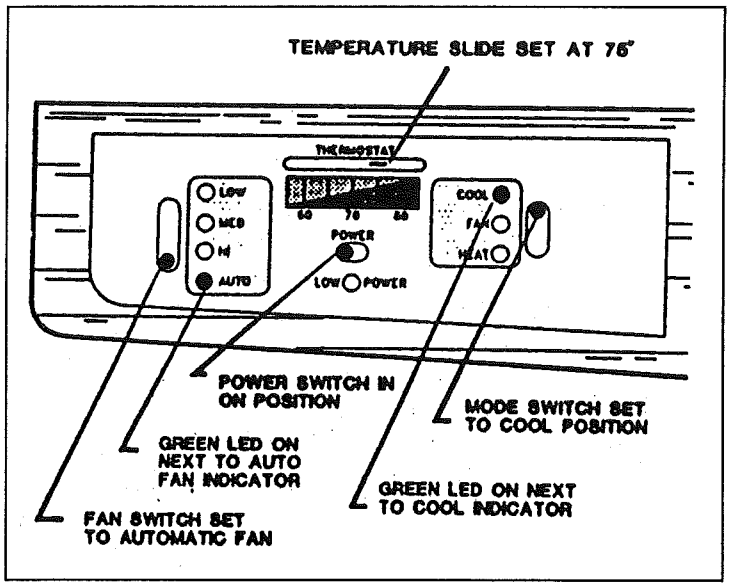
HEAT MODE OPERATION



1. Turn POWER switch (or REMOTE switch if used) to ON position.
2. Place mode switch in HEAT position.
3. Set temperature slide switch to your desired temperature level.
4. Select your desired fan speed HI-MED-LOW-AUTO) NOTE: in AUTO position the fan operates only at low speed in HEAT mode of operation.
5. The fan runs continuously with the electric heater cycling ON/OFF per the set point to maintain an even comfort range.

SPECIAL CONTROL FEATURES:

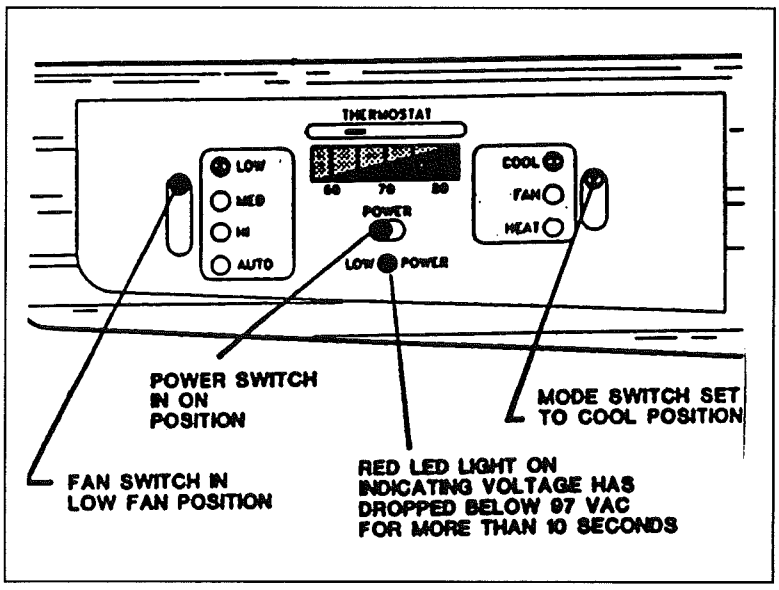
1. Auto Fan: When selected, FAN switch will:
   a. Automatically select the fan speed depending on the difference between set temperature and room temperature.
   b. Temperature difference of:
      8° or more
      Fan operates on HIGH
      4° to 8°
      Fan operates on MEDIUM
      4° or below
      Fan operates on LOW



2. Refrigerant Compressor Time Delay:
   The compressor will always have a delay in starting of approximately two minutes any time it is required to start.

3. Power Interruption:
   In the event power to the air conditioner is interrupted for any reason, the system will restart in the condition previously set by user.

4. Low Power Indicator:
   The red light will come on any time AC voltage drops below 97 volts AC for more than ten seconds. The light will remain on until the voltage is above 103 volts AC. The air conditioner will continue to run when red light is on as long as sufficient power is available to compressor to keep it running. NOTE: If red light is on, investigate the cause of the low voltage condition and correct to insure efficient operation of the air conditioner.



5. Remote ON/OFF Switch:
   This switch is user supplied and may be installed up to 40 feet from the control. Two screw terminals are located on the back of the control for this connection. The remote switch acts in conjunction with the power switch and when installed acts like a three way switch in your home.

MAINTENANCE

Air Filters: Periodically remove the return air filters. Wash the filters with soap and warm water, let dry and then reinstall or replace as required.

NOTE: Never run the air conditioner without return air filters in place. This may plug the unit evaporator coil with dirt and may substantially affect the performance of the unit.

Frost Formation on Cooling Coil: Under certain conditions frost may form on the evaporator coil. If this should occur, inspect the filter and clean if dirty. Make sure air louvers are not obstructed. Air conditioners have a greater tendency to frost when the outside temperature is relatively low. This may be prevented by adjusting the thermostat slide to a warmer setting. Should frost continue, operate on LOW, MED, or HIGH FAN setting until the cooling coil is free of frost.

SERVICE

If your unit fails to operate or operates improperly, check the following before calling your service center:

A. If RV is connected to motor generator, check to be sure motor generator is running and producing power.

B. If RV is connected to power supply by a land line, check to be sure line is sized properly to run air conditioner load and it is plugged into power supply.

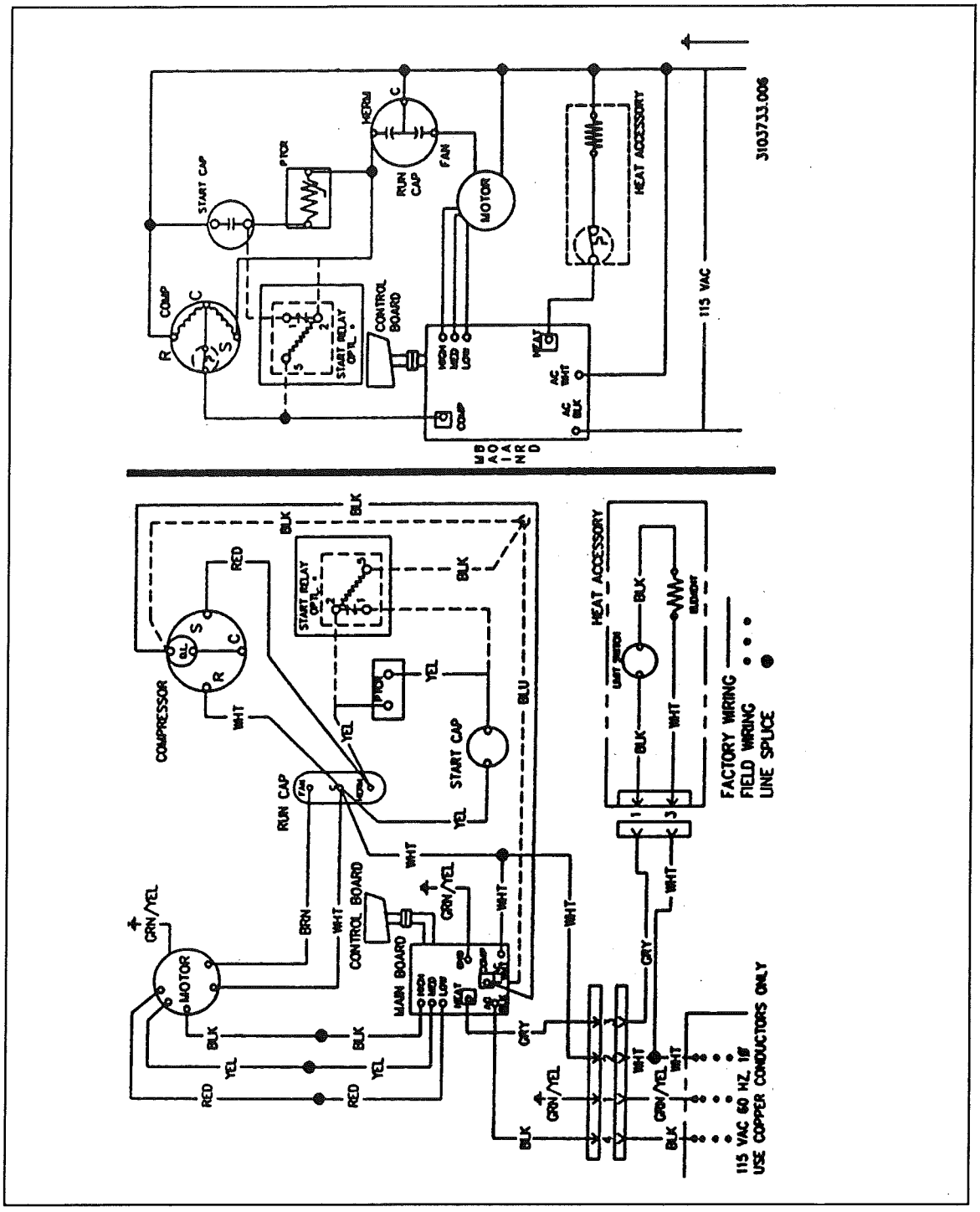
C. Check your fuse or circuit breaker to see if it is open.

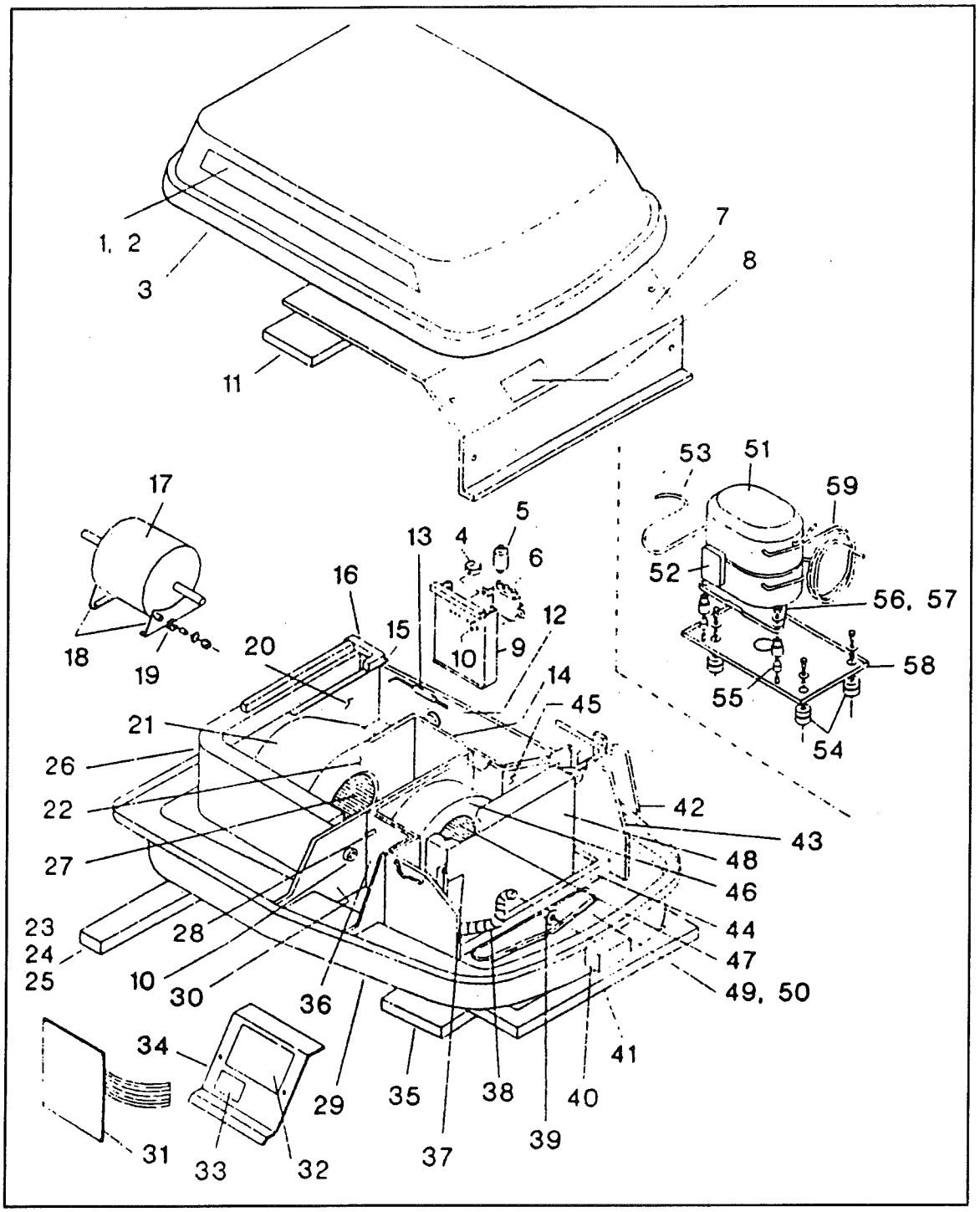
D. In the air conditioner air box, check to be sure the air conditioner conduit is plugged into the junction box and ribbon cable is connected.

E. After the above checks call your local service center for further help. This unit must be serviced by qualified service personnel only.

When calling for service always give the air conditioner model number and serial number. This information can be found on the unit rating plate located on the air conditioner base pan.

WIRING DIAGRAM

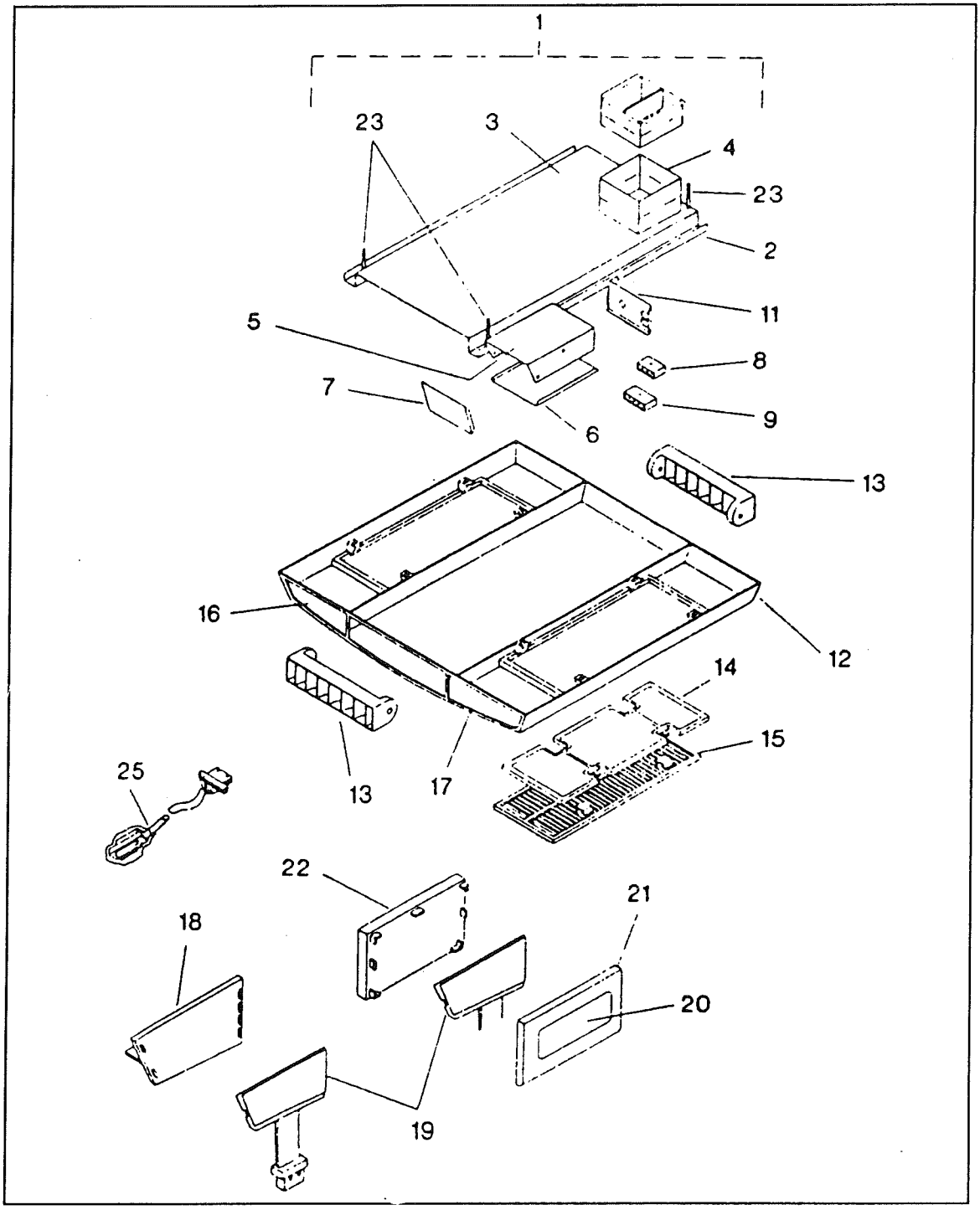



1, 2
3
11
7
8
17
18
19
20
16
15
13
4
5
6
10
9
12
14
45
21
26
22
27
23
24
25
28
10
30
36
34
31
33
32
29
35
37
38
39
40
41
42
43
48
46
44
47
49, 50
53
51
59
52
56, 57
58
55
54

PARTS DESCRIPTION FOR PRECEDING PAGE

1. Decal, LH (not shown)
2. Decal, RH
3. Shroud
4. Bracket, PTCR device
5. PTCR device
6. Capacitor fan/run
7. Cover, evap. w/insulation
8. Decal
9. Panel, Capacitor
10. Bushing, snap in
11. Insulation
12. Capillary tube (2 req)
13. Drier
14. Bulkhead, compressor
15. Plate, close-off
16. Tape, foam
17. Motor
18. Bracket, motor
19. Grommet
20. Blower side, rear
21. Blower scroll
22. Blower side, front
23. Gasket (16 x 1.5")
24. Gasket (16 x 1.5") not shown

    Gasket (10 x 1.5") not shown
26. Coil, condenser
27. Wheel, condenser
28. Support, PC board (4 req.)
29. Base pan
30. Bulkhead, evaporator
31. Board, main
32. Decal, wiring
33. Decal, caution
34. Cover, electrical
35. Insulation, blower housing
36. Bulkhead, electrical box
37. Clamp, cable
38. Conduit
39. Anti-short device
40. Plug, male 4 pole
41. Gasket 14 x 14
42. Insulation, evaporator
43. Plate, evaporator close-off
44. Pan, drain
45. Insulation, Evaporator
46. Blower housing, evaporator
47. Wheel, evaporator
48. Coil, evaporator
49. Bracket, mtg. less nuts (3 req)
50. Nut with clip (3 req)
51. Compressor
52. Overload
53. Line, discharge
54. Grommets, 7 req.
55. Sleeve
56. Plate, compressor
57. Spring
58. Plate, weldment, compressor mount
59. Line, suction


1
23
3
4
23
2
11
5
8
7
9
6
13
16
12
14
15
13
17
25
22
21
18
20
19

PARTS DESCRIPTION FOR PRECEDING PAGE

1-24	Box, assembly complete
2-11	Ceiling Template, complete
2.	Ceiling template less insulation
3.	Insulation
4.	Duct, discharge lower
5.	Junction box
6.	Cover, junction box
7.	Box front
8.	Plug, female 3 pole
9.	Plug, female 4 pole
10.	Decal, wiring (not shown)
11.	Box back
12-18	Complete air box assembly
12.	Air box only (not available)
13.	Louver, 3 req.
14.	Air filter, 2 req.
15.	Return air grill, 2 req.
16.	Decal, left side
17.	Decal, right side
18.	Mounting, control board
19-22	Thermostat, Complete
19.	Board, control
20.	Decal, thermostat
21.	Cover, thermostat
22.	Base, thermostat
23.	Bolts, mounting, 3 req
24.	Small parts bag (not shown)
25.	Cable, control

FURNACE

Manufacturer: Hydro Flame Corporation
1874 South Pioneer Road
Salt Lake City, UT 84104
Phone: 801-972-4621

The manufacturer of the furnace in your motorhome has been well known in the RV industry for many years. The furnace burns LP gas, and is powered by 12 volt current from the battery or power converter when plugged into city power. Operating instructions are located in your Owners Packet. If they should become misplaced new literature can be ordered direct from the manufacturer or your Airstream dealer. The manufacturer also offers a detailed service guide for your furnace.

WARNING: Carefully read all the manufacturer's instructions prior to operating. NEVER store flammable material next to the furnace.

If warranty service is required use only a service location recommended by the furnace manufacturer or your Airstream dealer.

Lighting Instructions

WARNING: This furnace is sealed and cannot be lit with a match. Failure to follow the instructions exactly may result in an explosion and possible damage to the furnace and injury to the operator.

1. Set the thermostat to "OFF".
2. Turn gas off at outside Lp Tank and wait 5 minutes.
3. Turn gas valve to "ON".
4. Turn thermostat up until blower comes on.
5. Allow 20 seconds or more for furnace to light due to a pre-purge cycle designed into the ignition system. On initial start up[in cold weather it may take up to two (2)minutes for the furnace to light.
6. If burner does not light, set thermostat to "OFF", wait 60 seconds and try again for ignition.
7. If after three tries and no ignition, go to shutdown and determine the cause. Be sure to have gas to the furnace)no air in the gas line).
8. If furnace lights, set thermostat to desired temperature setting.

Furnace Components

WARNING: Service and repair procedures in the following text is intended for Qualified Service Personnel use only.

Blower Assembly

The blower assembly is powered by a 12 volt DC motor. Two wheels are used. One for circulating warm air and the other for providing combustion air. See Fig. 1. The blower motor is permanently lubricated and no oiling is required. However, the blower assembly, including blower wheels, should be cleaned every season to remove accumulations of dirt and lint.

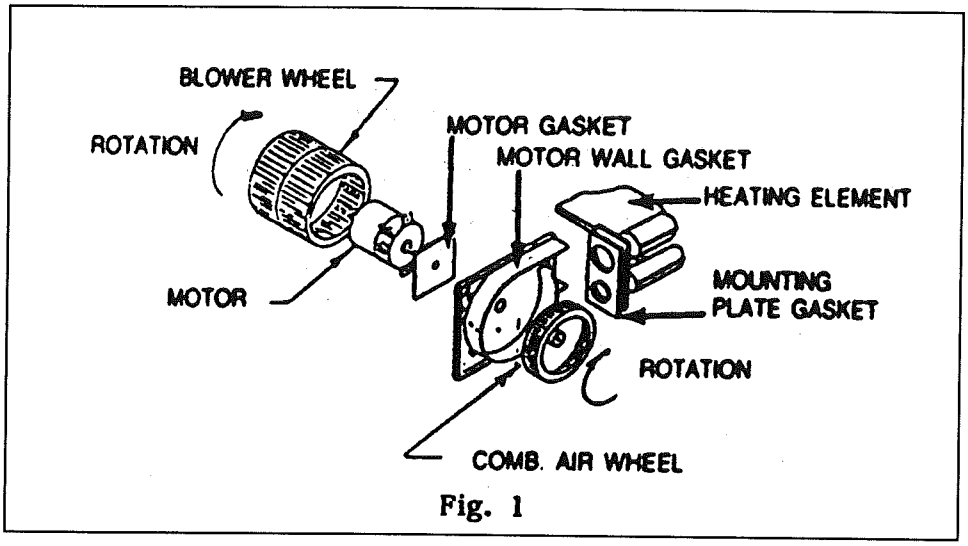


Fig. 1

Direct Spark Ignition Circuit Board

The circuit board is located on the back of the electrical panel just behind the front door. As shown in Fig. 2, it operates in conjunction with the ignitor assembly (located at the right side of the control box on the burner box assembly). To provide safe reliable ignition without the use of a standing pilot as described in the "Sequence of Operation" section, the circuit board provides an initial purge cycle of about 20 seconds. During this time only the blower runs so that any unburned gases are purged out of the heat exchanger, prior to ignition.

This purge cycle time is unique to the circuit board used by Hydro Flame and is not the same as most other circuit boards used by other manufacturers. **Therefore, it is essential to use only the Hydro Flame Circuit Board if a replacement is required.** Hydro Flame circuit board has a protective cover added to the assembly to give added protection from handling and moisture. See Fig. 2.

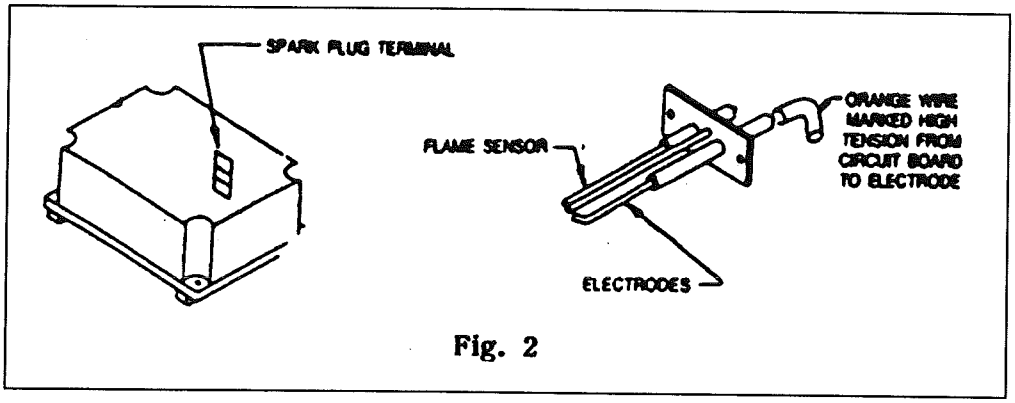


Fig. 2

The electrode assembly consists of two electrodes and one flame sensor probe. The spark produced by the circuit board to the electrodes ignites the burner after the purge cycle is completed. The flame sensor probe senses the heat from the burner and signals the circuit board to keep the gas valve open. If ignition does not occur so that the flame sensor does not sense heat, the circuit board will shut the gas valve off within 6 to 9 seconds.

Burner Assembly

To remove the burner assembly from the control box, first remove the draft shield assembly by opening the front door catches and unscrewing the wing nut located on the side of the combustion air housing cover and front screw. See Fig. 3. Next unscrew the manifold from the blower wall and remove the three (3) screws on the burner box.

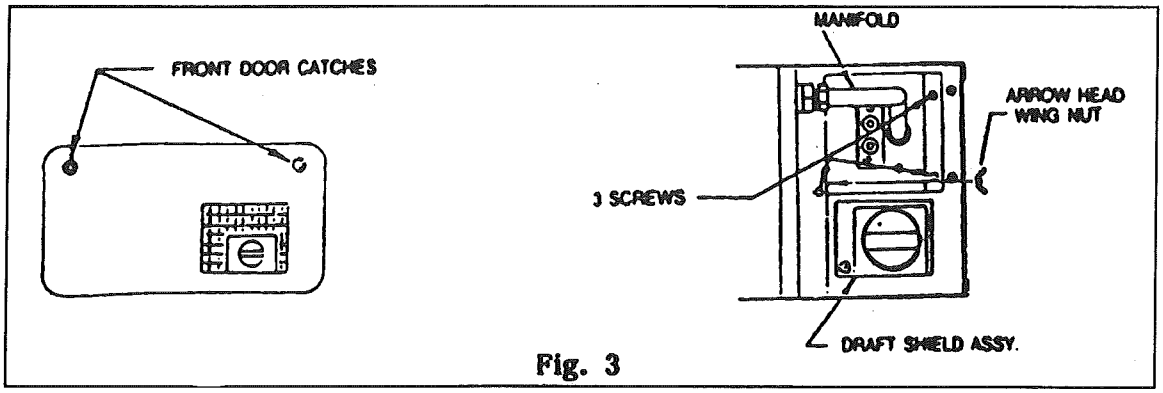


Fig. 3

Pull manifold to the right until manifold clears the brass fitting. Now remove burner assembly by pulling the manifold toward you and disconnecting the electrode wires.

CAUTION: When re-installing the burner assembly make sure the two screws on the burner box flange are secure and not stripped.

Air Seal Gaskets
In order to prevent leakage of combustion air from the sealed system, there are gaskets in the following places. These gaskets must be in place and undamaged. See Fig. 4 for gasket locations.

1. Heat exchanger gasket.
2. Motor wall gasket.
3. Motor gasket.

Heat Element Assembly
The heat element assembly can be removed in order to service the exchanger or the heat element gasket. Follow the steps listed:

1. Turn off gas at LP tanks.
2. Disconnect gas line from left side of furnace.

WARNING: Fire or explosion may result when gas line is disconnected at the furnace and the gas bleeds out. Check all appliances which have a pilot still burning and extinguish them or any other flame source in the vicinity.

3. Unplug the electrical plastic disconnect plug from the left side of the furnace.
4. Remove six screws on the left inside of the control box and the two screws on the right inside of the control box. See Fig. 4.

5. Remove the twelve screws holding the front door on.

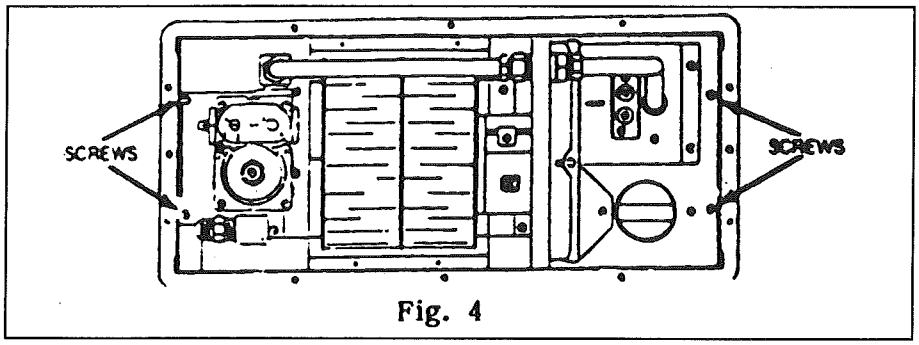


Fig. 4

6. Pull the entire control box assembly forward where it can now be serviced and bench tested.

7. Remove burner assembly as described earlier and remove three remaining screws holding element assembly to control box.

CAUTION: When re-installing heat element assembly and control box assembly, be sure all screws are firmly in place.

SEQUENCE OF OPERATION

A. On stand-by the +12 VDC is connected to terminal #3 of the fan relay which is closed. The voltage will extend (1) through the red wire to terminal #1 of the open fan relay, (2) through another red wire to the limit switch, (#) through the limit, (4) through the red wire to the sail switch. See Fig. 5.

B. When the temperature inside the RV drops to the set temperature of the thermostat, the thermostat contacts close to (1) switch 12 VDC to terminal #5 of the fan relay terminal, (2) through the yellow wire to -12 VDC ground, thus the fan relay coil is energized. See Fig. 6.

C. With the fan relay coil energized, the contacts of the fan relay will close and the +12 VDC will pass (1) through the contacts from #3 to #1, (2) through the red wire to the circuit breaker, (3) through the circuit breaker, (4) through the red wire to the motor, (5) through the motor, (6) through the black wire to the ground system. Thus, the fan motor runs. See Fig. 7.

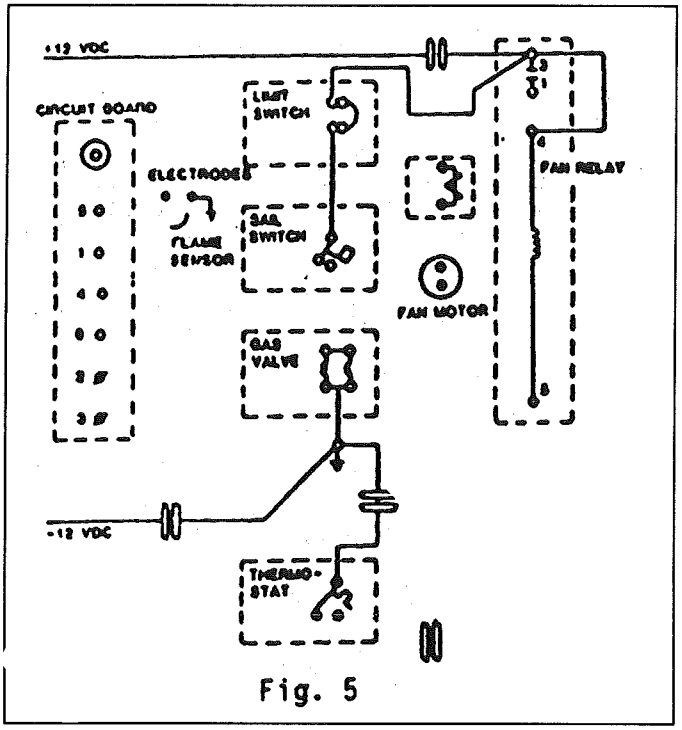


Fig. 5

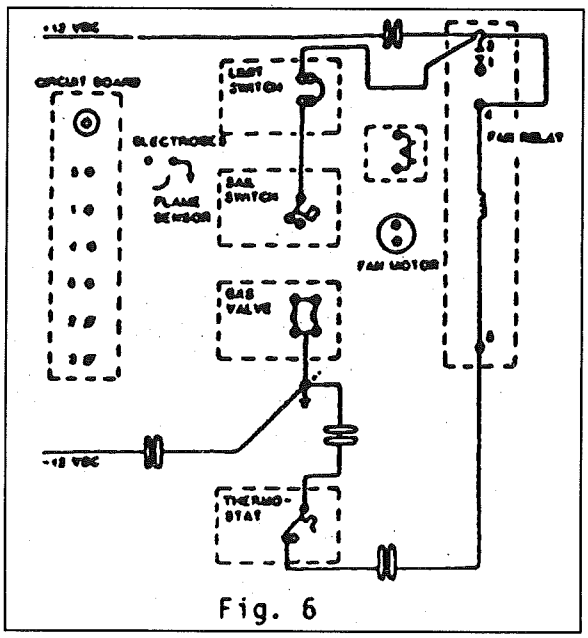


Fig. 6

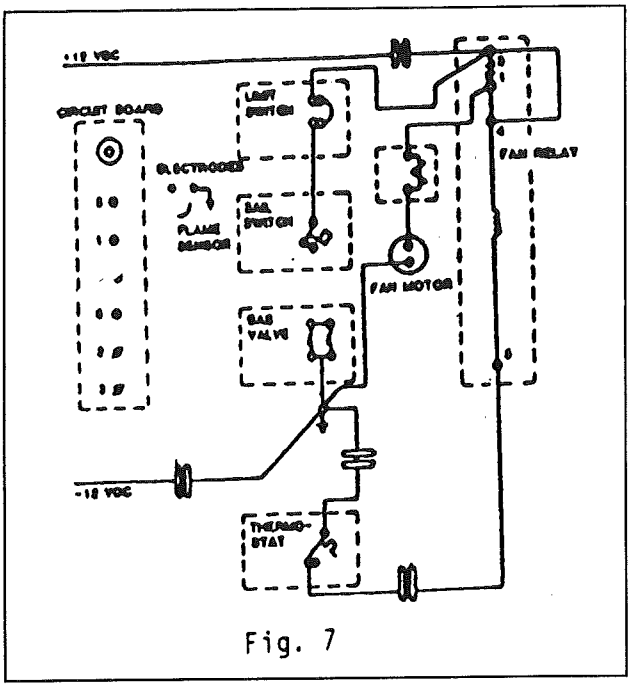


Fig. 7

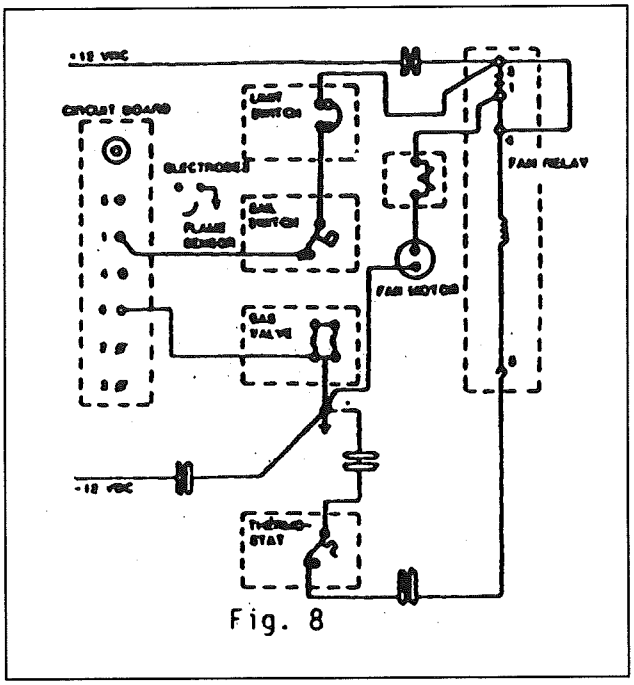
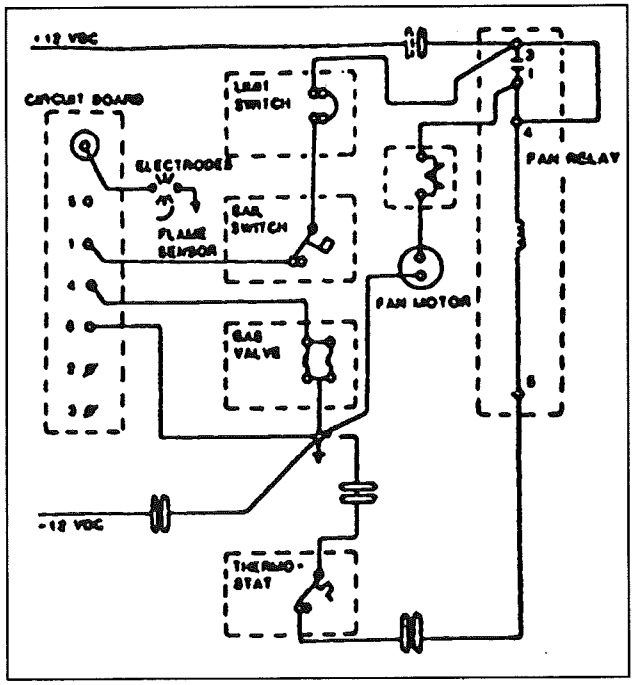


Fig. 8

D. As the fan comes up to speed the air current will close the sail switch and th +12 VDC will pass (1) through the sail switch, (2) through the wire to the #1 terminal of the circuit board.

Note: The ground side of the circuit board is established from terminal 6 through the red wire to the grounded side of the fan relay. When the circuit board is energized it will start the 20 second count down of purge time. See Fig. 8.

E. When the 20 second purge time is complete, the circuit board will switch +12 VDC to the ungrounded terminal of the gas valve and the gas valve will open. The circuit board will simultaneously initiate the ignitor spark through the large orange wire to the ignitor electrode, then ignition will occur. See Fig. 9.



F. When the gas valve is energized and the ignition spark occurs, (paragraph E) the circuit board will start the 6 to 9 seconds waiting time to prove the presence of a flame. When the flame is established above the burner in less than 6 to 9 seconds, the flame sensor will detect the flame and signal (through the black wire to terminal #5) circuit board to continue the heating cycle.

Note: If the flame sensor does not detect a flame, the flame sensor will signal the circuit board to lock-out the gas valve.

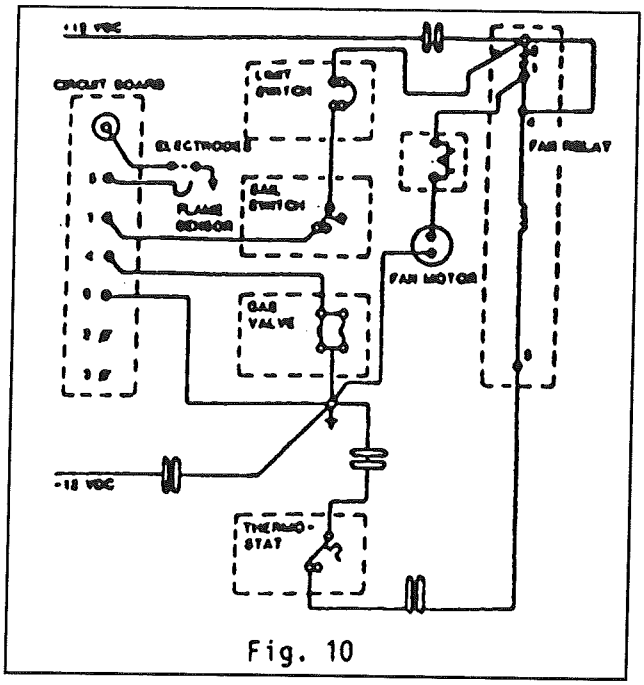


Fig. 10

G. When the temperature of the RV rises above the thermostat set temperature, the thermostat will open and disconnect the -12 VDC to terminal #5 of the fan relay. Then the gas valve will close and the fan relay contacts will open, after a cool down period of 1 to 2 minutes for the heat in the fan relay coil to be extracted. See Fig.11.

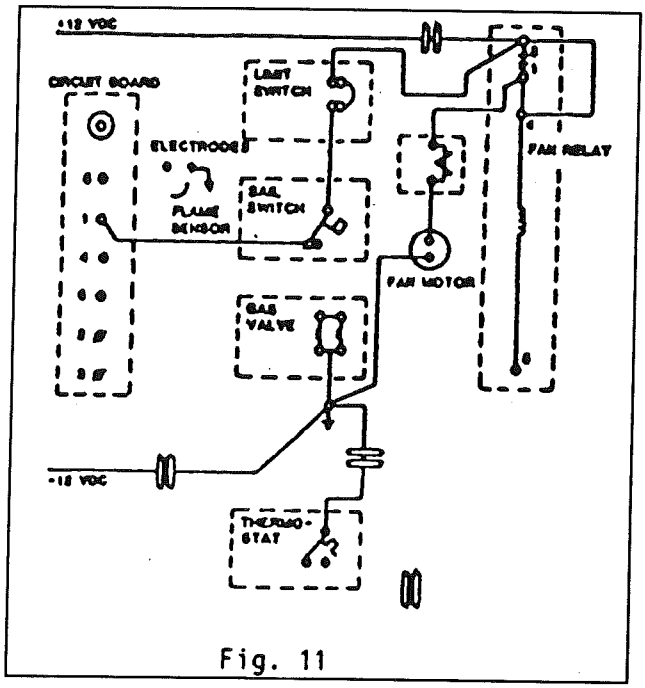


Fig. 11

The complete wiring diagram, with all switches in their normal positions, is shown in Fig. 12.

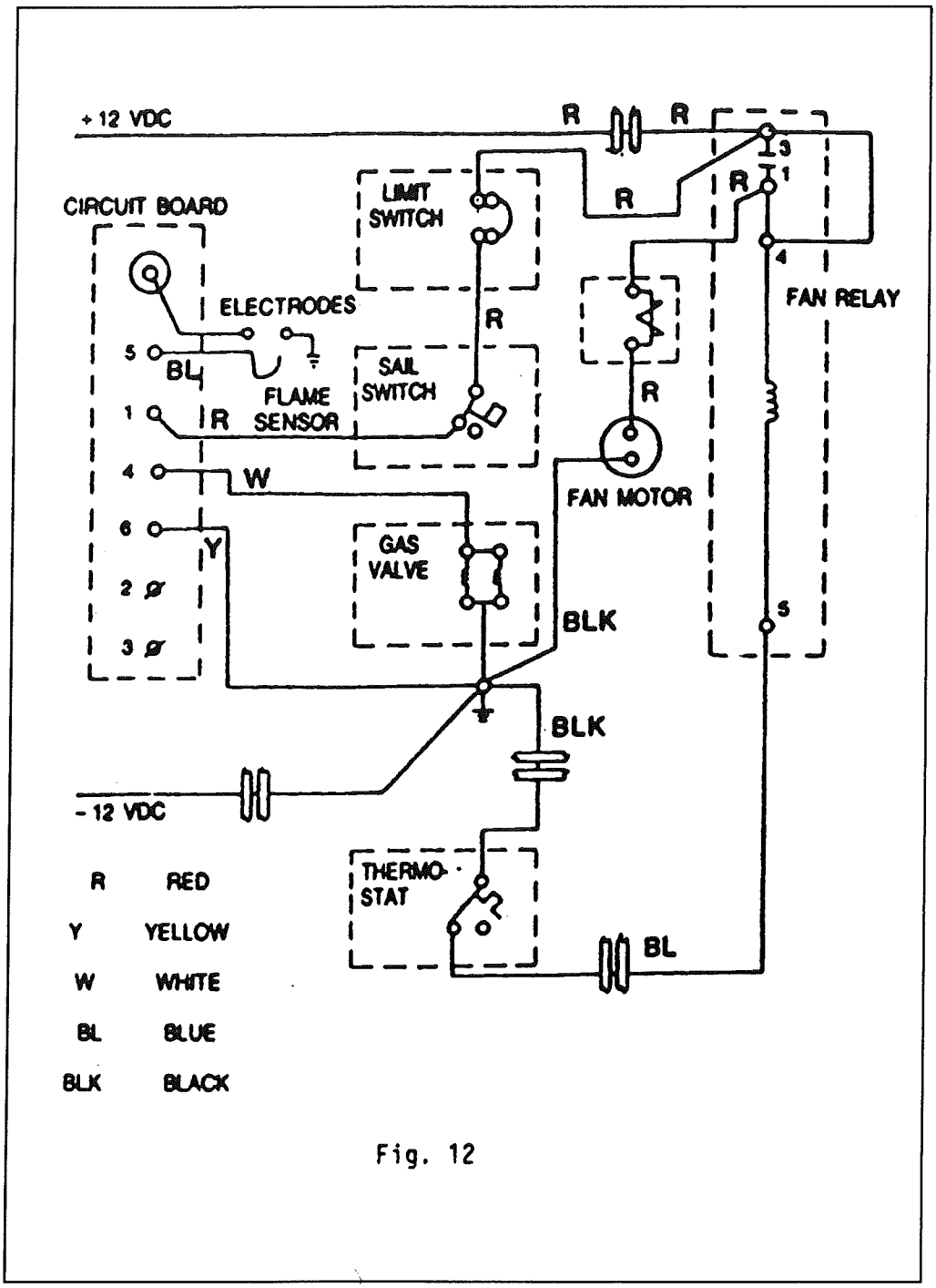
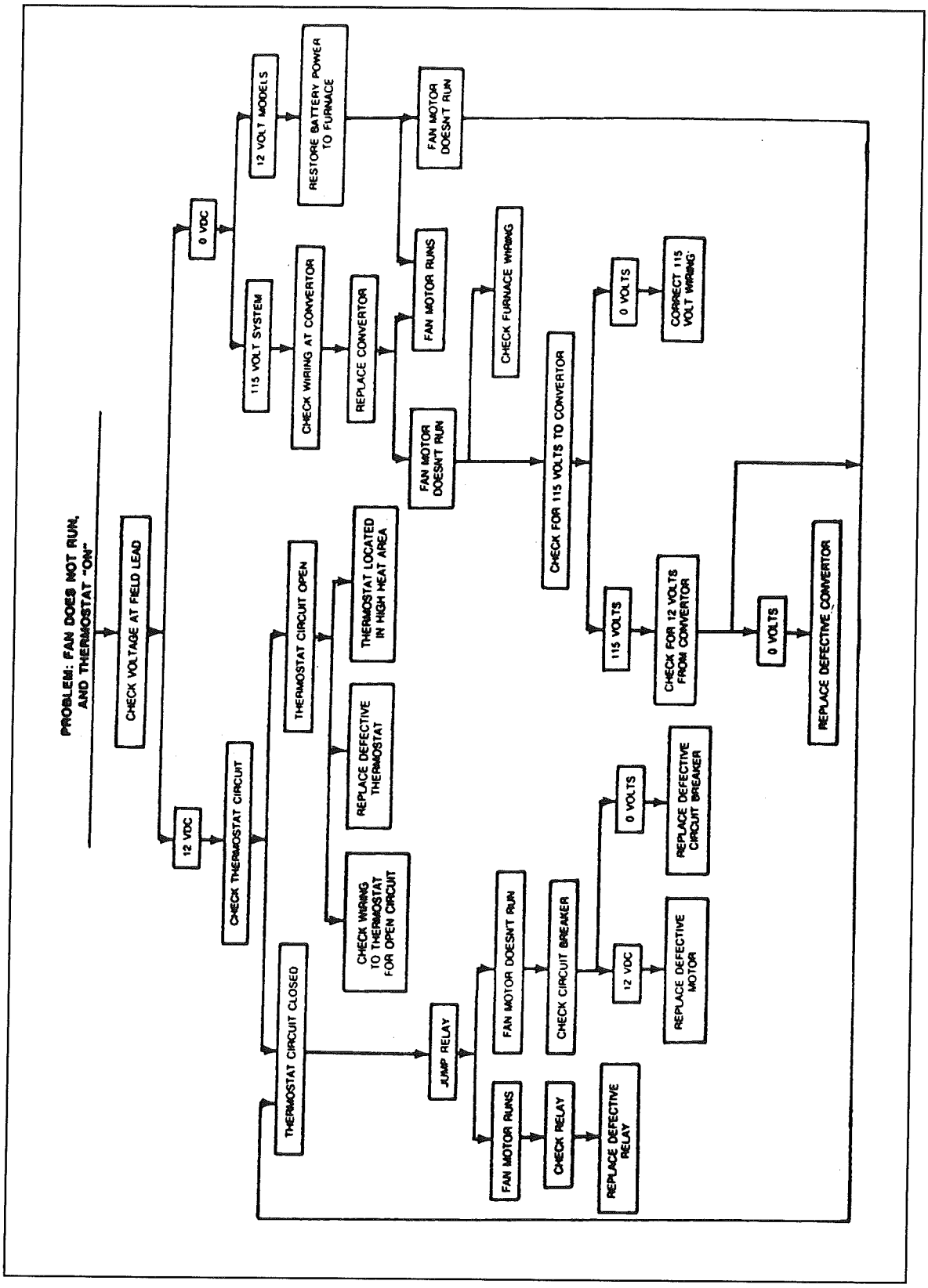
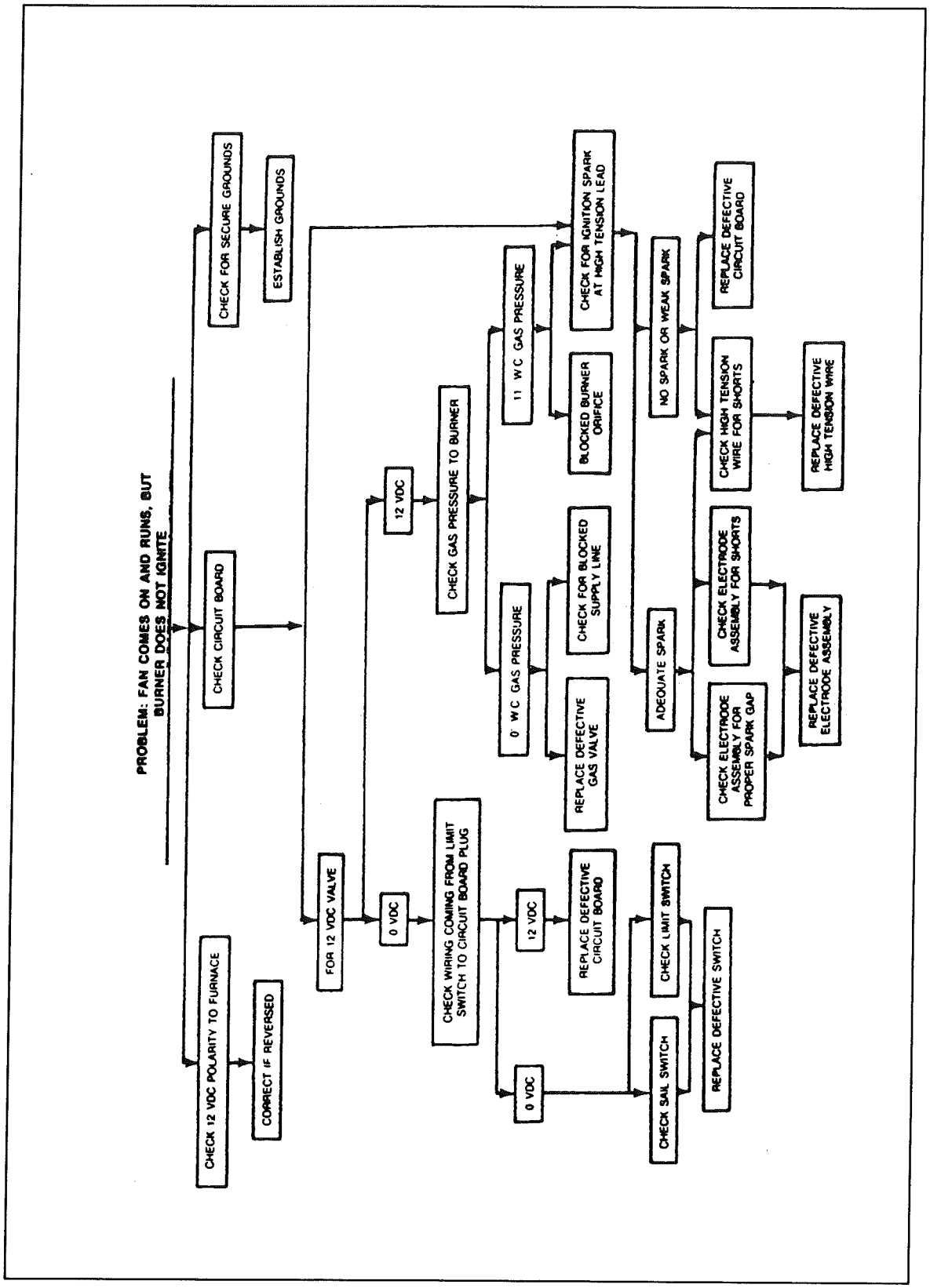


Fig. 12

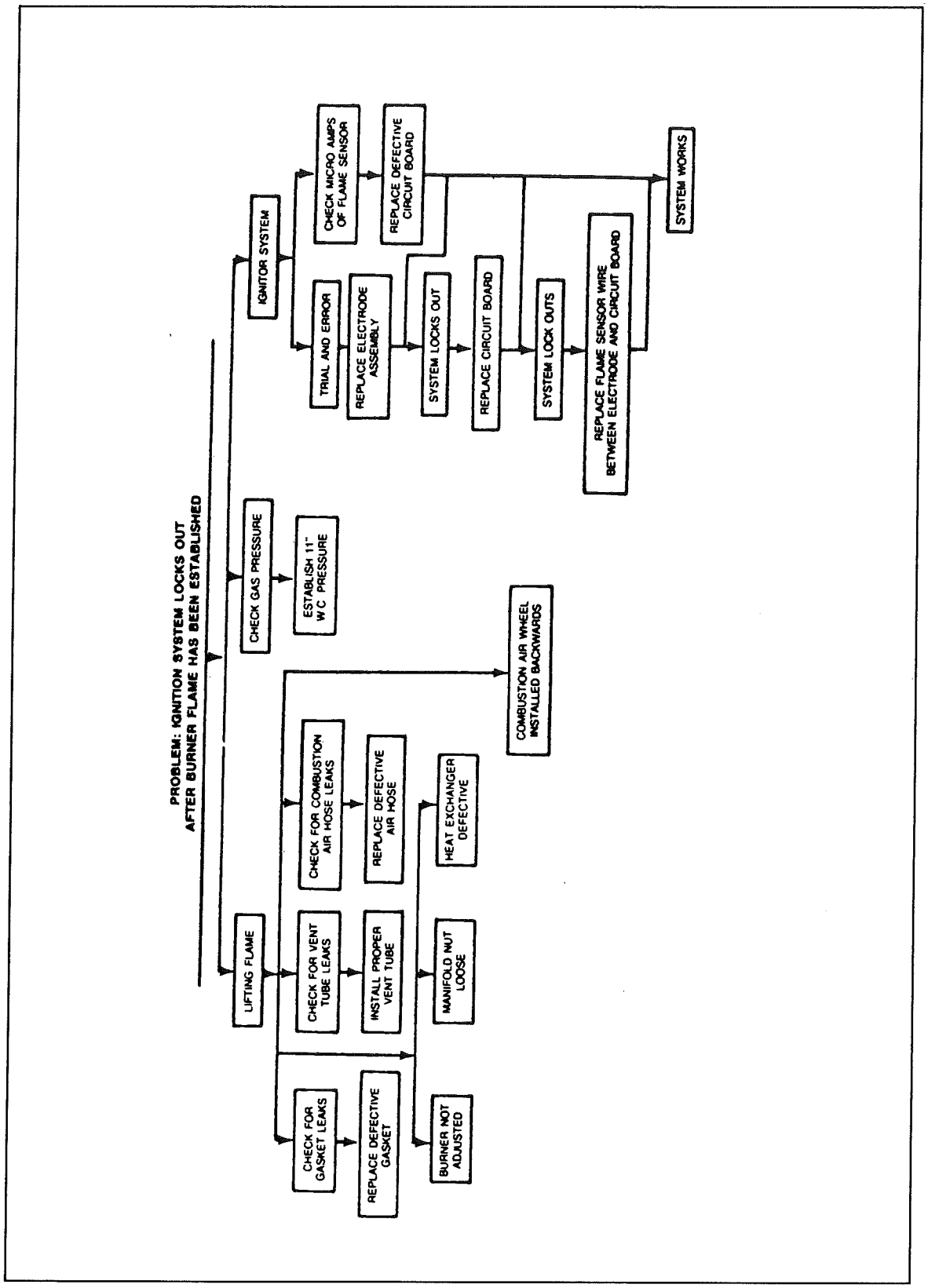
SERVICE CHART #1



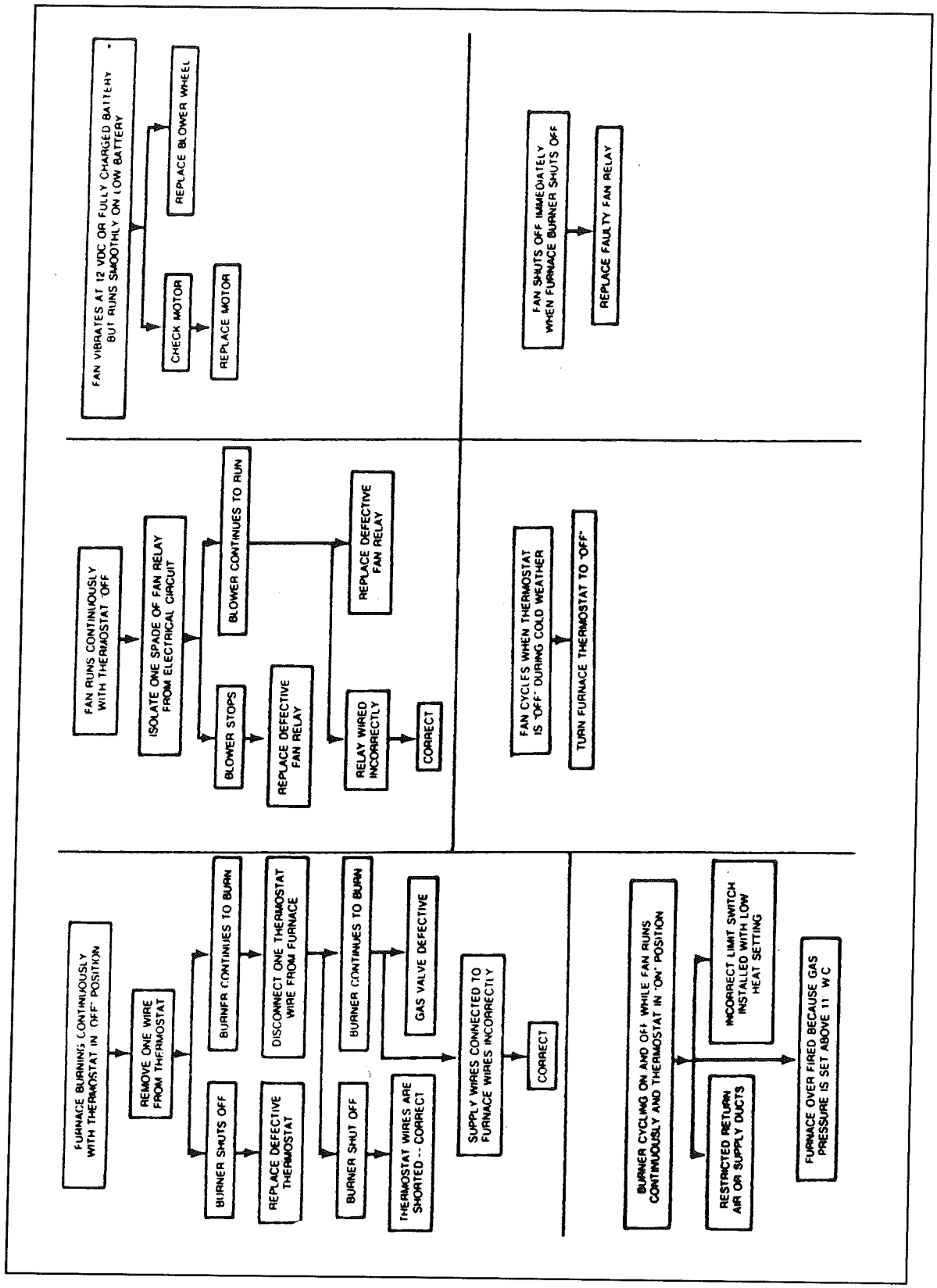
SERVICE CHART #2



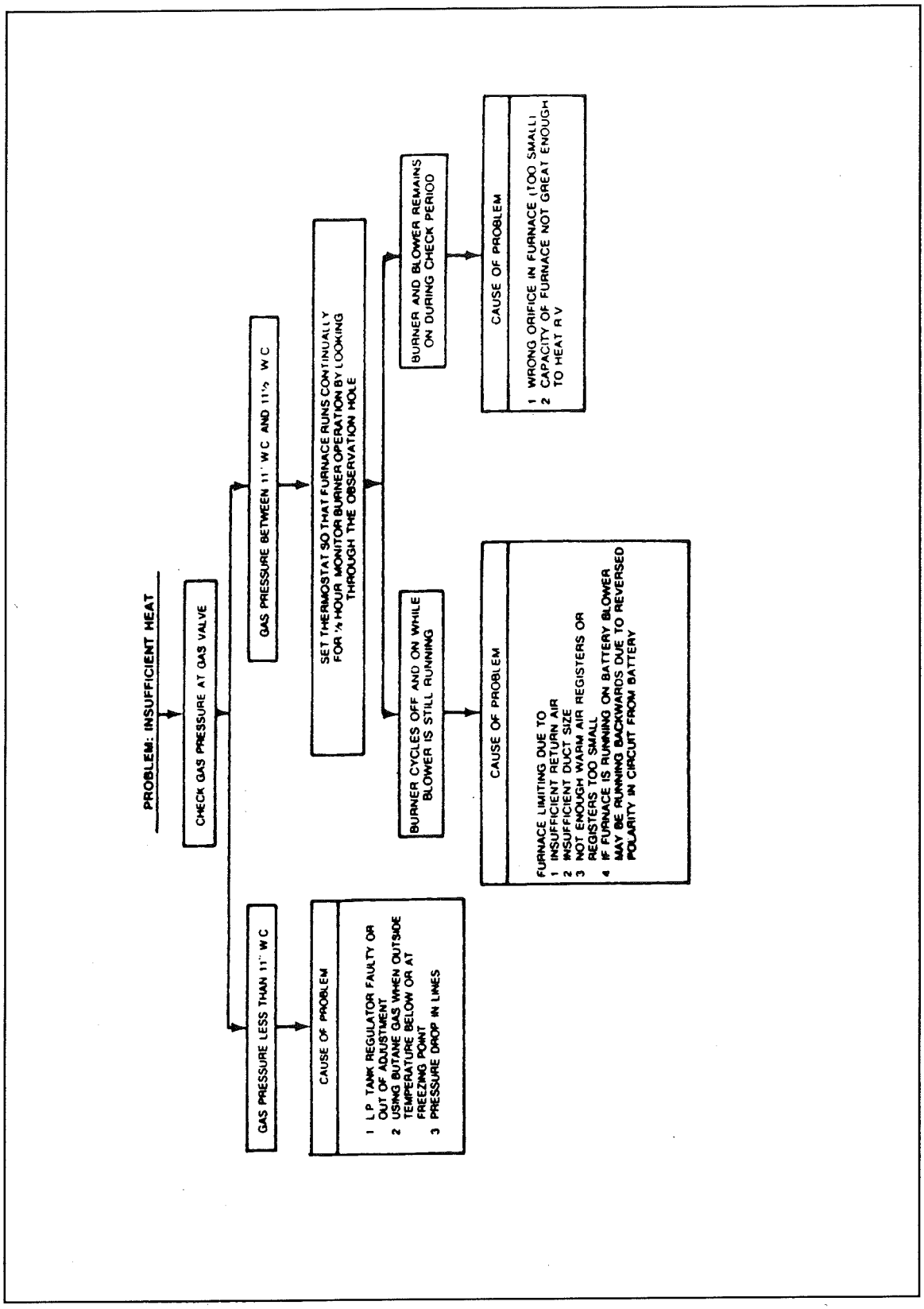
SERVICE CHART #3



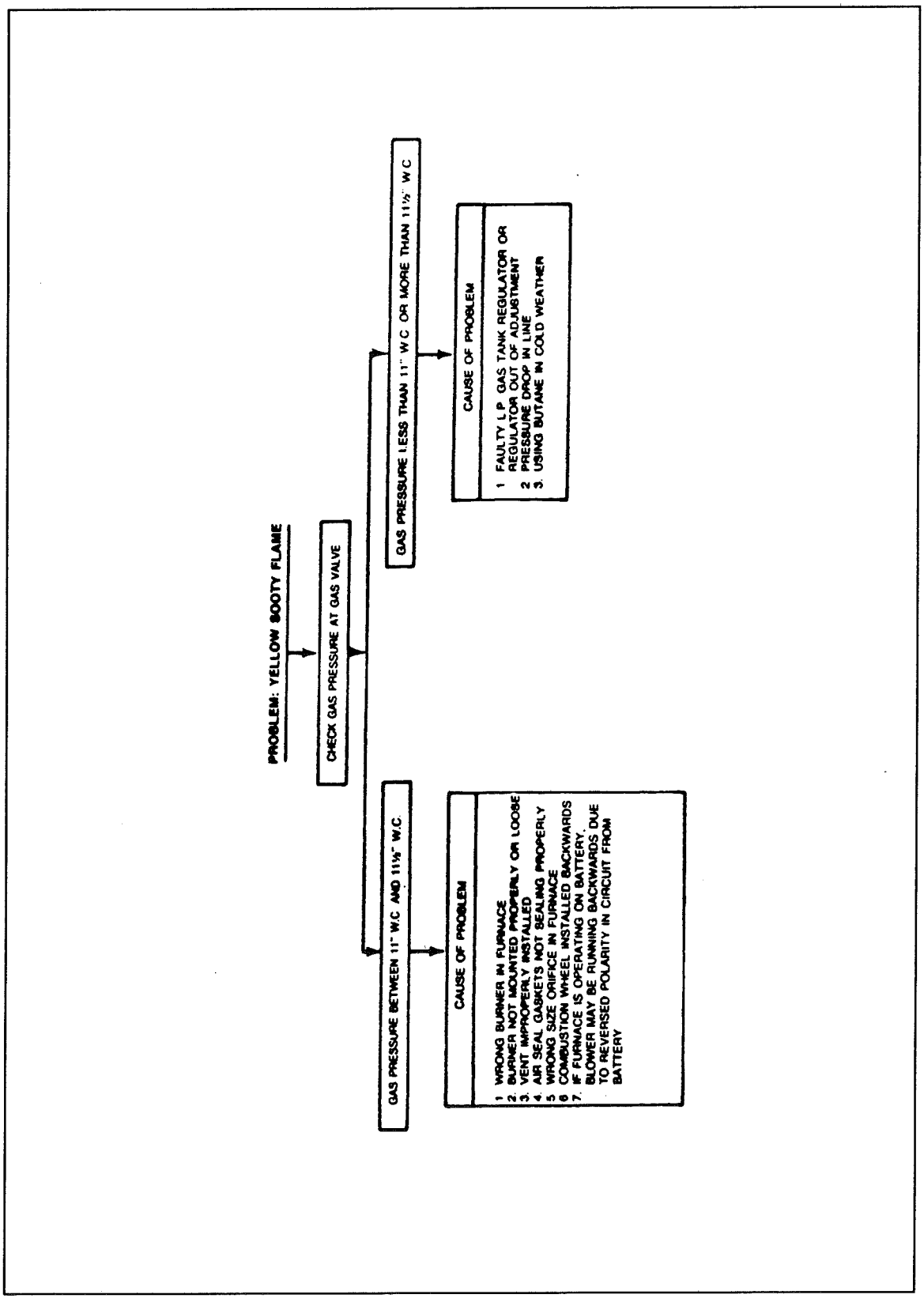
SERVICE CHART #4



SERVICE CHART #5



SERVICE CHART #6

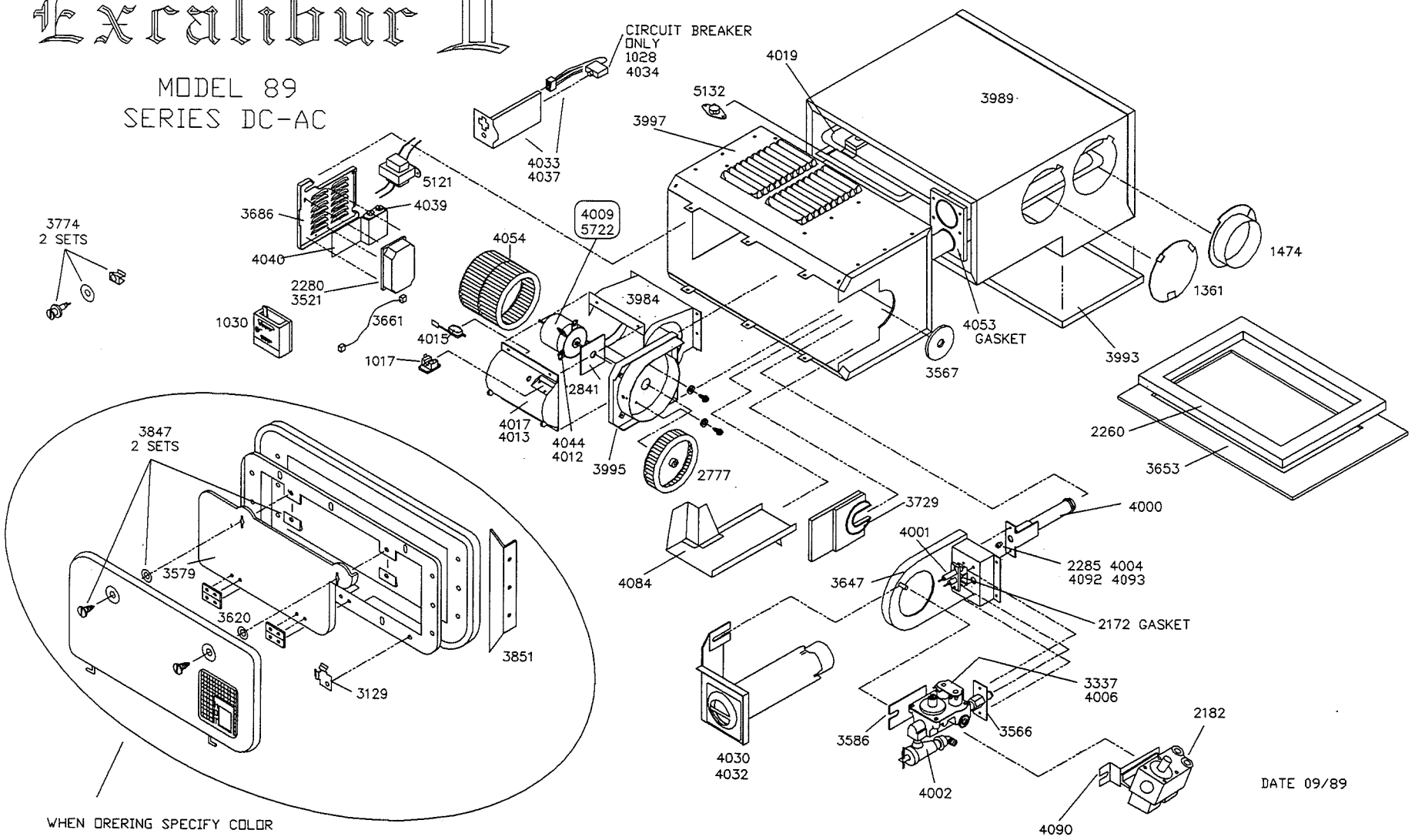


FURNACE PARTS LIST 89 MODELS SERIES DC AND AC

Part Numbers	Description of Parts
1017	Relay
1028	Circuit Breaker (AC)
1030	Thermostat
1361	Duct cover Plate
1474	Duct Adapter
2172	Electrode Gasket
2182	Johnson Valve
2260	Bottom Gasket
2280	AC Fenwal DSI Board
2285	#51 Orifice, propane
2777	Combustion Wheel
2841	Motor Gasket
3129	Door Hinge Clip
3337	White Rodger Valve, DC
3475	DC White Rodger Replacement Coil
3475	AC White Rodger Replacement Coil
3521	DC Fenwal DSI Board
3566	Outlet Manifold
3567	Gas Inlet Plug
3579	Inner Door
3586	White Rodger Valve Bracket
3620	Hinges (2)
3647	Burner Box Assembly
3653	Bottom Plenum Plate
3661	High Voltage Wire
3686	DSI Bracket
3729	Slide Plate
3759	Door & Bezel Assembly (Specify color) Beige #07
3774	Screw Set
3847	Door Latch Assembly
3851	Recess Door Pan Mounting Brackets
3859	Recess Door Pan (Specify color(Beige #07
3984	Blower Housing Assembly
3989	Casing
3993	Bottom Discharge Cover Plate
3995	Motor Mounting Wall Assembly
3997	Control Box Assembly
4000	Burner Assembly
4001	Electrode
4002	Brass Shut Off
4004	#49 Orifice, propane
4006	White Rodger Valve, AC
4009	Motor, DC
4012	AC Motor Mounting Plate
4013	DC Blower Back Assembly
4015	Sail Switch
4017	AC Blower Back Assembly
4019	Element Assembly
4030	DC Draft Cap Assembly
4032	AC Draft Cap Assembly
4033	DC Junction Box Assembly
4034	Circuit Breaker (DC)
4037	AC Junction Box Assembly
4039	AC Motor Capacitor
4040	AC Motor Capacitor Bracket
4044	DC Motor Bracket
4053	Element Exhaust Wall Casket
4054	Blower Wheel
4084	Rain Shield
4090	Johnson Mounting Bracket
4092	#30N Orifice (natural)
4093	#32N Orifice (natural)
5121	AC Transformer Assembly
5132	Limit Switch
5722	AC Motor

Exralibur II

MODEL 89
SERIES DC-AC



NOTES

REFRIGERATOR

Manufacturer: The Dometic Corporation
509 South Poplar St.
LaGrange, IN 46761
Phone: 219-463-4850

2-Way Models - 2807

INSTRUCTIONS FOR USE

HOW TO START THE REFRIGERATOR

Leveling

In an absorption refrigerator system, ammonia is liquified in the finned condenser coil at the top rear of the refrigerator. The liquid ammonia then flows into the evaporator (inside the freezer section) and is exposed to a circulating flow of hydrogen gas, which causes the ammonia to evaporate, creating a cold condition in the freezer.

The tubing in the evaporator section is specifically sloped to provide a continuous movement of liquid ammonia, flowing downward by gravity through this section. If the refrigerator is operated when it is not level and the vehicle is not moving, liquid ammonia will accumulate in sections of the evaporator tubing. This will slow the circulation of hydrogen and ammonia gas, or in severe cases, completely block it, resulting in a loss of cooling.

Any time the vehicle is parked for several hours with the refrigerator operating, the vehicle should be leveled to prevent this loss of cooling. The vehicle needs to be leveled only so it is comfortable to live in (no noticeable sloping of floor or walls).

When the vehicle is moving, the leveling is not critical as the rolling and pitching movement of the vehicle will pass to either side of level - keeping the liquid ammonia from accumulating in the evaporator tubing.

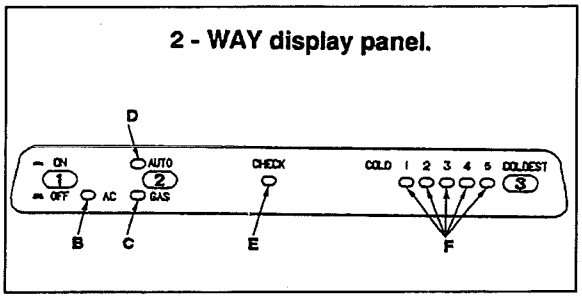
OPERATION

Before starting the refrigerator, check that all the manual gas valves are in the ON position. DO NOT forget the manual shutoff valve on the rear of the refrigerator, see FIG. 1.

This refrigerator is equipped with a semi Automatic Energy Selector (AMES) control system, which can be set to automatically select either 120 volt AC or LP gas operation, or if desired LP gas only. On 3-way models the control system can manually be set to DC operation. The refrigerator controls will work down to 9.6 volt DC.

WARNING: Most LP gas appliances used in recreational vehicles are vented to the outside of the vehicle. When parked close to a gasoline pump, it is possible that gasoline fumes could enter this type of appliance and ignite the burner flame, CAUSING A FIRE OR AN EXPLOSION.

FOR YOUR SAFETY, it is recommended that all LP gas appliances which are vented to the outside should be shut off when refueling.



START UP INSTRUCTIONS

A. A 12 volt DC supply must be available for the electronic control to function.
B. Press the main power ON/OFF button (1) to the DOWN position.
C. Press the TEMPERATURE SELECTOR BUTTON (3) 2-WAY Model or (4) 3-WAY Model until the lamp at the desired setting is illuminated.

2-WAY MODEL

AUTO MODE

1. Move the AUTO/GAS mode selector button (2) to the DOWN position. If 120 volts AC is available, the AC mode indicator lamp (B) will illuminate indicating AC operation. If 120 volts AC is not available, the GAS mode indicator lamp (C) will illuminate and the control system will automatically switch to GAS operation.
2. If the CHECK indicator lamp (E) illuminates and the GAS mode indicator lamp (C) is off, the controls have failed to ignite the burner in the GAS mode. GAS operation may be reset by pressing the main power ON/OFF button (1) to the OFF than ON position. (see step 2 under GAS MODE)
3. Press the TEMPERATURE SELECTOR button (3) until the lamp at the desired position is illuminated.

GAS MODE

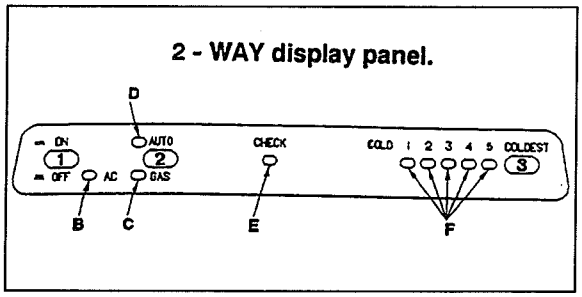
1. Move the AUTO/GAS mode selector button (2) to the UP position. The GAS mode indicator lamp (C) will illuminate. After 45 seconds the burner should be ignited and operating normally.
2. On the initial refrigerator start-up, it may take longer than 45 seconds to allow air to be purged from the gas line. If the gas does not ignite within 45 seconds the CHECK indicator lamp (E) will illuminate and the GAS mode indicator lamp (C) will go off. To reset when the CHECK indicator lamp (E) is illuminated, press the main power ON/OFF button (1) to the OFF and then ON position.

NOTE: Do not continue to reset GAS operation if the CHECK indicator lamp continues to be illuminated after several tries.

3. Press the TEMPERATURE SELECTOR button (3) until the lamp at the desired position is illuminated.

TO SHUT OFF THE REFRIGERATOR

The refrigerator may be shut off while in any mode of operation by pressing the main power ON/OFF button to the UP (OFF) position. This shuts off all DC power to the refrigerator, including the interior light.



DESCRIPTION OF OPERATING MODES

THERMOSTAT

The thermostat on the refrigerator controls both the gas and electric operation, thereby eliminating the necessity of resetting each time a different energy source is employed.

After the initial start-up, the thermostat should be moved from "COLDEST" to the desired temperature setting, usually about mid setting.

AUTO MODE

When operating in the AUTO mode, the AUTO modes indicator lamp (D) will illuminate. The control system will automatically select between AC and GAS operation with AC having priority over GAS. Either the AC indicator lamp (B) or the GAS indicator lamp (C) will illuminate depending on the energy source selected by the control system. If the control system is operating with AC energy and it then becomes unavailable, the system will automatically switch to GAS. As soon as AC becomes available again the control will switch back to AC regardless of the status of GAS operation.

GAS MODE

When operating in the GAS mode the AUTO mode indicator lamp (D) will be off and the GAS mode indicator lamp (C) will be illuminated. This mode provides LP gas operation only. The control system will activate the ignition system and will attempt to light the burner for a period of approximately 45 seconds. If unsuccessful, the CHECK indicator lamp (E) will illuminate and the GAS mode indicator lamp (C) will turn off.

To restart GAS operation, press the main power ON/OFF button (1) to the OFF and then ON position. The control system will attempt a new 45 second ignition sequence.

If the refrigerator has not been used for a long time or the LP tanks have just been refilled, air may be trapped in the supply lines. To purge the air from the lines may require resetting the main power ON/OFF button (1) three or four times. If repeated attempts fail to start the LP gas operation, check to make sure that the LP gas supply tanks are not empty and all manual shut-off valves in the lines are open. If the problem is still not corrected, contact a service center for assistance.

If the control is switched to AC or DC operation while the CHECK indicator lamp is on, it will function property, but the CHECK indicator lamp will not go off until the main power ON/OFF button is pressed to the OFF then ON position.

HOW TO USE THE REFRIGERATOR

FOOD STORAGE COMPARTMENT

The food storage compartment is completely closed and unventilated, which is necessary to maintain the required low temperature for food storage. Consequently, foods having a strong odor or those that absorb odors easily should be covered. Vegetables, salads etc. should be covered to retain their crispness. The coldest positions in the refrigerator are under the cooling fins and at the bottom of the refrigerator. The warmer areas are on the upper door shelves. This should be considered when placing different types of food in the refrigerator.

FROZEN FOOD STORAGE COMPARTMENT

Quick frozen soft fruits and ice cream should be placed in the coldest part of the compartment which is on or just below the freezer shelf. Frozen vegetables, may be stored in any part of the compartment.

This compartment is not designed for deep or quick freezing of food. Meat or fish, whether raw or prepared, can be stored in the frozen food storage compartment provided they are pre-cooled first in the refrigerator. They can be stored about three times longer in the frozen food compartment as compared to the fresh food compartment. To prevent food from drying out, keep it in covered dishes, containers, plastic bags or wrapped in aluminum foil.

ICE MAKING

Ice cubes can be made in the ice tray placed in the freezer compartment. The tray should be filled with water to within 1/4" (5mm) from the top. For faster ice making, the tray should be placed in direct contact with the freezer shell.

To release the ice cubes, seize the tray with both hands and twist the tray. Cubes not required should be replaced in the tray. Refill the tray with water and replace the tray on the freezer shelf.

Ice will be made more rapidly if the thermostat is set at the highest position.

It is a good idea to do this a few hours before the anticipated need for ice, but be sure to move back to normal setting, usually about mid setting when the ice is formed. Food in the lower compartment may be frozen if the setting is left on "COLDEST" position.

DEFROSTING

Shut off the refrigerator by pressing the main power ON/OFF button to the UP (OFF) position. Empty the refrigerator, leaving the drip tray under the finned evaporator, and the cabinet and freezer doors open. Defrosting time can be reduced by filling the ice tray with hot water and placing it on the freezer shelf.

CAUTION: <u>DO</u> NOT use a hot air blower. Permanent damage could result from warping the metal or plastic parts. DO NOT use a knife or an ice pick, or other sharp tools to remove frost from the freezer shelf. They can create a leak in the ammonia system.

When all frost is melted, dry the interior of the refrigerator with a clean cloth. Replace all food and set thermostat to the COLDEST temperature setting for a few hours. Then reset the thermostat to the desired setting, usually at mid setting.

NOTE: On these models the drip tray/cup is on the rear side of the refrigerator. (see FIG. 1).

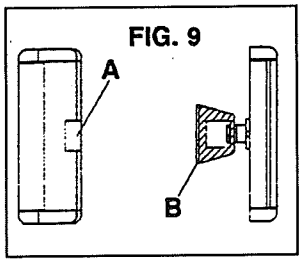
Move the plastic drain tube in to a water tight bucket or container. (Access through louvered service pane, on the outside of the vehicle.) As the frost melts, the water will flow into the container. When all the frost has melted wipe up the excess moisture and empty the accumulated water from the bucket. Replace the drain tube to the original position.

CLEANING

Cleaning the refrigerator is usually done after it is defrosted or put into storage. To clean the interior liner of the refrigerator, use lukewarm weak soda solution. Use only warm water to clean the finned evaporator, ice trays and shelves. NEVER use strong chemicals or abrasives to clean these parts as the protective surfaces will be damaged. It is important to always keep the refrigerator clean.

SHUT OFF - STORAGE PROCEDURE

Shut off the refrigerator by pressing the main power ON/OFF button to the UP (OFF) position.



If the refrigerator will not be in operation for a period of weeks, it should be emptied, defrosted, cleaned and the doors left ajar. The ice tray should also be dried and kept outside the cabinet.

The handle of the travel latch is designed to keep the refrigerator doors open slightly allowing air to circulate, preventing odors and mildew. The doors can be secured in the vented position by pushing the square button "A" (FIG. 9) until the notch seizes the catch "B" (FIG. 9). To release the door, simply pull the handle.

CAUTION: DO NOT store explosive substances in the refrigerator, such as cigarette lighter gas, petrol, ether or the like.

CLIMATE CONTROL HEATER

In certain temperatures and humidity conditions, the metal frame between the refrigerator doors can sweat The refrigerator is equipped with a 12 volt electric heater that warms the frame to prevent condensate formation. The climate control heater is turned on with a switch ("G") located on the front base-See FIG. 2.

The switch can be left on continuously or turned OFF and ON as temperature and humidity condition justify. **NOTE: THE CLIMATE CONTROL WILL DRAW 12 VOLT DC POWER CONTINUOUSLY. IT SHOULD BE TURNED OFF WHEN A CHARGING SOURCE IS NOT AVAILABLE.**

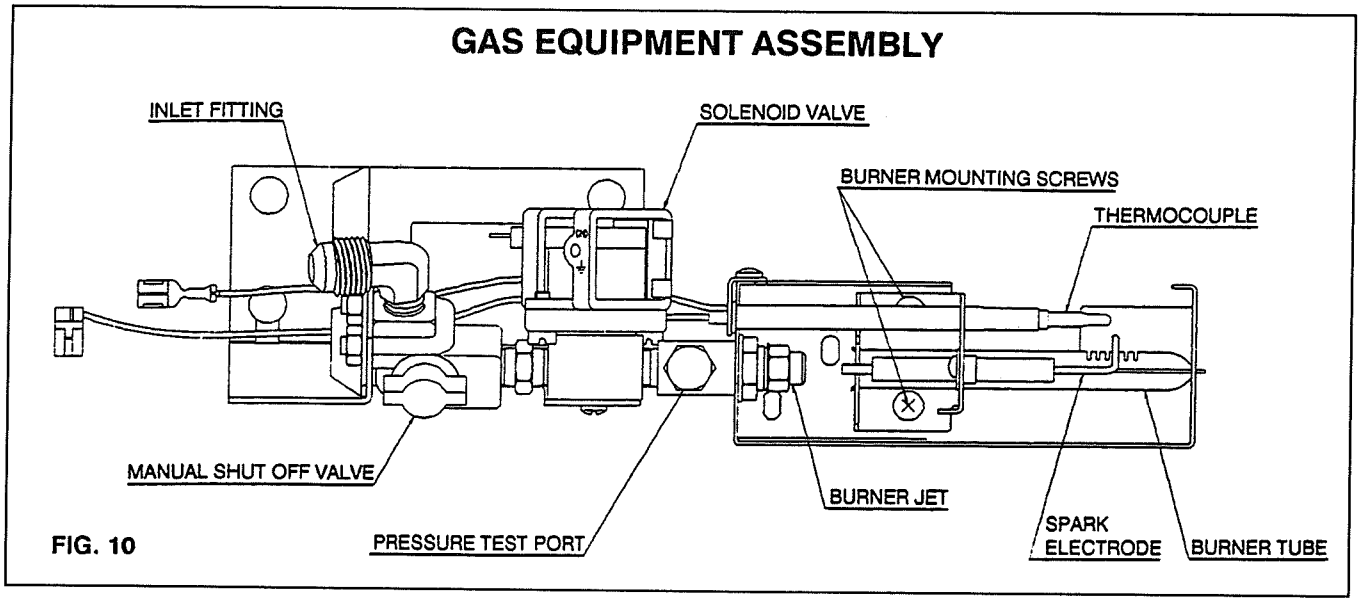


FIG. 10

ELECTRIC EQUIPMENT

CARTRIDGE HEATER

The heat necessary for the operation of an absorption cooling unit is supplied by an electric heater mounted in a pocket of the boiler system.

The 3-WAY Model is equipped with two electrical heaters, one for 120 volt AC and one for 12 volt DC.

The 2-WAY Model is equipped with one electric heater 120 volt AC.

To replace the heater proceed as follows:

1. Disconnect the wall plug, and the 12 volt wires.
2. Remove the protection cover see FIG. 1
3. Remove the power module cover see FIG. 1
4. Disconnect the heater leads.
5. With a pair of pliers unfold the lug holding the lid of the boiler casing and open the lid.
6. Remove some insulation wool so that the heater is accessible.
7. Turn and lift the heater out of its pocket.
8. Fit the new heater into the pocket.
9. Connect the leads and put on the power module cover.
10. Reset the insulation and close the lid of the boiler.
11. Replace the protection cover.

FUSES

The 2-way AMES models are equipped with 2 fuses, one for the refrigerator control system and one for the AC cartridge heater.

The 3-way AMES models are equipped with a third fuse for the DC cartridge heater. (see table below)

To replace fuse(s) proceed as follows:

1. Disconnect the wall plug, and the 12 volt wires.
2. Remove the power module cover. See FIG. 1.
3. Snap the fuse out of the fuse holder.
4. Fit a new fuse in to the fuse holder.
5. Replace the power module cover.

Control system	3 Amp
AC heater	5 Amp
DC heater	35 Amp

MAINTENANCE & SERVICE

1. REFRIGERATOR REMOVAL

Before working on the refrigerator make sure that 120 volt AC and 12 volt DC leads are disconnected. Close the shut-off valve on the gas supply piping system. Disconnect the outgoing gas line from the gas valve at the rear of the refrigerator. (see FIG. 1.) Loosen the screws anchoring the refrigerator to the enclosure (see FIG. 5) and slide the refrigerator forward out of the compartment.

When replacing the refrigerator make sure that the sealing strips are property positioned.

After reassemble the gas connection should be checked for leaks.

2. PERIODIC MAINTENANCE

To keep your Dometic refrigerator operating efficiently and safely, periodic inspection and cleaning of several components once or twice a year is recommended.

A. It is important to keep the area at the back of the refrigerator clean. Check the lower vent, upper vent and area between these openings for any obstructions such as bird/insect nests, spider webs, etc. Clean the coils on the back of the refrigerator. Use a soft bristled brush to dust off the coils.

It is important to keep the refrigerator area free from combustible material, gasoline and other flammable vapors or liquids.

NOTE: AVOID SPRAYING WATER THROUGH THE REFRIGERATOR VENTS WHILE WASHING YOUR RV.

B. Check all connections in the LP gas system (at the back of the refrigerator) for gas leaks. The LP gas supply must be turned on. Apply a non-corrosive bubble solution to all LP gas connections. The appearance of bubbles indicates a leak and should be repaired immediately by a QUALIFIED SERVICEMAN WHO IS FAMILIAR WITH GAS SYSTEM AND REFRIGERATORS.

WARNING: DO NOT use a flame to check for gas leaks.

C. Check the AMES control system by connecting/disconnecting 120 volt AC power, start/stop the engine, etc. Compare the operation with the operation described in description of operating modes. Side 9.

NOTE: The following maintenance is required once or twice a year, but should only be done by a qualified serviceman who is familiar with LP gas systems and refrigerators.

D. The LP gas pressure should be checked and the main regulator re-adjusted if pressure is incorrect. The correct operating pressure is 11 inches of water column. The correct place to take the LP gas pressure is at the test port just ahead of the burner jet (See FIG. 10).

E. Inspect the flue baffle. It should be reasonably clean and free of soot. Heavy soot formation indicates improper functioning of the burner. The flue and burner both require cleaning in the following manner

1. Unplug the refrigerator power cord from the 120 volt AC outlet (See FIG. 3).
2. Disconnect or shut off the 12 volt power to the refrigerator.
3. Turn manual shutoff valve to OFF. (See FIG. 1).
4. Remove cover from the burner housing. (See FIG. 1).
5. Disconnect the wire from the high voltage electrode.
6. Remove the burner mounting screws and remove the burner assembly. (See FIG. 10).
7. Remove the flue cap from top of flue tube and lift out the wire and spiral baffle. Clean the flue from the top using a flue brush. Blowing compressed air into the flue <u>will not</u> property clean soot and scale out of the flue tube. Replace spiral baffle and flue cap.
8. Clean burner tube with a brush. Blow out burner with compressed air.

Clear blue colour of flame

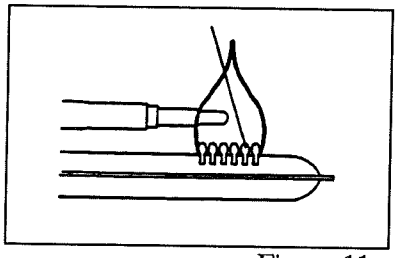
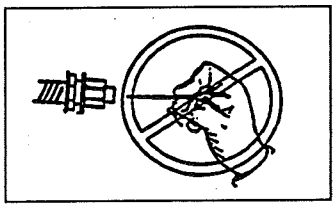


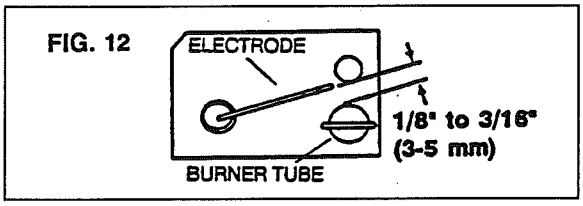
Figure 11

9. Before removing burner **jet** clean burner area of soot and scale that fell out of flue tube. Remove the burner jet. Soak the jet in wood alcohol and blow it out with compressed air. Re-install and tighten burner jet. **NOTE:** The color of the flame shall be clear blue over the slots of the burner. (See FIG. 11).

CAUTION: DO NOT use a wire or pin when cleaning the burner jet as damage can occur to the precision opening. This can cause damage to the refrigerator or create a fire hazard.



10. Reinstall burner, being careful that the end of the burner fits into the slot on the burner bracket. Check to make sure slots are centered under the flue tube and the thermocouple is positioned property (tip of thermocouple extends over two slots of burner).
11. Be sure to reconnect the wire to high voltage electrode. Check the electrode for proper location and gap. (See FIG. 12).
12. Turn on manual gas shut-off valve and check all fittings for leaks.



13. Connect 120 volt power cord to the outlet and reconnect or turn on the 12 volt DC power.
14. Check LP gas safety shut-off. See side 6.

TROUBLESHOOTING

The Refrigerator Does Not Cool Properly

Causes and remedies

Failure of refrigeration does not necessarily indicate that the cooling system is defective. Other factors governing its operation must be checked.

1. Common.

1a. Fuse(s) blown, replace (see side 11).

1b. Check level of refrigerator.

1c. Venting problem. Restriction in airflow across cooling unit.

1d. Heavy frost buildup on evaporator fins, defrost.

1e. If the refrigerator has been operating on gas and a loss of cooling is noted, convert the refrigerator to AC power (see start up instructions side 8).

If the refrigerator has been operating on AC, switch to gas operation. This will determine if a component failure in the electric or gas controls is causing the cooling fault. After the refrigerator has been converted from one power source to the other (gas to AC, or AC to gas) allow time to assure the unit is cycling property. At the end of the period the freezer plate should start to cool.

1f. A minimum of 9.6 volt DC supply present for the refrigerator control system.

1g. The thermostat can not be moved from MID position to the desired setting. The display module has became nonfunctional. See limp mode of operation (side 9).

1h. The refrigerator is running continuously and cool to much.

The temperature sensing device has become non functional. See limp mode of operation (side 9).

2. Gas operation only.

2.1 The refrigerator will not operate on gas when AC is present.

The display module has become non functional. See limp mode of operation (side 9).

2.2 Burner jet clogged. Clean see Section Maintenance/Service, item 2. Periodic maintenance, Paragraph E. item 9.

2.3 Flue baffle not inserted property in flue tube (see side 3 FIG. 1).

2.4 Burner dirty. Clean. See Section Maintenance/Service, item 2. Periodic Maintenance, Paragraph E. item 8.

2.5 LP gas pressure low at burner.

Set main regulator so pressure does not drop below 11 inches water column at pressure test port (see side 11 FIG. 10).

2.6 Burner not located property under flue tube, relocate.

2.7 Burner damage, replace.

ODOR FROM FUMES

CAUSES AND REMEDIES

A. The flame touches side of the boiler due to dislocation of the burner. Relocate. Burner dislocation may also cause smoke and discoloring of walls and ceiling.

B. Burner damaged. Replace.

All the above instructions are to be followed closely. The refrigerator is quality-guaranteed. However, we are not responsible for any failures caused by improper adjustments and unfavorable installation conditions. Contact service point or distributor service dept. for assistance.

ICE MAKER OPERATING INSTRUCTIONS

A. WATER CONNECTION

The water supply system must have a minimum pressure of 15 psig. A water line 1/4 inch in diameter shall be used to the water valve connection at the rear of the refrigerator. The water line must have a manual shut-off valve placed where it is easily accessible.

B. HOW TO OPERATE THE ICE MAKER

The refrigerator must be allowed to precool properly before starting the ice maker. The refrigerator has to be connected to 120 volts AC before the ice maker can operate. The water line manual shut-off valve must be open. To start the ice making, move the ice level bail arm to down position, see FIG. 1.

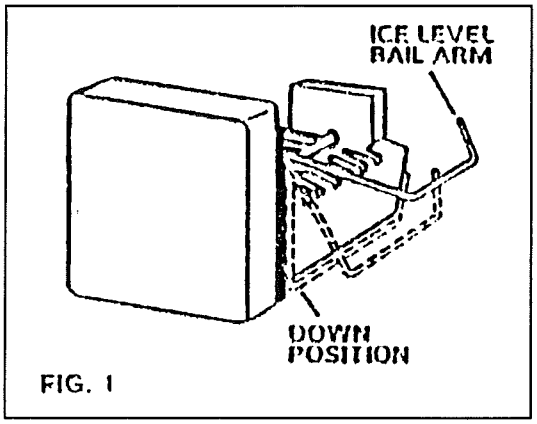


FIG. 1

To shut off the ice making, move the ice level bail arm to fully up position, see FIG. 1.

When the ice maker thermostat senses the preset temperature for ejection of the ice cubes, the fingers will start to rotate - dumping any ice cubes and filling the mold with water.

When storage container is full of ice, the ice level bail arm cannot return to the down position.

This will stop further production of ice until the container is emptied and the bail arm is returned to the start position.

The absorption system will keep the compartment at the proper temperature for storage of ice. Ice making is accelerated if the thermostat is set to the coldest position.

It is a good idea to do this a few hours before an anticipated need for ice.

NOTE: IF THE ICE MAKER WAS CLEANED AND DRAINED, NO ICE CUBES WILL BE DUMPED INTO THE STORAGE CONTAINER DURING THE FIRST CYCLE

The first few cycles may have small cubes due to air trapped in the water lines. The first container of ice cubes should be dumped if the water system has been winterized or not used for several weeks.

C. HOW TO ADJUST SIZE OF ICE CUBES

If the ice maker has run through several cycles and the cubes are too small or sticking together, adjustments is necessary on the amount of water entering the mold.

To adjust the amount of water entering the mold, remove the protective cover from the ice maker mechanism, see FIG. 2.

To increase the size of the cubes, turn the adjusting screw counter-clockwise.

To decrease the size of the ice cubes, turn the adjusting screw clockwise.

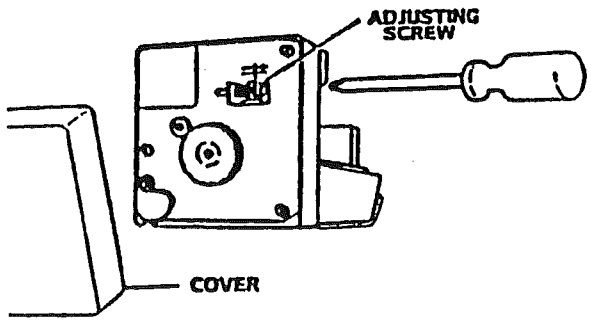


FIG. 2

CAUTION: DO NOT turn the screw more than one turn at a time. The ice maker should be allowed to cycle several times before another adjustment is made. Be sure to replace protective cover on the cycle after adjustments have been made.

D. HOW TO DRAIN THE ICE MAKER

If the RV is left unheated during the winter or put into storage, drain and dry the ice maker to prevent damage from freezing of water lines and valves. This will also prevent water from becoming stale and producing bad tasting ice.

To drain the ice maker, close the water line shut-off valve. Hold a pan under the water valve and loosen the water hose plastic nut from the water valve, see FIG. 3.

The water valve will now be drained, the water hose must be bent straight to allow the water to drain out, see FIG. 3.

Dry the mold cavities with a clean cloth.

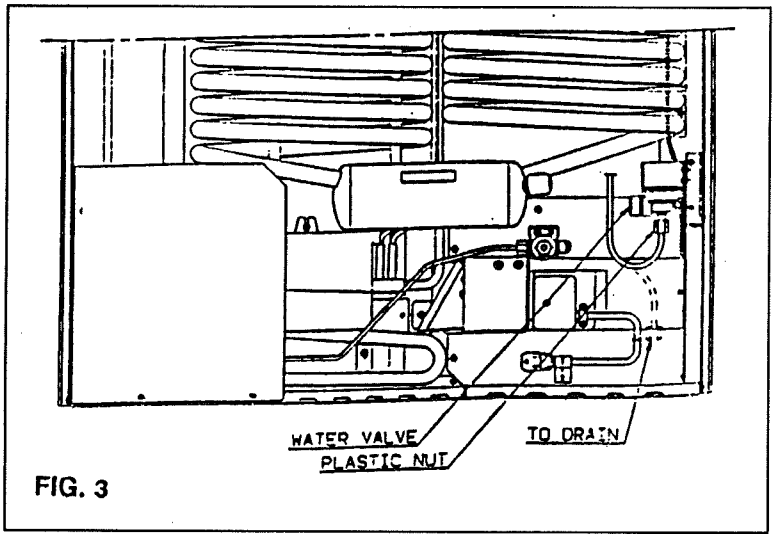
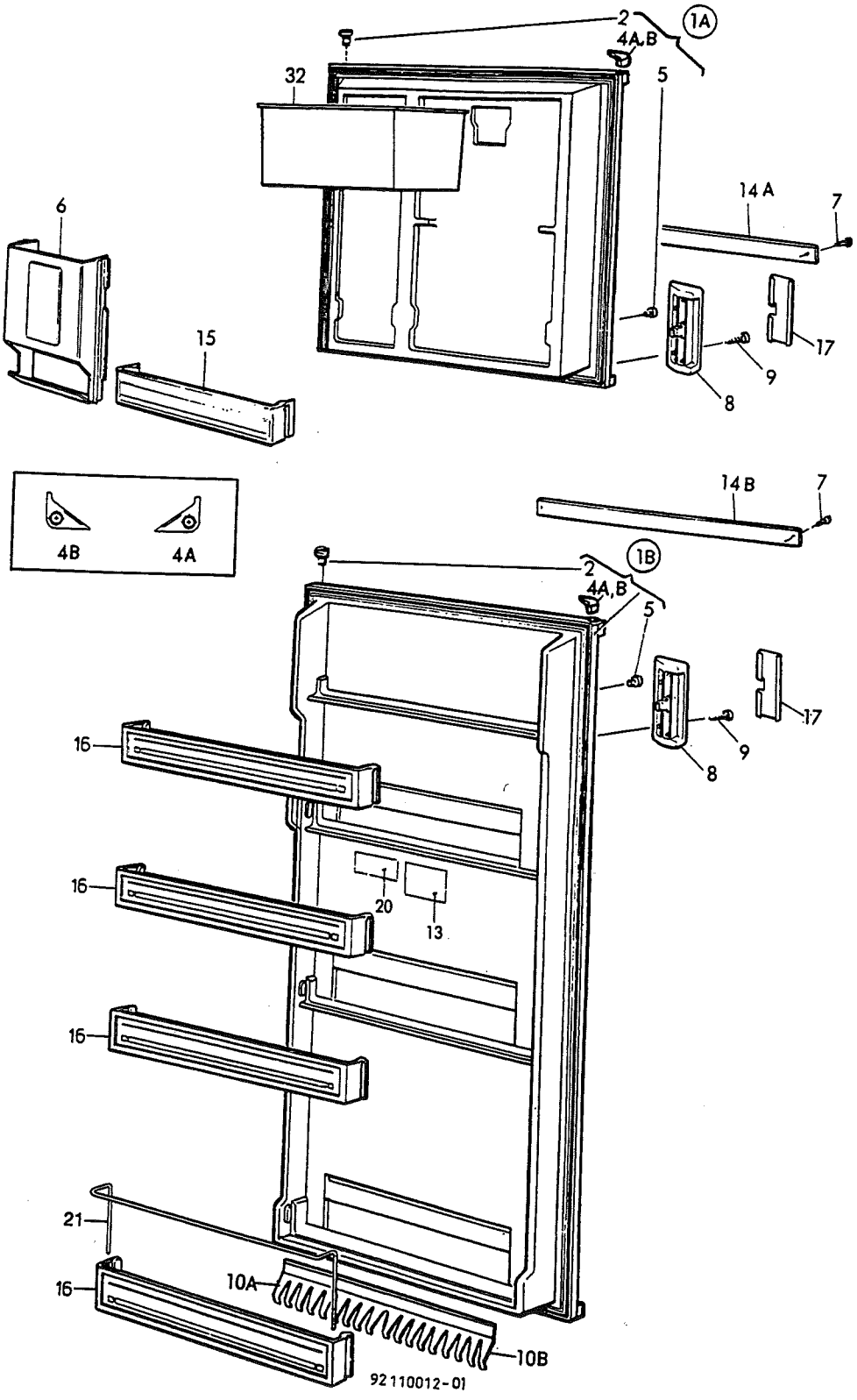
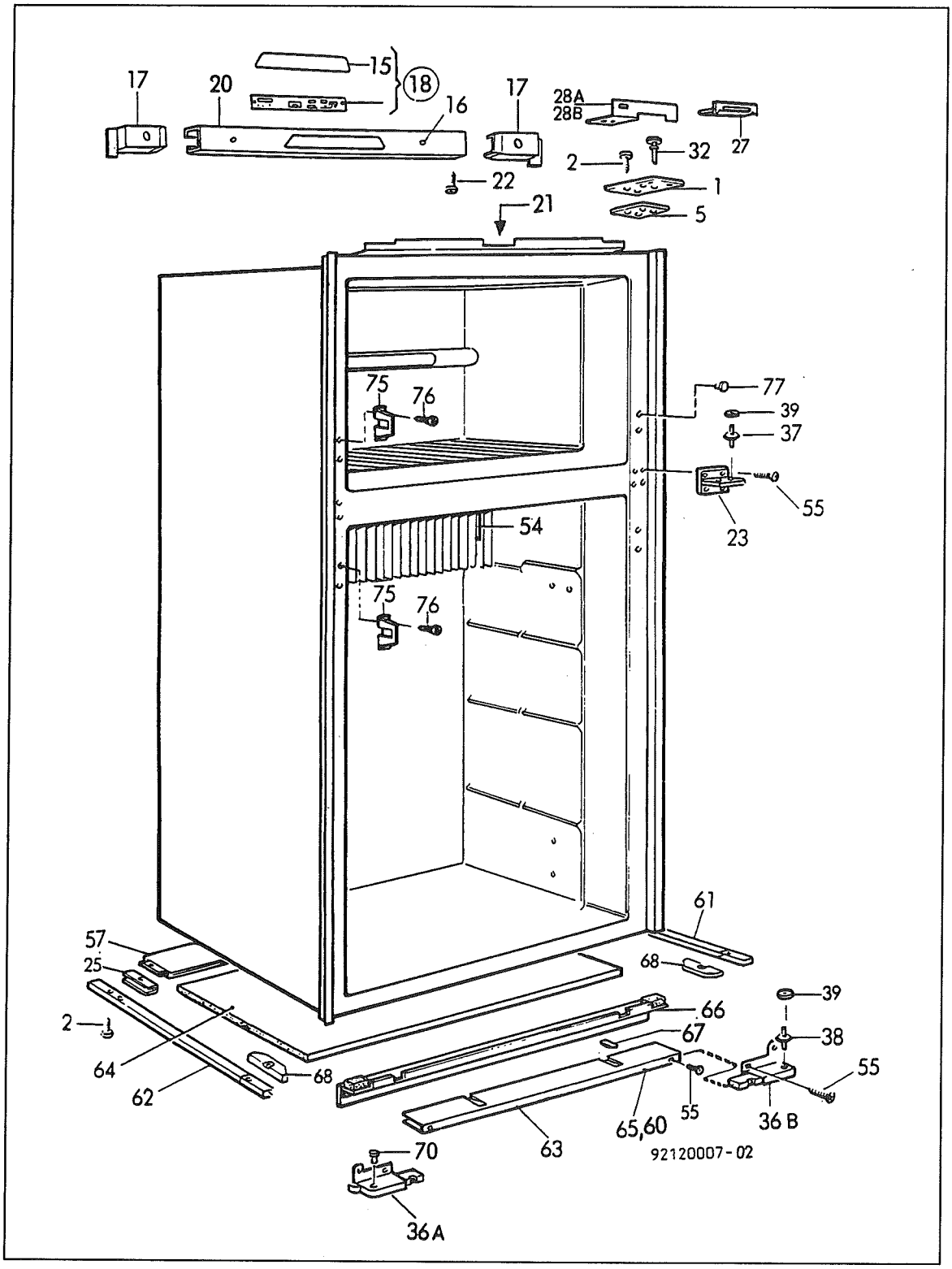


FIG. 3

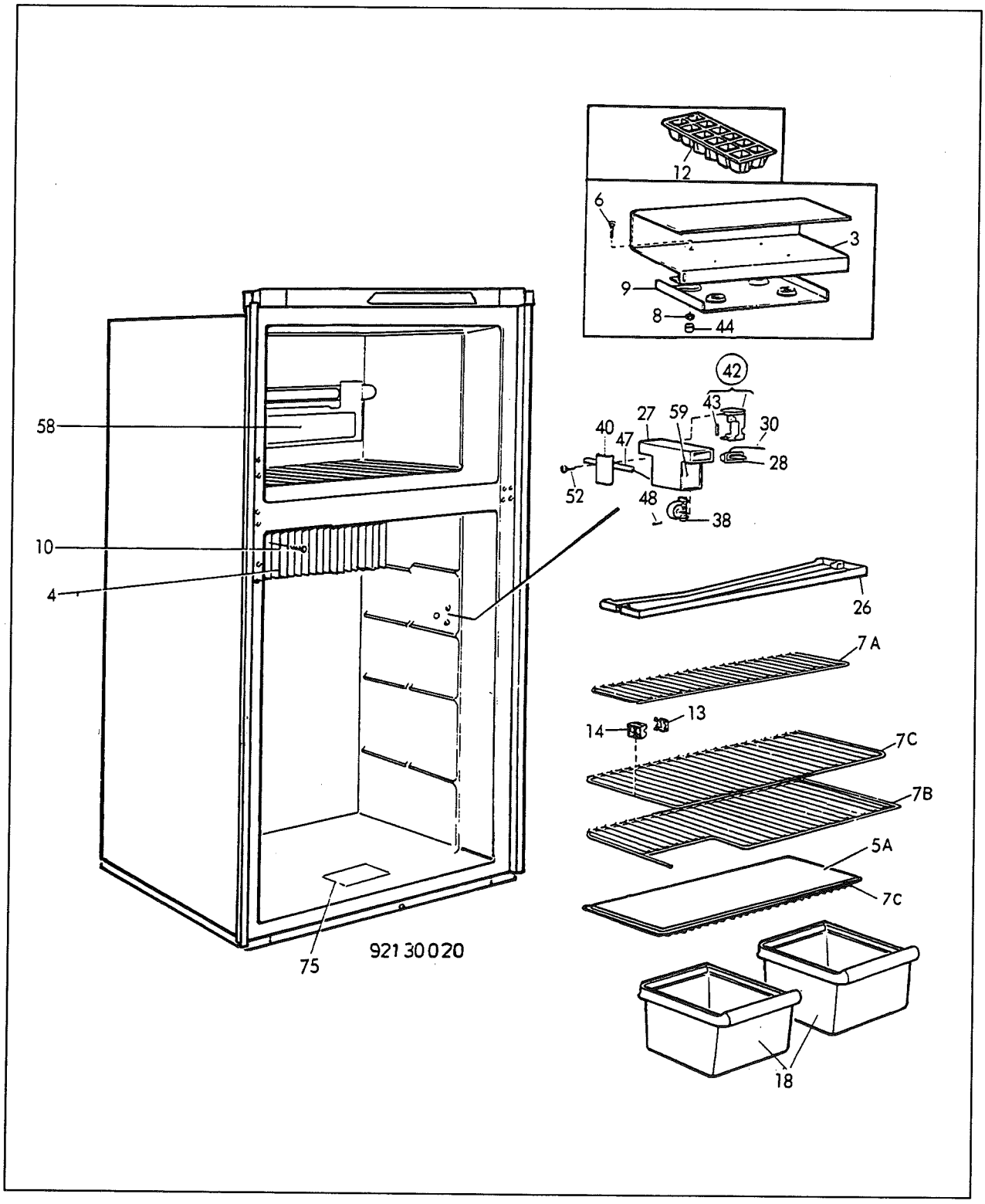

2
4A,B
1A
32
5
14A
7
6
15
17
9
8
4B
4A
14B
7
1B
2
4A,B
5
17
9
8
16
16
20
13
16
21
16
10A
10B
92110012-01

POS. NO	PART NO	DESCRIPTION
1A	293 16 40-11/0	Door, upper
1 B	293 16 39-11/2	Door, lower
2	293 11 71-01/7	*Bushing
4A	293 15 12-01/2	*Washer
4B	293 15 12-02/0	*Washer
5	293 15 10-03/2	*Plug
6	293 05 33-01/9	Retainer
7	729 52 29-01/2	Screw, B4x16, zinc plated
8	293 11 99-01/8	Handle
9	729 52 25-01/0	Screw, RXS, B4x10, zinc plated
10A	293 07 15-03/8	Holder bottle, Approx 7 1/2", grey beige
10B	293 07 15-04/6	Holder bottle, Approx 8", grey beige
13	200 23 56-00/0	Label, "Important.."
14A	293 11 62-01/6	Strip decoration
14B	293 11 62-18/0	Strip decoration
15	293 05 58-01/6	Shelf door, brown
16	200 17 32-13/6	Shelf door, 4 pieces
17	293 15 71-01/8	Coverplate
20	293 16 20-00/5	Label "Warning: Improper installation"
21	200 17 34-00/9	Rack
32	293 05 36-02/0	Box


17
20
15
18
16
17
28A
28B
27
2
32
22
1
21
5
75
76
77
39
37
55
23
54
75
76
61
57
25
68
2
66
39
67
38
64
68
55
62
65,60
55
36 B
63
70
92120007-02
36A

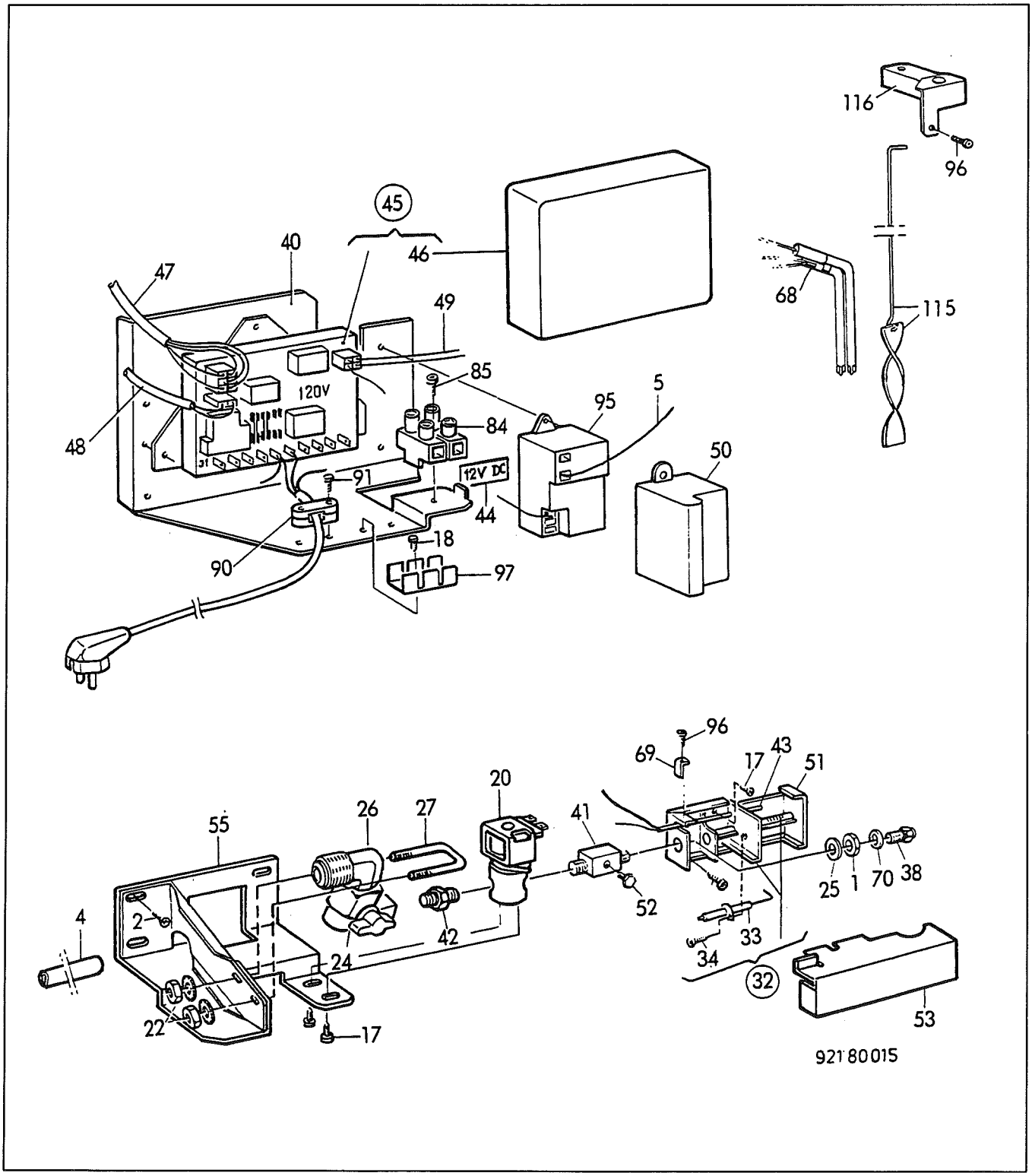
A = RM2807 (921 59 06-01, 921 59 14-01)
B = RM2807 (921 59 08-01, 921 59 16-01)

POS. NO	PART NO			DESCRIPTION
1	293 12 91-01/3	A	B	Hinge,upper
2	724 13 28-61/1	A	B	Screw, M5x14, zinc plated
5	293 12 92-01/1	A	B	Washer
15	95 50 00-09/6	A	-	Decoration
	95 50 00-10/4	-	B	Decoration
16	293 01 32-06/9	A	B	Plug
17	293 18 66-01/2	A	B	Side plate, right
	293 18 66-02/0	A	B	Side plate, left
15	293 18 44-01/9	A	-	Circuit board
	293 18 45-01/6	-	B	Circuit board
20	293 18 65-05/5	A	B	Front
21	293 13 04-00/6	A	B	Label, "This refrigerator must be installed. . ."
22	729 82 79-11/3	A	B	Screw, B6x9,5, zinc plated
23	293 12 89-01/7	A	B	Hinge, middle
25	293 07 74-01/9	A	B	Reinforcement
27	293 15 74-01/2	A	B	Sealing
28A	293 14 59-01/6	A	B	Plate mounting, left
28B	293 14 59-02/4	A	B	Plate mounting, right
32	293 12 88-01/9	A	B	Hinge pin, upper
36A	293 12 83-01/0	A	B	Hinge, lower, left
36B	293 12 83-02/8	A	B	Hinge, lower, right
37	293 12 87-01/1	A	B	Hinge pin, middle
38	293 12 86-01/3	A	B	Hinge pin, lower
39	734 49 04-03/7	A	B	Washer
54	293 19 76-01/9	A	B	Retainer,
55	724 32 91-61/9	A	B	Screw, M4x12, zinc plated
57	293 06 64-01/2	A	B	Protection plate
60	293 18 77-00/1	A	B	Sign plate
61	293 12 81-01/4	A	B	Runner, right
62	293 12 81-02/2	A	B	Runner, left
63	293 12 82-08/7	A	B	Base front
64	293 07 11-02/9	A	B	Insulation
65	293 18 76-01/1	A	B	Switch
66	293 16 28-02/4	A	B	Strip sealing
67	293 12 85-01/5	A	B	Coverplate
68	293 15 04-01/9	A	B	Reinforcement
70	293 12 84-02/6	A	B	Plug, dark grey
75	293 15 11-01/4	A	B	Bracket
76	729 52 21-01/9	A	B	Screw, RXS, B4x6,5, zinc plated
77	293 15 10-03/2	A	B	Plug


12
6
3
9
8
44
42
43
27
59
30
40
47
28
52
48
38
58
10
4
26
7A
13
14
7C
7B
5A
7C
75
92130020
18

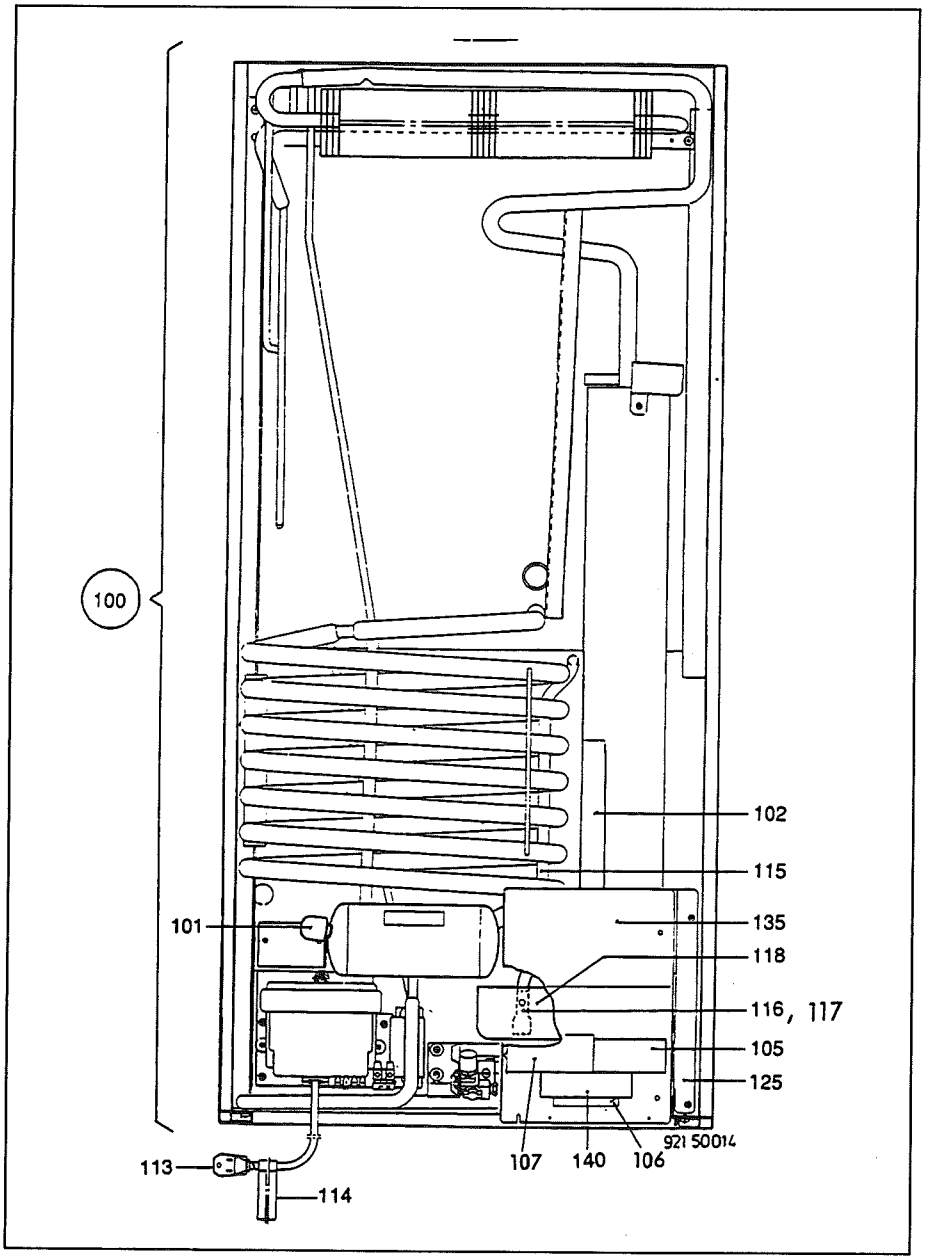
A = RM2807 (921 59 06-01, 921 59 14-01)
B = RM2807 (921 59 08-01, 921 59 16-01)

POS. NO	PART NO			DESCRIPTION
3	200 75 35-03/8	A	B	Shelf
4	200 76 05-00/5	A	B	Cooling flange
5A	293 11 17-05/I	A	B	Shelf
6	725 23 30-13/4	A	B	Screw, M6S, 5x2O, FN
7A	200 26 52-26/7	A	B	Shelf, D approx 7,5"
7B	293 01 33-11/7	A	B	Shelf, D approx 12"
7C	200 26 52-25/9	A	B	Shelf, D approx 12", 2 pieces
8	731 43 14-13/4	A	B	Nut, M5, brass, FN
9	200 76 49-01/1	A	B	Plate
10	729 54 22-11/2	A	B	Screw, RXS, B10x38, FN
12	293 04 00-00/3	A	B	Ice tray
13	200 73 93-02/4	A	B	Shelf lock, outer
14	200 73 92-02/6	A	B	Shelf lock, inner
18	200 27 26-02/0	A	B	Box vegetable, 2 pieces
26	200 76 10-01/3	A	8	Drip tray
27	200 40 44-09/1	A	B	Cover
28	294 08 25-00/9	A	B	Switch door
30	293 07 35-01/0	A	B	Conductor
38	200 40 42-00/4	A	B	Support thermostat
40	200 40 43-00/2	A	B	Lamp screen
42	293 07 44-01/2	A	B	Lighting
43	200 72 90-00/6	A	B	*Lamp, 10W, 12V
44	293 04 87-00/0	A	B	Lid
47	200 40 56-04/6	A	B	Cover
48	200 12 81-01/9	A	B	Locking pin
52	729 52 83-40/7	A	B	Screw, RXS, B6x16, stainless
58	293 10 06-01/5	A	B	Coverplate
59	293 06 11-01/3	A	B	Washer
75	293 18 82-00/1	A	-	Sign plate
	293 18 83-00/9	-	B	Sign plate


116
96
45
40
46
47
49
68
115
85
120V
95
5
48
84
50
91
12V DC
44
18
90
97
96
69
17
43
51
20
26
27
41
55
25
1
70
38
52
4
2
42
33
34
24
32
22
17
53
92180015

A = RM2807 (921 59 06-01, 921 59 14-01)
B = RM2807 (921 59 08-01, 921 59 16-01)

POS. NO	PART NO			DESCRIPTION
1	14 02 07-04/4	A	B	Nut
2	724 13 28-61/1	A	B	Screw, M5x14, zinc plated
4	293 20 01-01/5	A	B	Hose
5	200 76 68-05/2	A	B	Conductor, electrode
17	724 12 87-61/9	A	B	Screw, M4x8, zinc plated
18	724 12 89-61/5	A	B	Screw, MRX, M4x10, zinc plated
20	294 32 98-00/6	A	B	Valve solenoid
	294 32 86-00/1	A	B	Nut lock
24	294 32 99-00/4	A	B	Valve gas
25	734 58 42-01/2	A	B	Washer
26	293 19 16-01/5	A	B	Nipple
27	294 32 85-00/3	A	B	Bolt,U
32	293 06 97-02/0	A	B	Burner
33	293 03 79-00/9	A	B	* Electrode
34	729 52 21-01/9	A	B	* Screw, RXS, B4x6,5, zinc plated
38	200 74 19-21/7	A	B	Jet, no. 58
40	293 18 22-01/5	A	B	Retainer
41	293 18 24-01/1	A	B	Nipple
42	293 18 25-02/6	A	B	Nipple
43	293 18 26-01/6	A	B	Thermocouple
44	293 18 27-00/6	A	B	Sign plate
45	293 18 42-0113	A	-	Circuit board cpl. with cover
	293 18 43-01/1	-	B	Circuit board cpl. with cover
46	293 18 58-01/9	A	B	* Cover
47	293 18 62-01/1	A	B	Conductor, circuit card
48	293 18 63-01/9	A	B	Conductor, thermistor
49	293 18 64-01/7	A	B	Conductor, gas valve
50	293 18 86-01/0	A	B	Cover
51	293 19 13-01/2	A	B	Burner housing
52	16 93 80-00/3	A	B	Screw
53	293 15 72-01/6	A	B	Protection plate
55	293 19 15-01/7	A	B	Cantilever
68	17 37 42-16/4	A	B	Heater, 325W, 120 V
	17 37 57-06/3	-	B	Heater, 215W, 12 V
69	293 06 60-01/0	A	B	Retainer
70	200 74 57-00/1	A	B	Washer
84	293 04 63-01/9	A	B	Terminal block
85	729 52 87-40/8	A	B	Screw, RXS, B6x25, stainless
90	56 10 14-01/0	A	B	Ant-strain clip
91	729 52 85-40/2	A	B	Screw, RXS, B6x19, stainless
95	293 11 32-01/9	A	B	Spark ignition device
96	729 52 79-01/7	A	B	Screw, RXS, B6x10, zinc plated
97	293 03 27-00/8	A	B	Terminal rail
115	200 75 90-06/6	A	B	Baffle
116	293 15 40-01/3	A	B	Flue



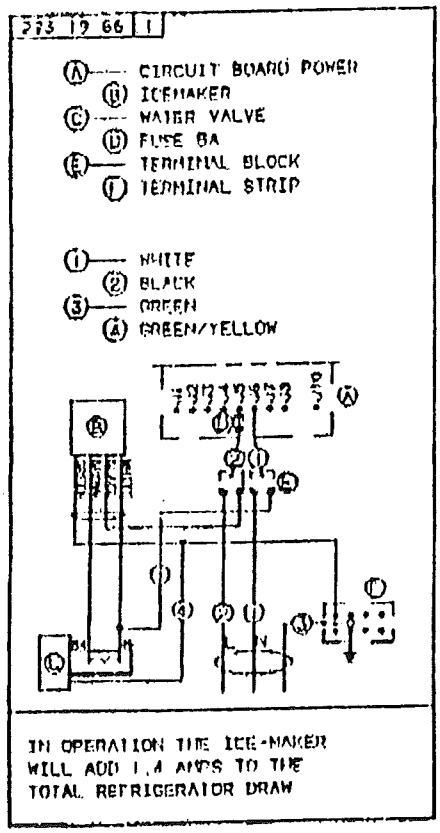
POS. NO	PART NO	DESCRIPTION
100	293 49 03-99/4	Cooling unit,2934903-01 +emb
101	17 32 28-00/8	Cap
102	293 35 57-00/7	Cover
105	293 15 03-00/3	Sign plate, "Installation clearances"
106	200 75 74-02/9	Sign plate, "Install only..."
107	200 76 89-00/9	Label, "Important"
113	200 26 99-06/0	Cord set
114	200 25 76-00/3	Label, "Warning(Electrical grounding instructions)"
115	293 15 79-04/5	Hose
116	293 18 29-01/0	Outlet tube
117	294 34 14-00/9	Clamp
118	293 18 28-01/2	Tray
125	293 07 84-01/8	Protection plate
135	293 07 85-01/5	Protection plate
140	200 25 77-00/1	Label, "When testing..."

E. TROUBLESHOOTING

(Ice Maker Fails - Does Not Make Ice)

1. Check fuse or breaker supplying 120 volts AC to refrigerator and check that RV is connected to power.
2. Check that ice level bail arm is in down position.
3. Check that the water line manual shut-off valve is open.
4. Check that ice has not jammed the level bail arm.

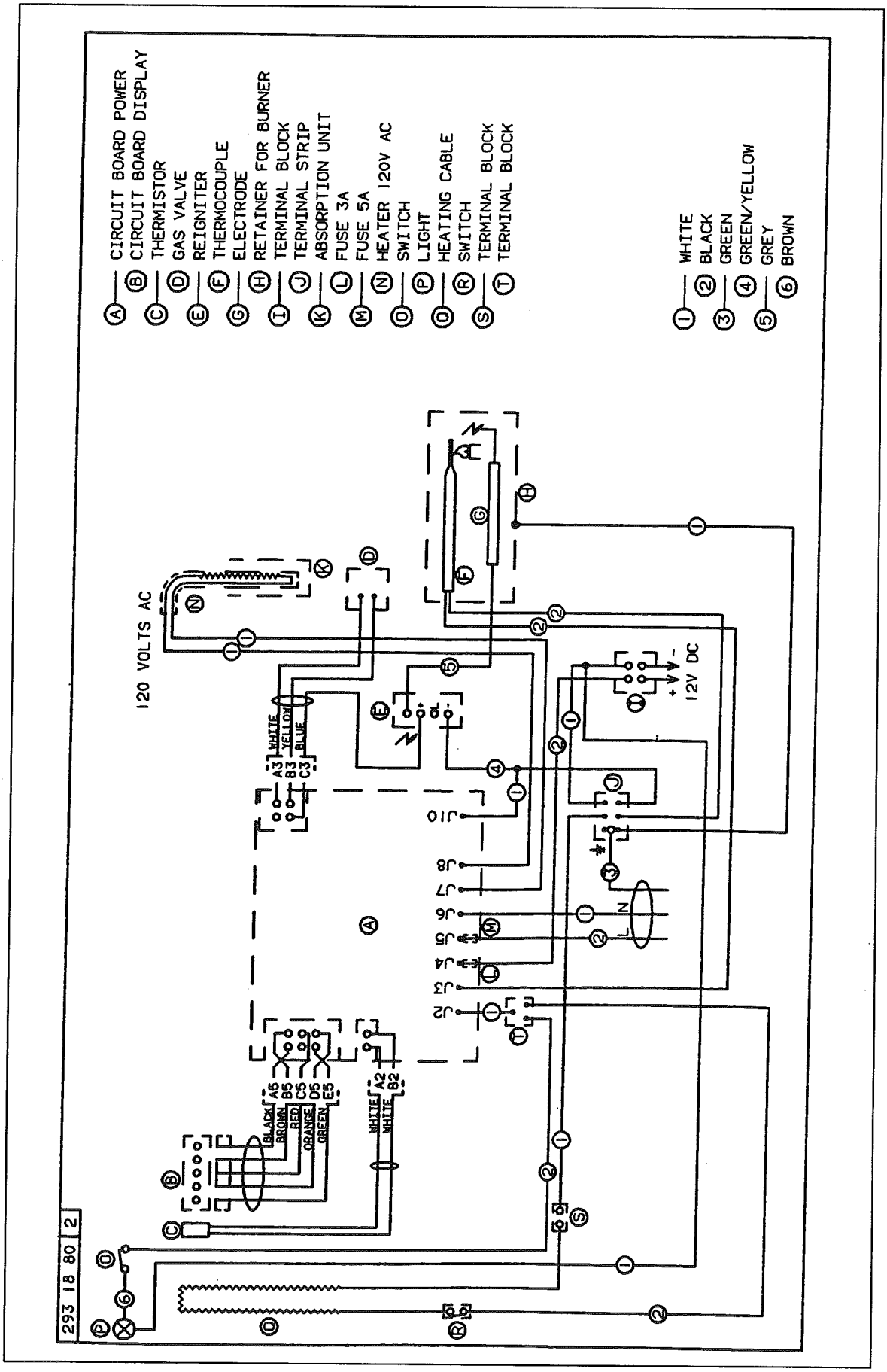
Wiring Diagram, Ice Maker

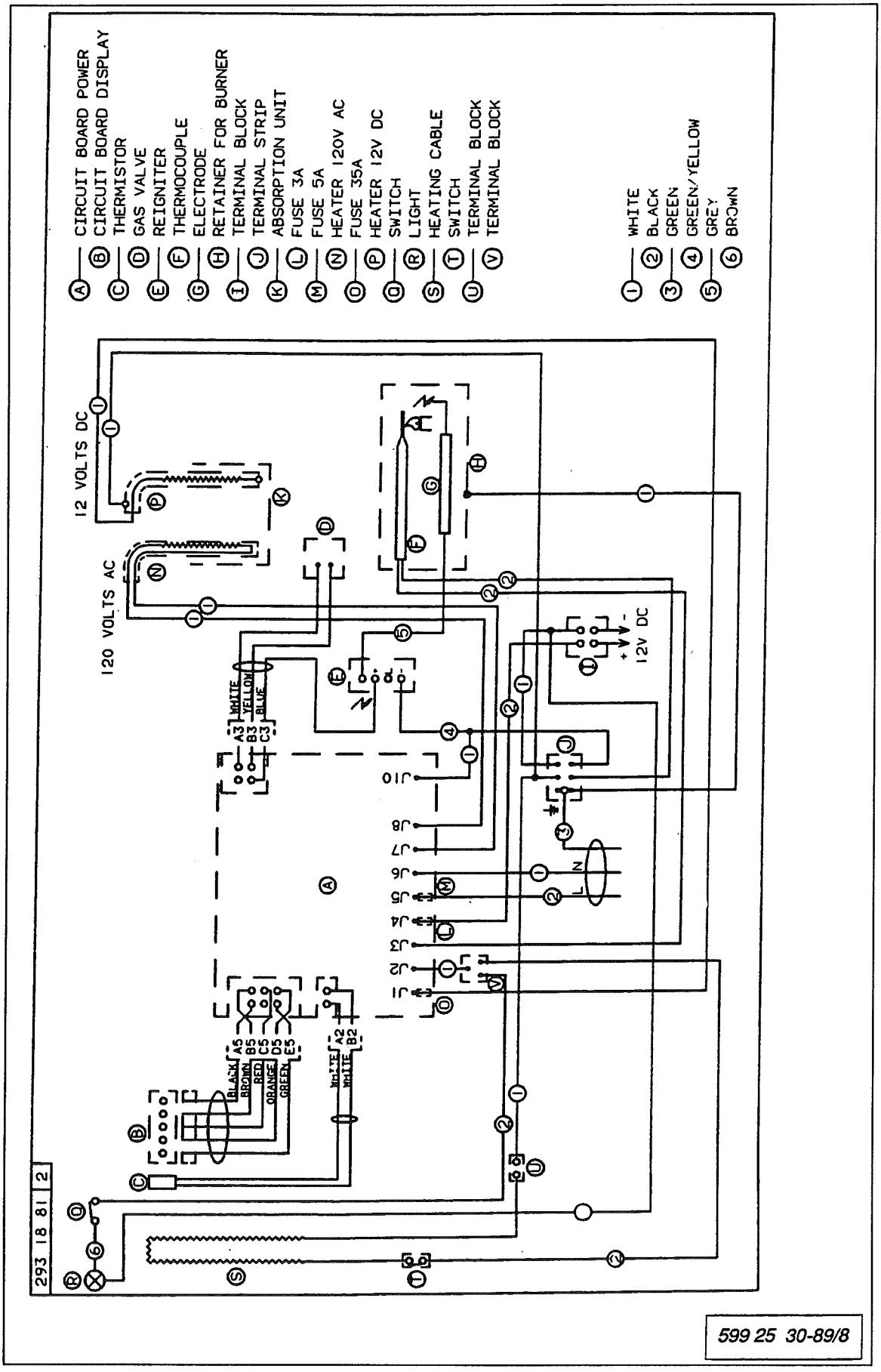


ICEMAKER KIT CPL. 293 19 90-01

Parts included in this Kit:

56	10	14-01	Cable clamp	2
293	07	18-09	Strip	1
293	08	39-01	Plastic Nut	1
293	08	41-01	Insert	1
293	09	05-04	Water hose	1
293	09	16-02	Water connection cpl.	1
293	11	63-12	Door decoration strip	1
293	14	71-01	Ice bucket	1
293	19	71-03	Icemaker	1
293	19	72-03	Water valve	1
293	19	74-01	Cover	1
293	19	75-00	Warning label.	1
293	19	84-01	Shelf	1
293	19	85-01	Shelf	1
293	19	86-01	Water tube	1
293	19	87-01	Spacer plate	1
293	19	9600	Wiring diagram	1
724	13	28-61	Screw, M5x14,zinc plated	5
725	23	35-13	Screw, hexagon M6S,5x3O	2
729	52	25-01	Screw, RXS,B4x9,5,zinc plated	1
729	52	85-01	Screw, RXS,B6x19,zinc plated	2
729	53	40-01	Screw, RXS,B8x9.5,zinc plated	4
734	11	56-09	Washer, Stainless	2
762	91	54-58	Cable clamp	1
822	60	66-01	Instruction manual	1


A CIRCUIT BOARD POWER
B CIRCUIT BOARD DISPLAY
C THERMISTOR
D GAS VALVE
E REIGNITER
F THERMOCOUPLE
G ELECTRODE
H RETAINER FOR BURNER
I TERMINAL BLOCK
J TERMINAL STRIP
K ABSORPTION UNIT
L FUSE 3A
M FUSE 5A
N HEATER 120V AC
O SWITCH
P LIGHT
Q HEATING CABLE
R SWITCH
S TERMINAL BLOCK
T TERMINAL BLOCK
1 WHITE
2 BLACK
3 GREEN
4 GREEN/YELLOW
5 GREY
6 BROWN
120 VOLTS AC
12V DC
293 18 80 2


A CIRCUIT BOARD POWER
B CIRCUIT BOARD DISPLAY
C THERMISTOR
D GAS VALVE
E REIGNITER
F THERMOCOUPLE
G ELECTRODE
H RETAINER FOR BURNER
I TERMINAL BLOCK
J TERMINAL STRIP
K ABSORPTION UNIT
L FUSE 3A
M FUSE 5A
N HEATER 120V AC
O FUSE 35A
P HEATER 12V DC
Q SWITCH
R LIGHT
S HEATING CABLE
T SWITCH
U TERMINAL BLOCK
V TERMINAL BLOCK
1 WHITE
2 BLACK
3 GREEN
4 GREEN/YELLOW
5 GREY
6 BROWN
12 VOLTS DC
120 VOLTS AC
12V DC
293 18 81 2
599 25 30-89/8

RANGE AND OVEN

Manufacturer: Wedgewood Ranges
Atwood Mobile Products
P.O. Box R, Kelly Willis Rd.
Greenbrier, TN 37073
Phone: 615-643-4556

The range and oven in your Airstream works on LP gas. The oven is optional and may not be included on your motorhome.

People using gas ranges in the home will find little difference in the operation of the range in the motorhome. Other customers, used to electric ranges, may be a little apprehensive at first, but will quickly gain confidence. The basic operation of the gas range has been the same for many years; but please be sure to read all the directions furnished by the manufacturer and located in the Owner's Packet.

We find many experienced RVers do not use the pilot light for the top burners, preferring the flint type hand lighters instead. The main reason the pilots aren't used is due to the size of the motorhome and the climate in which most motorhomes are used. The pilots are very small, but, of course, produce heat that may be noticeable in the motorhome. With limited counterspace it is normal to set articles on the closed top of the range. If the day is hot and the article is plastic it may become deformed from the low but constant heat of the pilot.

OPERATION

NOTE: A range pilot (top lighter) is an optional feature. An oven pilot is standard on all range models with an oven.

WARNING: If pilot should extinguish (after initial lighting or due to accidental blow-out), turn gas supply off and wait (5) minutes before again attempting to light the pilot.

CAUTION: For safe operation, top burners should always be adjusted so that flame never extends beyond the edge of the cooking utensil.

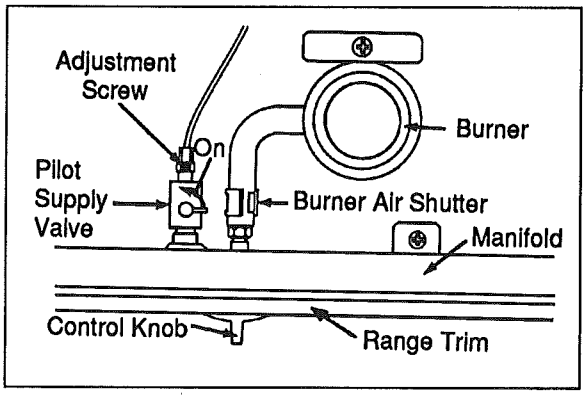


Figure 2
Pilot Supply Valve

1. To light range pilot:
   a. Verify gas supply is sufficient.
   b. Turn all controls to OFF.
   c. Lift or remove range top.
   d. Turn pilot supply valve on (Figure 2).
   e. Light pilot.

NOTE: The range pilot can be adjusted by the brass screw on the pilot supply valve. Turn screw clockwise to decrease flame, counterclockwise to increase flame. Pilot flame should extend 3/8 inch above pilot assembly cup.

   f. Close (or replace) range top.
   g. To extinguish range pilot, simply turn pilot supply valve off.

2. To light oven pilot:
   a. Verify gas supply is sufficient.
   b. Push in oven control knob and rotate counterclockwise to PILOT ON.
   c. Light oven pilot located at back of oven to the left of the oven burner (Figure 3).

NOTE: The oven pilot may be slow in lighting due to initial air in the gas lines.

NOTE: The oven pilot has been factory adjusted, and requires no further adjustment.

   d. To extinguish oven pilot, push in oven control knob and turn clockwise to OFF.

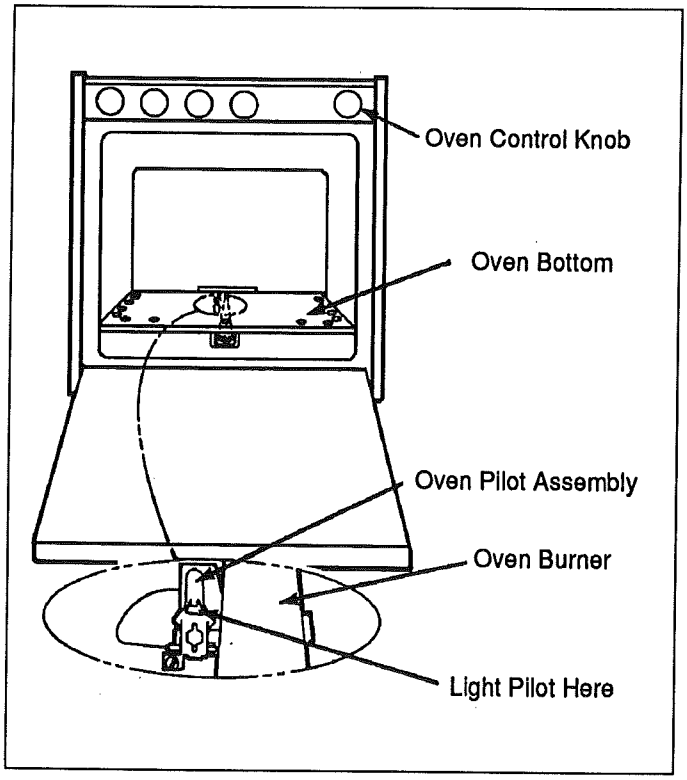


Figure 3
Lighting Oven Pilot

3. To light Spark Ignition range models:
   a. Verify gas supply is sufficient.
   b. Turn desired top burner on.
   c. Wait approximately (7) seconds and push red ignitor button.
4. All burner and oven controls operate counterclockwise, and must be pressed inward to turn control on. The oven control must also be pressed inward to turn control to OFF, past PILOT ON position.
5. Check flames on top burners and oven burner; adjust air mixture if necessary. To adjust burner flame, turn burner's air-shutter (see Figure 2) to increase air mixture until flame has yellow tips but does not lift off burner ports. Then, adjust air shutter until the yellow tips of the flame are eliminated. This will provide maximum flame efficiency without flame blow-out.

NOTE: Top burner flames are preset at the factory on all models without optional range pilot, (top lighter).

6. To operate the oven, turn oven control counterclockwise to the desired temperature. The oven will pre-heat in approximately 10 minutes.

NOTE:
The oven is equipped with a safety ignition system that requires a minimum of 30 seconds to operate after turning oven knob on.

NOTE: Do not cover the ventilation holes in oven bottom (shelf above oven burner).

7. When broiling (a 2-piece enamel broiler pan can be purchased from Wedgewood Operations):
   a. center the broiler pan under the flame.
   b. move and turn the food over frequently to ensure even browning and cooking.

MAINTENANCE

The owners cooking habits and cleanliness will affect the operation of a range. With proper installation and care this range should provide many years of maintenance-free performance.

Some of the more common range operating difficulties (their probable causes and remedies) are detailed in the Fault Isolation Chart (Figure 4).

1. Clean all surfaces as soon as possible after spills or spotting. Use warm soapy water only. Grit or acid-type cleaners should never be used.

    a. never wash warm porcelain surfaces.
    b. pitting and discoloration will result if spills are allowed to remain for any length of time on stainless steel.
    c. use oven cleaner on oven interior. Follow directions on the can.

RANGE TOP

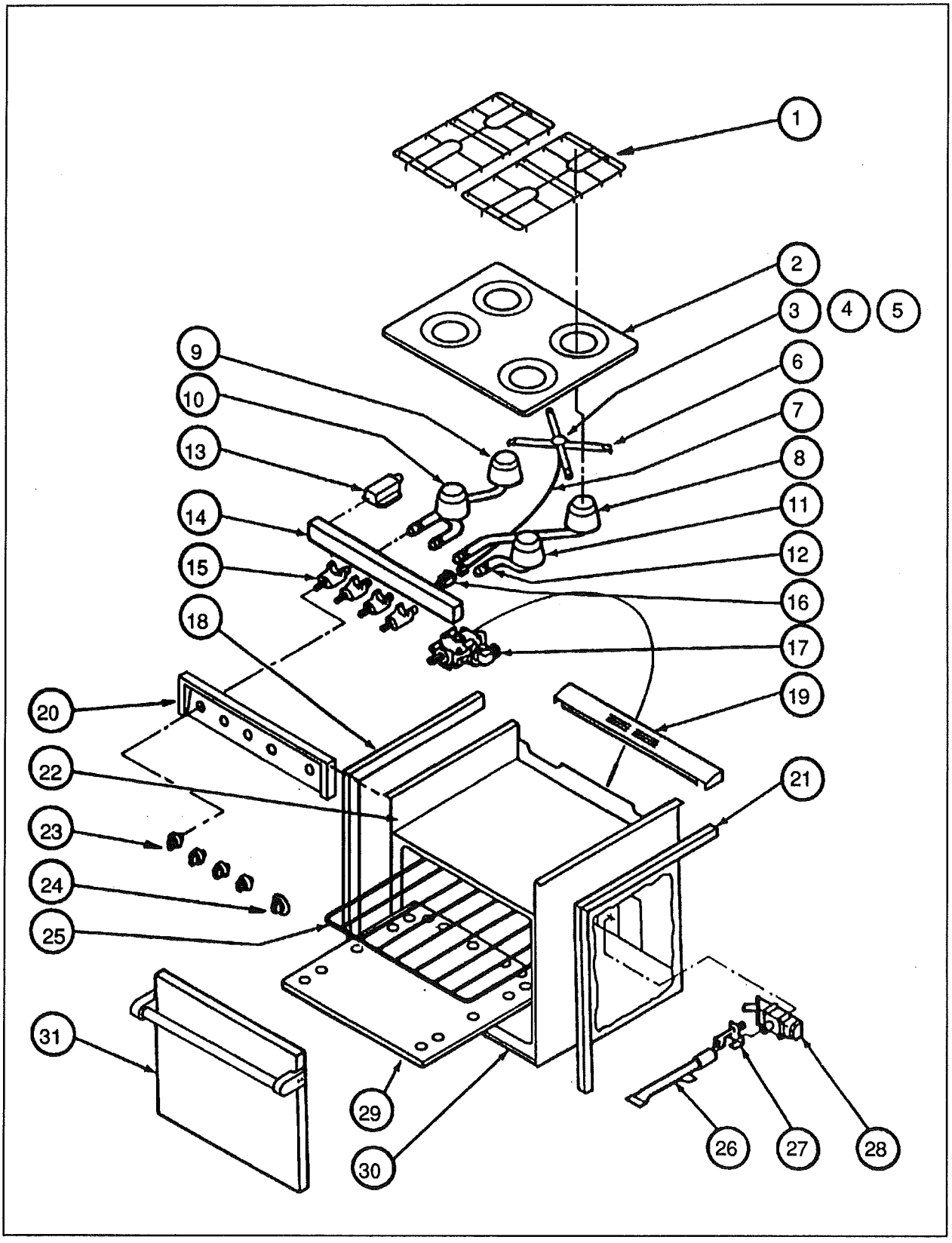
To remove:
a. remove all burner grates.
b. lift top upward by front edge and pull out, away from rear vent trim.

To replace:
a. insert lip on rear edge of range top beneath the rear vent trim.
b. lower range top into place.
c. apply a slight downward pressure on both sides in order to engage the retaining clips.

CAUTION: On models with a range pilot, be sure burner pilot flash tubes are in place and the pilot is burning before replacing top.

Malfunction	Probable Cause	Remedy
A. Range pilot won't light or stay lit.	1. Supply Valve closed. 2. Insufficient gas supply. 3. Insufficient gas pressure. 4. Blocked pilot orifice, or blocked flash tubes. 5. Pilot flame too high or too low. 6. Pilot flame cover out of position, and/or coated with carbon. 7. Pilot flame blow-out.	1. Turn valve on. 2. Check gas supply. 3. Check for gas leaks and have regulator checked by qualified LP gas technician. 4. Clean pilot orifice with toothpick; clean flash tubes. 5. Adjust pilot flame. Refer to #5 page 4. 6. Reposition pilot flame cover, and/or remove carbon buildup. 7. If range is installed near an open window, the pilot may not stay lit on a windy day. CAUTION: Turn off gas and wait 5 minutes before relighting.
B. Burner(s) won't light or stay lit.	1. Insufficient gas pressure. 2. Incorrect air/gas mixture.	1. Check for gas leaks, and have regulator checked by qualified LP gas technician. 2. Adjust air shutter. Refer to #5 page 4.
C. Burner lights, but flame is too small.	1. Improper gas pressure. 2. Improper air/gas mixture (on range pilot models only).	1. Check for gas leaks, and have regulator checked by qualified LP gas technician. 2. Adjust air shutter. Refer to #5 page 4.
D. Burner flame lifts off burner head.	1. Gas pressure too high. 2. Incorrect air/gas mixture (on range pilot models only).	1 Have regulator checked by a qualified LP gas technician. 2. Adjust air shutter (on range pilot models only).
E. Oven burner lights, but flame remains very small and oven heats very slowly.	1. Improper gas pressure.	1. Check for gas leaks, and have regulator checked by qualified LP gas technician.
F. Oven burner flame lifts off burner and oven cycles too frequently.	1. Gas pressure too high.	1. Have regulator checked by qualified LP gas technician.
G. Oven cooks unevenly and/or food burns on the bottom.	1. Poor oven ventilation.	1. Oven too full for proper circulation, and/or ventilation holes in oven bottom (shelf above burner) are covered.

FIGURE 4
FAULT ISOLATION CHART


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

ITEM	DESCRIPTION	PART NO.
1	Grate, Top, Dual	53007
2	Range, Top	order by color
3	Pilot cluster holder	*
4	Pilot shield	*
5	Top pilot adapter	*
8	Flash tubes, top lighter	*
7	Pilot gas supply tube	*
8	Burner, right rear	51243
9	Burner, left rear	51242
10	Burner, left front	51240
11	Burner, right front	51241
12	Air shutter	51208
13	Extreme pressure regulator	51062
14	Manifold, 4 burner	52284
15	Valve, burner	51096
16	Top Pilot Valve kit	51066
17	Thermostat, oven control	51095
18	Trim, left hand top and side (black)	53023
18	Trim, left hand top and side (stainless steel)	53523
19	Trim, vent (black)	53025
20	Manifold cover (black)	53556
21	Trim, right hand top and side (black)	53024
21	Trim, right hand top and side (stainless steel)	53524
22	Burner box	51684
23	Knob, burner (Package of 2)	51056
24	Knob, thermostat	51057
25	Oven rack	51069
28	Burner, oven	52018
27	Pilot assembly, oven	51065
28	Safety Valve	51063
28	Shelf, oven bottom	51657
30	Trim, bottom (black)	53526
30	Trim, bottom (stainless steel)	53668
N/S	Burner Ignitor kit	51077
N/S	Designer Accessory Kit	51071
N/S	Gas Tube kit	51068
	Doors & Door Parts	
31	Door assembly, black glass	order by color
N/S	Handle, black glass door	53087
N/S	Handle, solid door	*53086*
N/S	Enamel door liner w/window	53611
N/S	Enamel door liner	53612
N/S	Solid door panel	53663
N/S	Insert, black glass	53426
N/S	Insert, black glass w/window	53446
N/S	Window, inner assembly	51421
N/S	Door Seal kit	51061

NOTES

WATER HEATER

Manufacturer: Atwood Mobile Products
4750 Hiawatha Drive
P.O. Box 1205
Rockford• Illinois 61105
Phone: 815-877-7461

Note: Review the water heater literature supplied in your Owner's Packet before proceeding.

CAUTION: Hydrogen gas can be produced in a hot water system served by this heater that has not been used for a long period of time (generally two weeks or more). Hydrogen gas is extremely flammable. To reduce the risk of injury under these conditions, it is recommended that the hot water faucet he opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. There should be no smoking or open flame near the faucet at the time it is open.

Electronic Ignition

The switch used to light your electronic ignition water heater is located in the bathroom above the lavatory top. When the switch is turned on, the red light will come on indicating the "try" mode is in effect. Normally the burner will ignite in just a few seconds, and the light will go out. If your LP system hasn't been used for some time, the system may go into safety lock-out (about 20 seconds) before the air is all expelled from the lines. Turning the switch off for 30 seconds, then back on, reinstates the "try" mode. (See **Note** below.)

Principle of Operation

When the switch is turned on, power is supplied to the thermostat (located inside the junction box at the back of the water heater). When the thermostat senses the water in the tank requires heat (below 120°F), its contacts close and complete the circuit to the circuit board. This will energize the coils in the dual solenoid gas valve, allowing gas to flow out of the main burner orifice, mix with air at the ventura (air adjusting slots), then flow out the end of the main burner.

Simultaneously the coil on the circuit hoard provides a high voltage current to reach the spark probe at the main burner. This ignites the gas. When the flame is sensed by the probe, current is conducted to the relay and the valve remains energized. Sparking ceases when the electrode to ground current path is altered by the presence of flame. The water heating process begins. When the water in the tank drops below 120°F, the process will automatically repeat itself.

Note: A complaint sometimes received at Airstream is the fact the water heater will not light for a while when the motorhome is first parked. The explanation is easy. The water is already hot! The motorhome water heater has a heat exchanger plumbed into the engine radiator system. As you are driving the water is being heated without your having to do a thing.

SAFETY

ECO Switch: The unit is equipped with an ECO (Energy Cut-Off) switch. This is located next to the thermostat and, should the water exceed 190° F, the contacts in the ECO switch will open and completely shut off the power to the unit.

It is unlikely, but should this occur it is necessary to move the rectangular cover from the back (inside) of the unit and manually depress the red button. The unit should then be checked before continuing use to determine why the water overheated. Refer to trouble shooting section.

Relief Valve: Each unit is equipped with a temperature pressure relief valve. Should the water in the tank exceed 201°F or 150 PSI, the valve will open and allow cold water to enter and reduce the temperature of the water or release the pressure built up.

Circuit Board Lock-Out:

Should the spark not ignite the gas, a built-in timing circuit in the circuit board will shut down and the red light next to the interior switch will come on. It is necessary to shut this switch off, wait 30 seconds, then turn switch back on. If unit again fails to light, check trouble shooting section.

Storage and Winterization Procedure for Water Heaters

Normal storage and winterization procedures would be as follows:

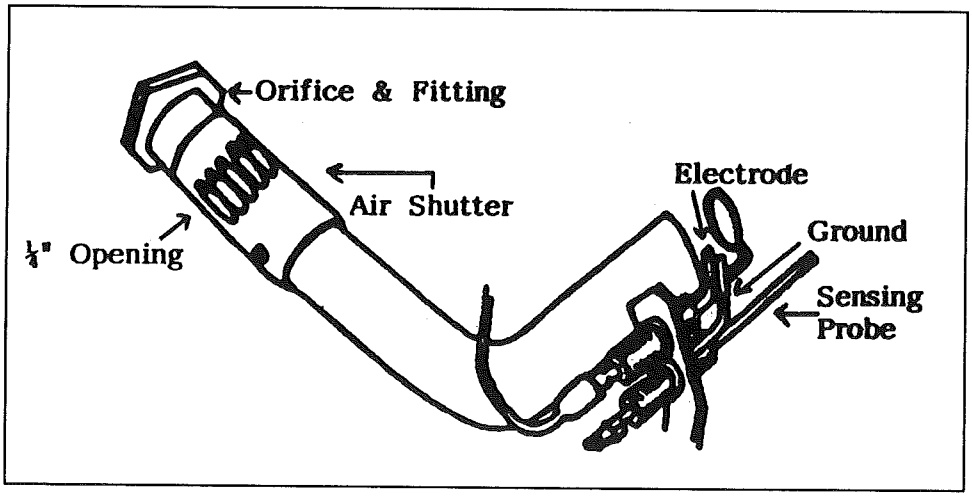
1. Thoroughly drain the inner tank. Simply open the petcock drain valve contained at the front base of the unit. To assist in draining, plus to eliminate the chance of developing an air lock, also open your relief valve.
2. Once the unit has been thoroughly drained, approximately two quarts of water will remain in the base of the tank due to the position of the petcock drain valve. Strictly for winterization precautions, these remaining two quarts of water will not harm the unit. As this water freezes, it has ample room for expansion without causing freezing damage.

Adjustment for Direct Ignition Water Heater

The following are adjustments that can be made to all direct ignition water heaters. These adjustments will improve initial start up and recycling capabilities of the unit.

Air Shutter Positioning

The air shutter should be positioned in a manner that will allow the main burner flame to be blue with a trace or flash of yellow appearing through the flame. Approximate positioning is 1/4 way open. **Note Illus.** The importance of this adjustment is to allow an adequate air/gas mix to be ignited by the electrode at the end of the burner tube. If the air shutter is not positioned properly, this will minimize the unit's start up and recycling capabilities.



Main Burner Alignment

It is important that the air shutter is fitted over the orifice holder. It is also important that the orifice is centered in the main burner tube. This adjustment allows for the proper air/gas mix.

Electrode Positioning

The electrode and the ground probe should be positioned in the area between the end of the burner tube and the flame spreader. This adjustment allows for instantaneous start up and recycling. The flame sensing probe should not be grounded on the flame spreader or any other metal object in the combustion chamber. The sensing probe is the component part of the electrode that relays to the circuit board that a flame is present and everything is functioning properly. The flame sensing probe sends microamps to the circuit board. When the circuit board receives the proper amount of microamps, it allows the gas valve to stay open and the main burner flame to stay on. The male connector on the back of the flame sensing probe should be clean and free of corrosion, as should the female connector on the white wire. If the water heater initially starts up and runs for one minute or less, the probe could be at fault. First clean it. If this does not correct the problem, replace the electrode assembly. It is important to note that the air adjustment shutter positioning plays an important part in the functioning of the flame sensing probe. When the main burner flame is blue and not roaring, the flame spreads correctly and the sensing probe is heated quicker.

TROUBLE SHOOTING

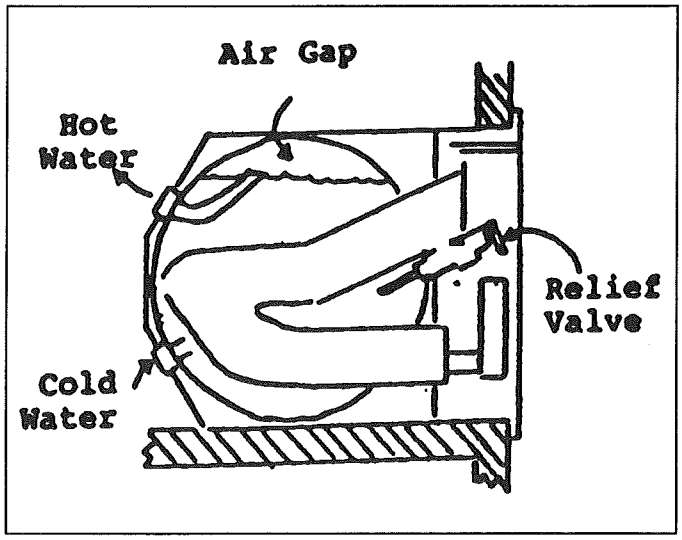
General Test

If you are not sure if the water heater is functioning properly, there is a simple test you can perform. With the water heater off, run all the hot water out of the system by opening any of the faucets. Now light the water heater and time it until the burner shuts off. A good working heater will shut off within just a few minutes short of a half hour, as timed from a completely cold start up.

Temperature/Pressure Relief Valve

Problem: Weeping or dripping of relief valve while water heater is running DOES NOT mean it is defective. This is caused by the normal expansion of water as it is heated in the closed water system of a recreational vehicle.

The Atwood water heater tank is designed internally with an air gap at the top of the tank to reduce the possibility of this occurring. In time the expanding water will absorb this air. To replace the air:



Remedy:

A. Turn off water heater.
B. Turn off incoming water supply.
C. Open a faucet in the coach.
D. Pull handle of P & T valve straight out and allow water to flow until it stops.
E. Allow P & T valve to snap shut. Close faucet and turn on water supply.

Electronic Ignition System

Problem: "Switch on" red light does not flash.

Remedy:

A. Water in tank at 160 degrees. Drain off water below 160 degrees, then observe unit for start up.

B. Unit must be connected directly to battery. Battery must produce at least 10V DC. If lower, charge battery.

C. Remove cover from back of water heater and manually depress red reset button.

D. Check wiring of switch with diagram.

E. Defective interior switch. Replace.

F. Defective ECO switch. Check for closed contacts with continuity tester. Replace.

G. Defective thermostat. Contacts should be closed when thermostat is cooled. Replace.

Problem: "Switch on" red light remains on (not a flash).

Remedy:

A. Inadequate voltage. Check battery.

B. Improper wiring. Check with diagram.

C. Circuit board ground wire or ground at back of unit broken or disconnected.

D. Flame sensing probe grounding to flame spreader or burner. Check by removing lead from probe. If unit goes through lock-out cycle, bend sensing probe away from flame spreader and replace lead.

E. Top of SCR contacting sheet metal casing with power off. Bend SCR top until contact with sheet metal is broken.

Problem: "Switch on" red light flashes then stays on.

Remedy:

A. No gas supply. Check all valves to open. Unit must have minimum of 11" water column pressure.

B. Check connection to solenoid valve with volt meter. Should have 12V DC.

C. Defective solenoid valve. Test with good battery. One lead on case; one lead on white wire. An audible click should be heard.

D. Water temperature may be 160 degrees, causing contacts to fluctuate.

E. Defective circuit board. Replace.

Problem: "Switch on" red light flashes one time, then goes out. Unit not lit.

Remedy:

A. Spark probe grounded. Proper gap 1/8" from center wire, burner tube and/or flame spreader.

B. Broken or shorted spark probe lead wire (heavy insulated, light brown.)

C. Temperature of water at 160 degrees allowing thermostat contacts to fluctuate.

D. Possible defective circuit board. Replace.

Problem: Yellow main burner flame.

Remedy:

A. Improper air adjustment.

B. Partially plugged main burner orifice. Remove and clean.

DO NOT ENLARGE.

C. Obstruction in main burner tube. Spiders, rust etc. Remove and clean.

D. Bent or missing flame spreader. Straighten or replace.

E. Inadequate gas pressure into valve. Check with manometer-11" water column minimum.

F. Inadequate gas pressure at outlet side of valve. Remove pressure tap plug located at right front of solenoid valve. Insert 1/8" MPT pipe nipple. Hook up manometer. Turn on unit.

G. Grille in upper left hand side of grille obstructed. Filters, tape, etc. should not be used to block any portion of this grille.

E. Gas solenoid bracket bent. Orifice not pointed up center of main burner.

Problem: Tank leaks water.

Remedy:

A. Check all plumbing fittings for leaks.

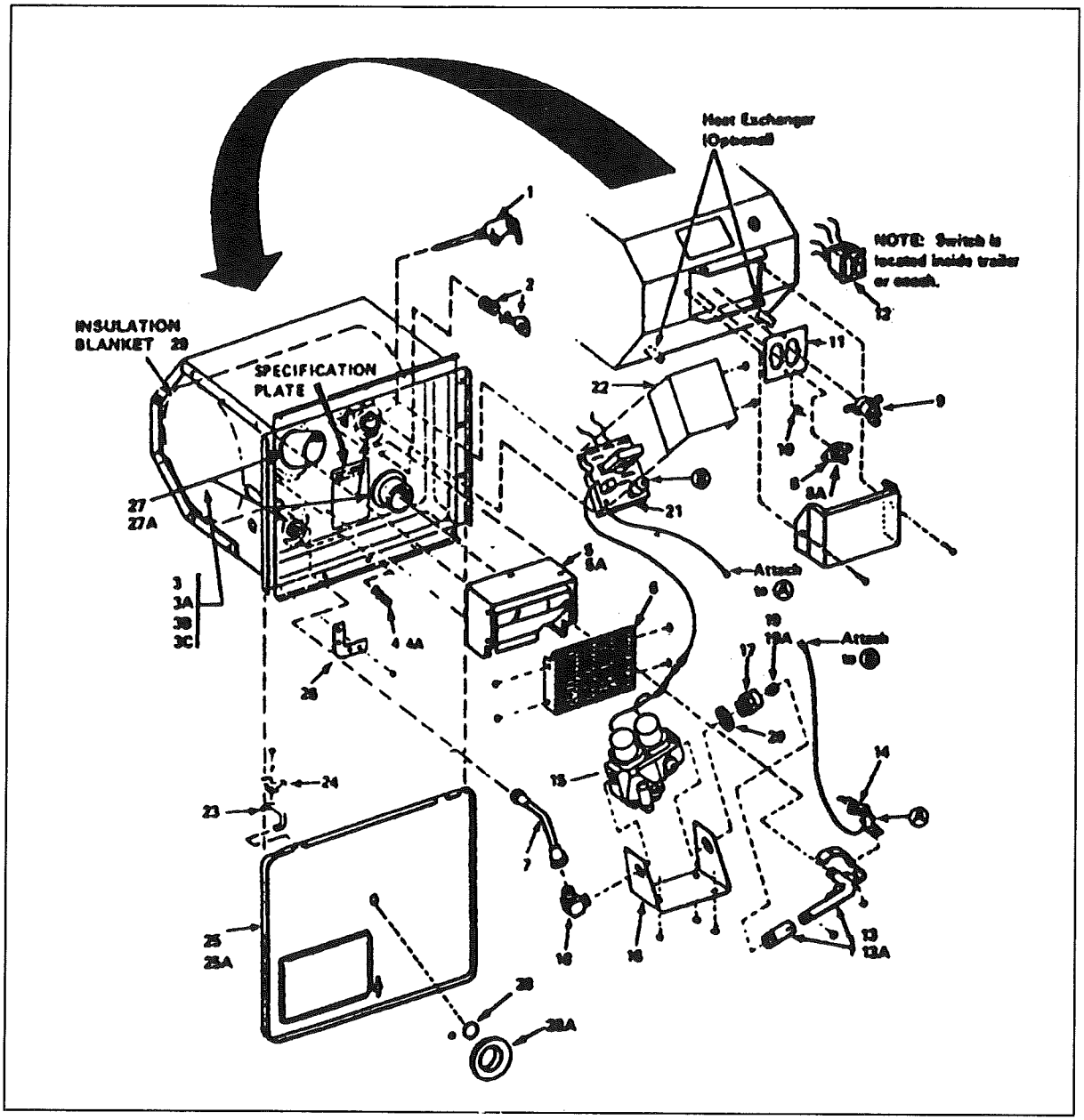
B. Tank Corrosion. Refer to warranty with unit.

Problem: Spark ignitor continues to spark while burner is on.

Remedy:

A. Flame sensor not correctly positioned in flame.

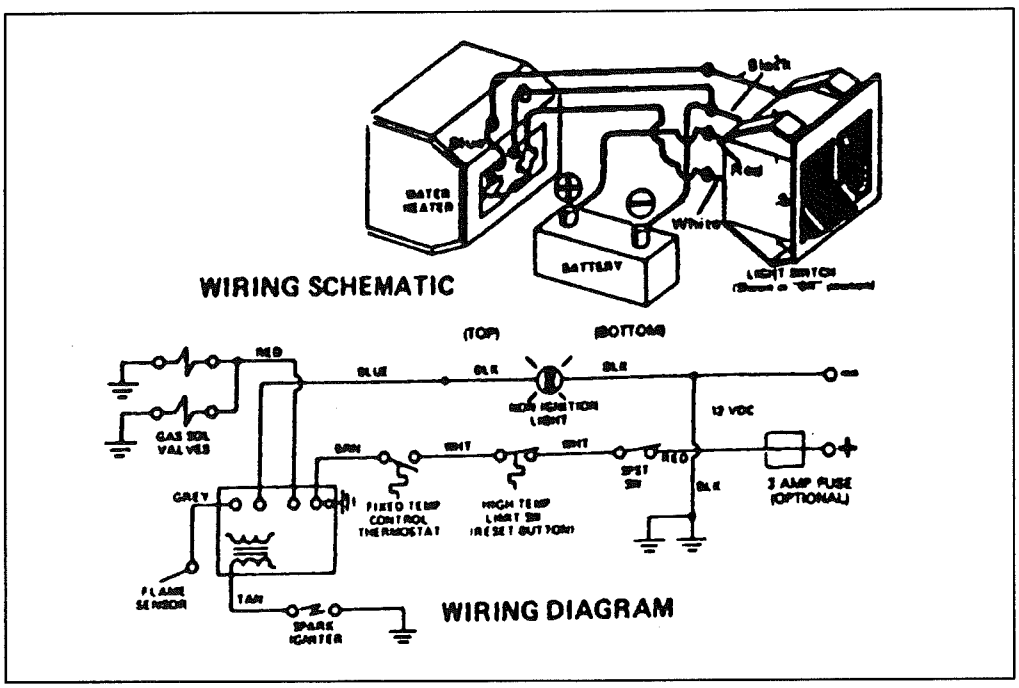
PARTS DESCRIPTION WATER HEATER MODEL G6A-4E



PARTS DESCRIPTION

1. Relief valve 1/2" fitting
2. Cam-loc fastener
3. Inner tank
4. Drain plug
5. Flue box
6. Exhaust grille
7. Gas inlet tube
8. Thermostat 12V LC, 140° preset
9. ECO switch
10. Lock-nut
11. Control retainer plate
12. Switch package
13. Main burner
14. Spark probe assembly
15. Gas valve
16. Valve bracket
17. Orifice holder
18. Elbow fitting
19. Main burner orifice
20. Washer gasket
21. Circuit board
22. Circuit board cover
23. Hinge pin
24. Hinge clip
25. Access cover
26. Corner brackets (set of 4)
27. Gasket kit (standard or high performance)
28. Gasket for sight window
28A. Access cover, sight window
29. Insulation blanket

WIRING SCHEMATIC/DIAGRAM



Removal

In order to remove the water heater, access must be gained to the water lines on the back of the heater. The carpeted panel next to the panel is only held in with about three screws - two in the top and one in the bottom corner. They can be difficult to see buried in the nap of the carpet, but if you feel with your finger tips you won't have any problem finding them. Once you have access to the lines the removal is basic:

1. Turn off LP gas at the bottles.

2. Disconnect city water or turn off water pump.

3. Remove drain plug in the face of the heater and open a faucet so water will drain.

4. Mark and disconnect wires if it has electronic ignition.

5. Remove perimeter screws around the face of the heater.

6. Use a putty knife or similar tool to break the seal between the water heater and the side of the trailer. Be careful not to damage paint.

7. After heater has drained remove water lines next to toilet.

8. Remove gas line.

9. Work the heater side to side as you are pulling out.

WARNING: Be sure to check the gas line connection with soapy water when replacing.

HIGH VOLUME ROOF VENT (OPTIONAL)

Manufacturer:

FAN-TASTIC VENT CORP.
4349 S. Dort Hwy.
Burton, MI 48529
1-313-742-0330
1-800-521-0298

The optional high-volume roof vent system is designed to quickly exhaust stale, hot air and draw in fresh air. It's great to use when the outside temperature really doesn't call for air conditioning, but heat has built up in your coach.

OPERATING INSTRUCTIONS:

1) Open dome approx. 3" or more (ceiling fan has a built in safety switch that will not allow motor to operate unless dome is partially open).
2) Turn 3- speed knob to desired performance lever (3-Low, 2-Medium, 1-High, O-Off).
3) Open a window or door for airflow.
4) Source of airflow is determined by the window(s) or door(s) opened. For best results, close all roof vents and open 1 (one) window the greatest distance from your Fan-Tastic Vent ceiling fan.

CAUTION: Never place Lindeen™ or a like cover over ceiling fan. Greatly restricted airflow & increased sound levels will occur.

WHEN EQUIPPED WITH REVERSE SWITCH

1) Turn fan motor off by:
    a) Setting 3-speed switch to "O" - OFF.
    b) Closing Dome.
    c) Selecting center position on IN/OUT rocker switch.
2) Wait for fan blade to stop.
3) Select IN position, brings air from the roof area into your coach (pressurizes inside).
4) Or select OUT position, brings air in through any or all openings in coach and exhausts through the roof.
5) Turn fan motor On.

WHEN EQUIPPED WITH THERMOSTAT:

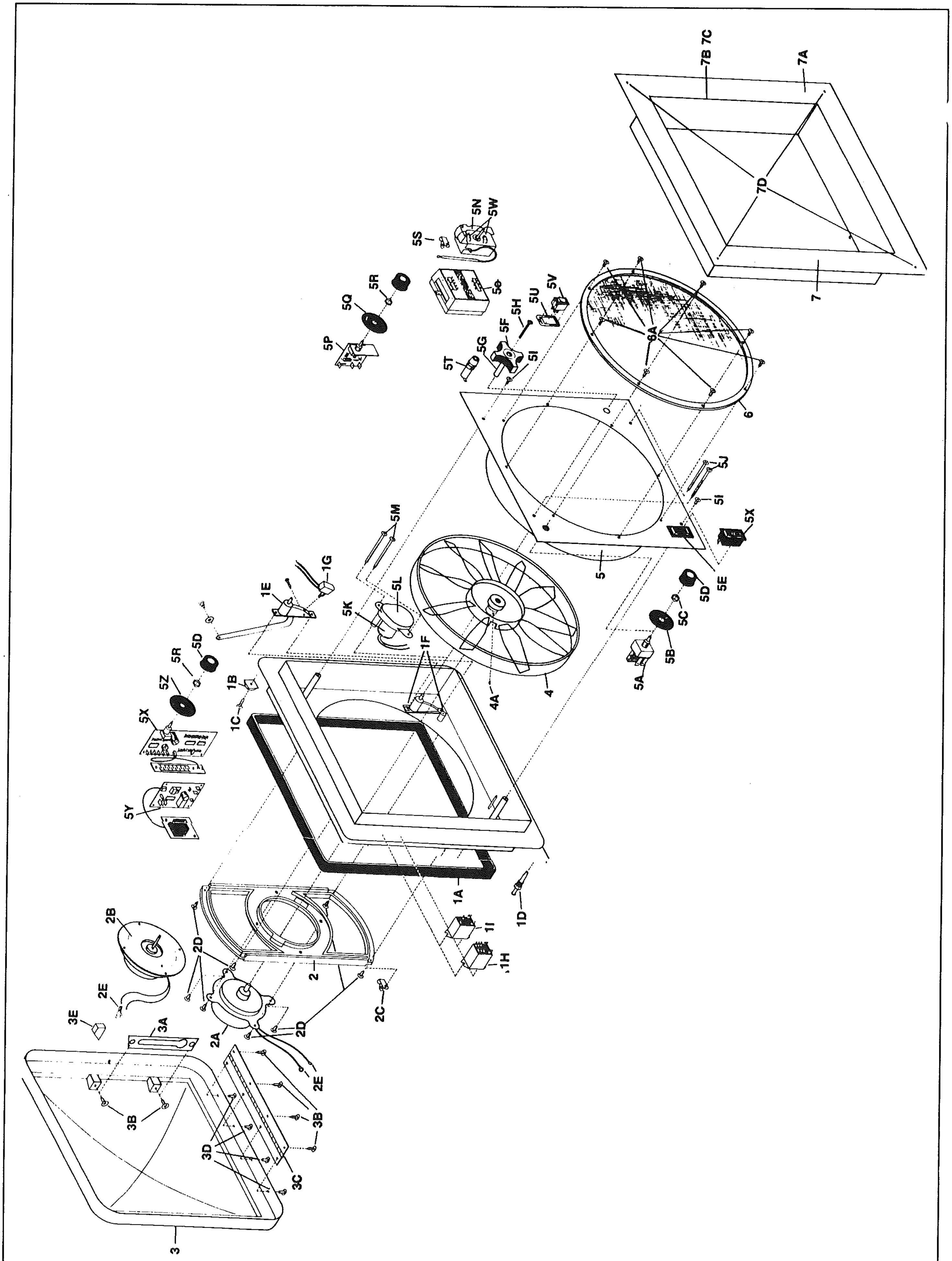
1) Follow "Operating Instructions: 1 thru 4.
2) Select desired temperature or comfort level on thermostat. Fan motor will now start & stop automatically as interior temperature of coach exceeds or drops below selected level.

NOTE: Fan motor will not start if temperature selected is warmer than interior temperature of coach.

CLEANING INSTRUCTIONS:

1) Turn fan motor Off.
2) Remove 8 painted flathead phillips screws around perimeter of screen insert only.
3) Clean screen with soap & water solution and reinstall.

NOTES


7B 7C
7A
7D
7
5N
5W
5S
5R
5Q
5P
5e
5V
5U
5H
5F
5G
5T
5I
6A
6
5J
5X
5M
1G
1E
5L
5K
5E
5
5D
5C
5B
5A
4
4A
1F
5D
5R
5Z
5X
1B
1C
5Y
2B
2D
2
1A
1D
1I
1H
2E
3E
3A
2C
2A
3B
3D
3C
3

	#1	#1010-81	MAIN BASE
(4.5)	#1	#1144-09	EPDM BULB SEAL
	#1B	#1024-81	ALIGNMENT SPACER
	#1C	#1025-05	#8 x 5/8 F.H.PH. t/s ZINC
	#1D	#1122-05	JAMB SWITCH #9251 - C.H.
	#1E	#2011-05	6" LIFT ARM -w/RIV. & BUSHING
(2)	#1F	#1012-05	#10 x 1/2" P.H. PH. p/s - ZINC
(2)	#1G	#2053-09	P-267T-1A-RD CARLING LIMIT
	#1H	#2052-00	LYZF - DC - 12 - OMRON
	#11	#9002-09	G4W -11123 - 95 - TVB - DC - 12 OMRON
	#2	#1015-00	"H" MOTOR MOUNT
	#2A	#4017-09	MOTOR - PM3491x - BLK - 1600 RPM
	#2B	#1017-03	MOTOR-#31153-1400RPM-CSA
	#2C	#101 9-81	HEYCO - CCL 1/8 - #3302 CLAMP
(8)	#2D	#1016-05	#8 x 1/2 P.H. PH. t/s -ZINC
	#2E	#1121-05	B3R - 56 - RING CONNECTOR
	#3	#1020-19	DOME-SMOKE
	#3A	#1023-05	DOME SLIDE - GALVANIZED
(6)	#3B	#1016-05	#8 x 1/2 P.H. PH. t/s - ZINC
	#3C	#1021-05	#1260A - HINGE - ALUMINUM
(4)	#3D	#1022-05	5/32 x 1/4 x 5/16 "o" RIVET ZINC
	#3E	#2018-81	DOME WEDGE - WHITE NYLON
	#4	#1138-00	FAN BLADE - 12" CLR.
	#4A		FAN BLADE SET SCREW
	#5	#1030-	SCREEN ASSEMBLY COLORED
	#5A	#1031-05	3-SPEED SWITCH #3K754
	#5B	#1033-09	DIAL LABEL - BLK. POLY
	#5C	#1032-05	NUT - 7/16 x 28 UNEF - ZINC
	#5D	#1034-09	KNOB - SOFT TOUCH #PT-6-P
	#5E	#9001-09	DPDT - HOT STAMPED w/CROSS
	#5F	#1140-09	KNOB - 1741Z - BLACK
	#5G	#2143-05	EXTENSION 1 1/8 - ZINC
	#5H	#1142-05	8-32 x1 3/4 P.H. PH. m/s ZINC
(2)	#5I	#1038-	#88 x 3/8" F.H. PH t/s - COLOR
(2)	#5J	#1039-	#8 x 2 3/4" F.H. PH. w/s - COLOR
	#5K	#6050-05	DOME LIFT MOTOR - #200.0262A
	#5L	#6035-	MOTOR CAP - COLORED
(2)	#5M	#1039-	#8 x 2 3/4 F.H. PH. w/s - COLOR
	#5N	#9006-05	BT THERMO #3301B
	#5P	#9015-90	SST THERMO #00-00127-000
	#5Q	#9009-09	LABEL - COOLER - BLACK
	#5R	#1032-05	NUT - 7/16 x 28 UNEF - ZINC
	#5S	#1018-81	BT CLAMP - CCL 1/4 - #3304
	#5T	#9017-00	FUSE #312010 - 10A - FLTW*
	#5T	#9018-09	FUSE HOLDER #345602 - FLTW*
	#5U		LABEL OVERRIDE/NORMAL
	#5V		B-2-1 8 GOLD - SPST-SGMA
(2)	#5W	#9008-05	6 - 32 x 1/4 F.H. PH. m/s - ZINC
	#5X		SPST w/ON/OFF LABEL
	#5e-	#9005-39	RBT. SHW w/OFF WALL THERMO
	#6	#1035-	SCREEN RING w/ALUM. WIRE - COLOR
(8)	#6A	#1038-	8B x 3/8" F.H. PH. t/s -COLORED
	#7	#1040-	INTERIOR GARNISH - 3" MAX. - COLOR
	#7A	#9024-81	INTERIOR GARNISH - 4" MAX. - COLOR
	#7B	#9019-00	OAK STYLE - FINISHED
	#7C	#9020-00	OAK RETURN PANEL - ANY SIZE
	#7D	#9010-	#6 x 3/4 F.H. PH. t/s - COLORED

NOTES

SPECIFICATIONS

Airstream constantly strives to improve its product. All specifications are subject to change without notice. Each vehicle comes with a one-year limited warranty.

	30 FT	34 FT
DIMENSIONS		
Exterior Height with Air Conditioner	122"	122"
Interior Head Room	79"	79"
Interior Width	90"	90"
Exterior Length	31'2"	34'
CAPACITIES		
LPG Tank	105 lbs.	105 lbs.
Fresh Water Tank	60 Gal.	60 Gal. (80 on 34J)
Grey Water Holding Tank	36 Gal.	36 Gal.
Black Water Holding Tank	29 Gal.	29 Gal.
Fuel Tank	60 Gal.	80 Gal.
CHASSIS COMPONENTS		
Wheel Base	178"	208"
Engine	4.63	4.63
Gross Vehicle Weight Rating (Maximum Carrying Capacity)	14,800 lbs.	16,000 lbs.
Front Air Bags, Chevrolet	70 psi	70 psi
Tire Pressure, Front	60 psi	70 psi
Tire Pressure, Rear	60 psi	70 psi
Tire Size	225/70R 19.5	225/70R 19.5