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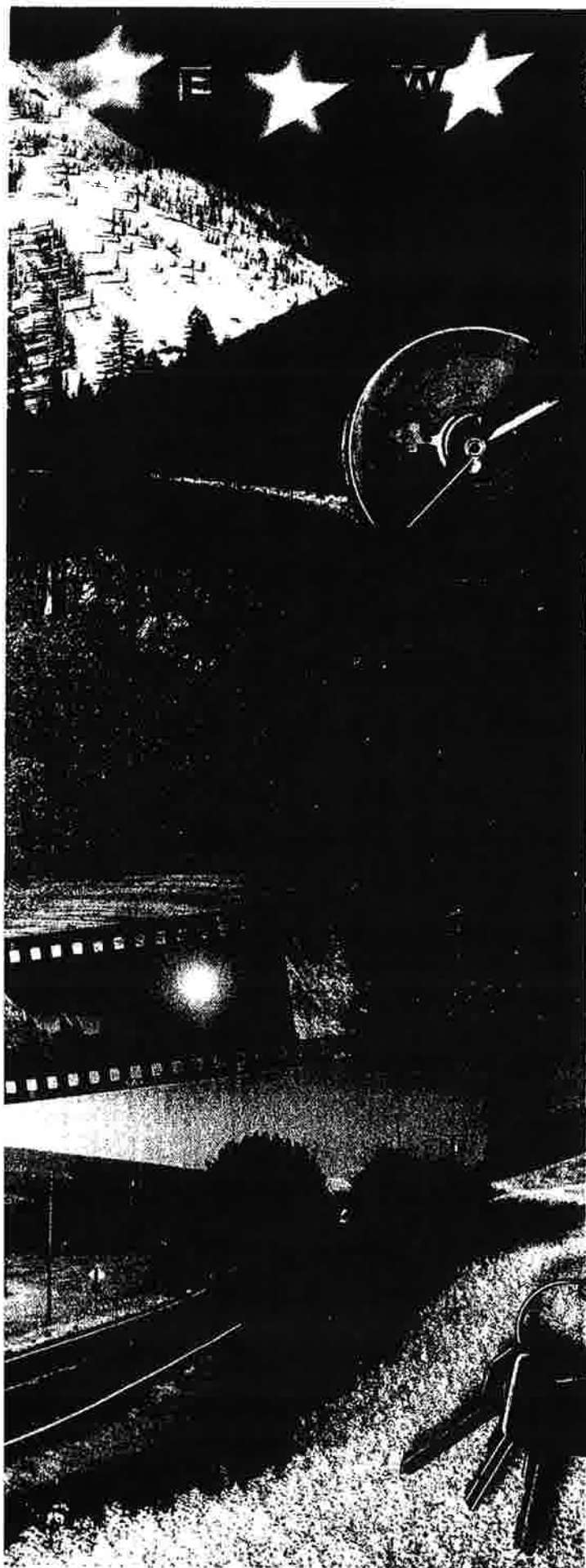
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Owner's Guide

2002 NewAire

DIESEL PUSHER MOTORHOME



NEWMAR CORPORATION

OWNER'S GUIDE

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Welcome to the exciting world of recreational vehicle traveling and the growing Newmar family.

Congratulations on your purchase of a Newmar product. We sincerely thank you for choosing Newmar as your recreational vehicle. We hope that you will enjoy many miles of traveling. Your new vehicle was built with care using today's technology and old world craftsmanship. We, at Newmar, strive to build vehicles that are safe, dependable, and comfortable to provide you with years of carefree, pleasant traveling.

With your new RV purchase, Newmar provides a 36-month limited warranty. Please read the NewAire Limited Warranty and all other component warranties that apply to the equipment installed on your unit.

Carefully read both the instructions in this Owner's Guide and the booklets supplied by the component manufacturers for important operation, safety, and maintenance information. Your dealer should be consulted should you have any questions. If your dealer is unable to answer the questions to your satisfaction he will refer you to our staff for assistance. Our customers are extremely important to us and we will make every effort necessary to ensure your satisfaction.

The limited warranties issued by component manufacturers require periodic service and maintenance, and the owner's failure to provide this service and/or maintenance will result in the loss of warranty coverage. Be sure to file the appropriate registration card with the component manufacturer as described with the individual instruction booklets to activate the warranties on the components within your Newmar RV. This Owner's Guide should be kept in your vehicle for quick reference. Take time to get acquainted with your unit and how it operates.

Again, thank you and welcome to the Newmar family.

Newmar Corporation



This guide has been provided by Newmar Corporation solely for the purpose of providing instructions about the operation and maintenance of this vehicle and its components. Nothing in this manual creates any warranty, either expressed or implied. The only warranty offered by Newmar Corporation is set forth in the written limited warranty that applies to this vehicle.

Instructions are included in this manual for operating some of the components that are standard on this vehicle. Instructions may also be given for components that are options and may not appear on all vehicles. For more detailed information on the components installed, refer to the individual manufacturer's operating instructions contained in the Owner's Information Package.

Newmar Corporation has compiled the most current information available at the time this guide was published. If the components in your unit vary significantly from what is described within this manual, then consult the instructions provided by the component manufacturer found in the Owner's Package.

Throughout this guide, reference is made to the following terms: Warning, Caution, and Important. These terms indicate important information that must be understood and followed. The definitions of these terms are:

WARNING

Emphasizes an area in which personal injury or even death could result from failure to follow instructions properly. Mechanical damage may also occur.

CAUTION

Failure to observe a caution can cause damage to the equipment or unit. Personal injury is unlikely.

IMPORTANT

Provides additional information to make a step easier or clearer.

CHAPTER 1

GENERAL INFORMATION

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DELIVERY

Throughout the manufacturing process your vehicle has been inspected by our qualified technicians. However, our final inspection at the factory is not to be the last one. The pre-delivery inspection and systems check your dealer performs are the final inspections done to the unit prior to you receiving your new coach. Your dealer is also available to assist you in understanding the limited warranties and completing any necessary forms to activate the warranties for the various appliances and accessories installed in your unit.

Dealer Responsibilities

1. A pre-delivery inspection and systems check, thoroughly inspecting the vehicle and the operation of the factory installed components.
2. A customer walk-through. This is done to familiarize the customer with the vehicle, its systems and components, and their operation.
3. Delivery of the Owner's Information Package. This package contains the warranty cards and registrations for the vehicle and factory installed components that carry a separate warranty. The detailed operating and maintenance instructions on these components are also included in this package.
4. Assisting the customer in completing the component registration forms, at the customer's request. To avoid loss of warranty coverage, the dealer should review the limited warranty provisions with the customer stressing the importance of filing warranty cards and registrations to the component's manufacturers within the prescribed time limit.
5. Providing the customer with information regarding warranty and non-warranty work on the vehicle and its separately warranted components whether the customer is in or out of the area.

Customer Responsibilities

The customer is responsible for regular and proper maintenance of the vehicle. Properly maintaining your vehicle will prevent conditions arising from neglect that are not covered by your Newmar limited warranty. The maintenance guidelines in this manual and any other applicable manual should be followed. It is your responsibility and obligation to return the vehicle to an authorized dealer for repairs and service.

To assist you in avoiding problems with your vehicle, we recommend you do the following:

- a. Read the warranty. Go over it thoroughly with your dealer.
- b. Inspect the vehicle. Do not accept delivery until you have gone through the unit with the dealer. Newmar has provided a checklist to be used during retail delivery. Check each item on the list and make sure the dealer does the same. Do not sign this checklist until you have done this.
NOTE: The sales literature versus actual specifics to the vehicle's measurements, weights, or quantities may vary.
- c. Ask questions about anything that you do not understand concerning your recreational vehicle.
- d. When taking delivery, set an appointment for adjustments. This appointment should be approximately two (2) weeks after you accept delivery.
- e. Responsible Use. Your vehicle is designed to be used for recreational or temporary living purposes. It is not designed to be used as a full-time residence or for commercial use. Commercial use means using as a business asset such as a mobile office or using the vehicle for lease/rental purposes.

RECREATIONAL VEHICLE LIMITED WARRANTY

The Newmar Corporation Limited Warranty was provided to you by your selling dealer prior to purchase. Please refer to this document when inquiring about the Newmar Warranty. To receive an additional copy, please write to: Newmar Corporation, Warranty Department, P.O. Box 30, Nappanee, IN 46550-0030.

Major Equipment Manufacturers

Antennatek	303-772-9591
Atwood (Water Heaters)	815-877-5700
Clarion	800-366-4567
Cummins	800-343-7357
Diesel Equipment (Wiper System)	910-373-8331
Dometic, Duo Therm	800-544-4881
Evans Dash Air Conditioning	800-354-7088
Exide Batteries	800-782-7848
Fantastic Vents	800-521-0298
Flexsteel Industries	319-556-7730
Gekotek Electronics (Monitor Panel)	714-738-3551
Girard Systems	800-382-8442
HWH Leveling Jacks	800-494-3213
Interstate Batteries - 12 Volt	800-872-4100
Interstate Batteries - 6 Volt	888-772-3600
Magnadyne	219-262-4479
Magnavox Appliances	800-851-8885
Meritor	740-348-3424
Michelin Tires	800-847-8475
Mito	888-433-6486
Newmar Corporation	800-731-8300
Nova Kool	604-523-6515
Panasonic Microwaves	888-433-6486
Pioneer	800-777-4856
Power Tech Generators	800-760-0027
Putnam Hitch	517-369-2165
River Park Inc.	800-442-7717
Sealand Toilets	800-321-9886
Seward	562-699-7997
Sharp	800-334-8251
Sony	800-222-7669
Spartan Motors	800-543-4277
TCL	800-334-8251
Trekmate Security Systems	619-941-3444
Tri-Star Distributing	800-456-3340
Tuthill Transportation	219-279-2801
Vehicle Systems	800-685-4298
Ventline	219-848-4491
Wilson Art Flooring	800-433-3222
Winegard Antenna Systems	800-288-8094
Xantrex	800-446-6180

Warranty Service

Warranty service required needs to be completed during the term of the warranty. Service work performed after the expiration of the Newmar three (3) year/36,000 mile warranty **WILL NOT** be covered by the warranty. If you have a problem with the service work performed under the Newmar Expressed Written Warranty, you must notify the Newmar Customer Service Department within seven (7) calendar days so that Newmar can assist you.

However, if you have Newmar warranty issues arise *immediately* prior to the expiration of your warranty, you must schedule and have the warranty work completed within thirty (30) days of the expiration of the warranty. If you are unable to meet these requirements you must call the Newmar Customer Service Department so that we may assist you.

Owner's Information Package

Included in this package are valuable documents about your vehicle and its components and systems. The Newmar Owner's Guide does not cover every possible detail of equipment, standard and/or option, installed on or in your vehicle. Consulting the booklets and instruction manuals in this package will help you safely operate, maintain, and troubleshoot these items.

Read all of the information and understand the safety and operating instructions included in the Owner's Information Package. To assure full warranty coverage, it is essential that all maintenance instructions are followed.

CUSTOMER RELATIONS

If you wish to schedule maintenance, service or to order parts, you should notify your local Authorized Newmar Service Center to set up an appointment. If you are unsure of the location of your closest Authorized Newmar Service Center, see the listing in the manual. You may also write to: Newmar Corporation

Warranty Department
PO Box 30
Nappanee IN 46550-0030

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 Newmar Corporation.

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 Newmar.

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, DC 20590. You can also obtain other information about motor vehicle safety from the hotline.

SPECIFICATION LABEL

There are two main numbers used to identify the vehicle. The Vehicle Identification Number (VIN) is the legal identification of the completed vehicle. The VIN is the number used by the state for vehicle registration. The Newmar Serial Number (1) is a five digit number that is needed whenever making an appointment for service or ordering parts through your Newmar Dealer or Service Center. This number can be found on the placard in the kitchen overhead and on the Customer Care Card received from Newmar. Below is a sample of the placard located in the kitchen.

1. The Newmar Serial Number
2. Last five digits Vehicle Identification Number (VIN)
3. Model Number of the Unit
4. Model Year of the Unit
5. Manufacturer, Model Number, and Serial Number of factory installed appliances

SPECIFICATION LABEL					
SERIAL #	XXXXXXXXXX	VIN #	XXXXXXXXXXXXXXXXXXXX	MODEL #	XXXXXXXXXX
DECOR #	XXXXXX	WOODCOLOR	XXXXXXXXXX	MODEL YEAR	XXXX
HEIGHT	XXXXXXXXXX	DRY WEIGHT	XXXXXXXXXX	LENGTH	XXXXXXXXXX
APPLIANCE INFORMATION					
	MODEL #	SERIAL #		MODEL #	SERIAL #
FRONT A/C	620315-421	XXXXXXXXXX	REAR A/C	620315-421	XXXXXXXXXX
FRONT TV	XR1801	XXXXXXXXXX	REAR TV		
FRONT FURN.	8F42	XXXXXXXXXX	DASH A/C		XXXXXXXXXX
WATER HEATER	SW100E	XXXXXXXXXX	RANGE	C378P	XXXXXXXXXX
GENERATOR 3.5kW-HFA28100N		XXXXXXXXXX	AUX. HEATER		
FRONT RADIO	EXCD-21	XXXXXXXXXX	REAR RADIO		
WASHER			DRYER		
CB RADIO			VCR		
CONVERTER	TODD	XXXXXXXXXX	MICROWAVE	R1850	XXXXXXXXXX
REFRIGERATOR	RM3882	XXXXXXXXXX	BLENDER		
MONITOR	CJ75QE	XXXXXX	FREEZER		
ICE MAKER			DISHWASHER		
SAFE			CD PLAYER		

Notes

CHAPTER 2

DRIVING & SAFETY PRECAUTIONS

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SAFETY PRECAUTIONS

WARNING

Prior to driving your vehicle, be sure you have read this entire owner's guide and the chassis manufacturer operator's manual. It is important that you understand your vehicle's equipment completely and how to use the equipment safely.

Read and understand all of the instructions and precautions in this owner's guide and the chassis manufacturer owner's manual before operating your new motorhome. Listed below are some safety precautions that must be adhered to while your motorhome is in motion. These precautions, as well as others that involve possible damage to equipment, are also listed in the appropriate areas in this manual.

General Warning

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.

- Seats equipped with seat belts are the only ones to be used while the vehicle is in motion.
- While the vehicle is in motion, all dinette seats should be locked in the forward facing position.
- Passengers should never be allowed to stand or kneel on seats in a moving vehicle.
- All passengers must have seat belts fastened in a low and snug position so that the force exerted by the belt in a collision will be spread across the hip area. Pregnant women should wear the lap-shoulder belt, with the lap belt portion worn low and snug.
- The fire extinguisher should be inspected monthly for proper charge and operating condition. The smoke alarm should also be tested on a regular basis. The label on the detector should be removed when preparing the unit for the first trip. In addition to the recommended inspection, these should also be checked prior to a vacation or extended trip.
- Sleeping facilities are not to be used while the vehicle is in motion.
- Become familiar with the operation of the escape window, but use this window strictly as an emergency exit.

Before Starting Out

The following is a brief list of procedures that will aid in your driving safety and extend your equipment's life.

- Windows, mirrors, and light lenses are to be clean and unobstructed.
- Tires should be checked for proper cold inflation pressure.
- Wheel lug nuts should be checked for proper tightness.
- Fluid levels, including engine oil, transmission fluid, coolant, power steering fluid, brake fluid, and windshield washer solvent, should be checked and filled if necessary.
- Disconnect the unit and store the sewer and water supply hoses as well as shoreline power cords.
- Secure all cargo in the storage compartments in the event of a sudden stop.

Driving

There are various adjustments that need to be made prior to starting and moving the vehicle.

- Among them are the driver's seat, the tilt steering, and the exterior rear view mirrors.
- The dashboard may contain several gauges and controls you have not previously used. Become familiar with all of these devices and their operation before starting out.
- The cruise control is not to be operated on icy roads, extremely wet roads, winding roads, heavy traffic, or in any other traffic situation where a constant speed cannot be maintained.
- While driving on slippery surfaces, use care when accelerating or decelerating. Also, verify that the engine exhaust brake is in the off position. Skidding and loss of vehicle control may be the result of abrupt changes in speed.
- Driving through water deep enough to wet the brakes may affect the stopping distance or cause the vehicle to pull to one side. If you have driven through deep water, check the brake operation in a safe area to be sure they have not been affected. **Never** operate a vehicle if a difference in braking efficiency is noticeable.
- Extreme terrain and adverse weather may affect the handling and/or performance of your vehicle. Please refer to your chassis manual for related information.

Notes

Gas & Fuel

WARNING

LP gas containers, gasoline or other flammable liquids shall not be placed or stored inside the vehicle because fire or explosion may result.

WARNING

Exhaust gases contain carbon monoxide (an odorless, colorless, and poisonous gas). These gases are produced by burned gasoline, diesel, or LP gas. Items such as the range, furnace, water heater, refrigerator, chassis engine, or generator engine can produce these gases. These fumes should not be inhaled. Inhaling carbon monoxide may produce headaches, dizziness, nausea, or even death.

- While refilling the fuel, the engine must be off and appliances turned off. Smoking is also prohibited at this time.
- The use of equipment such as wood and charcoal grills and stoves inside this recreational vehicle may cause fires or asphyxiation.

FIRE SAFETY

The possibility of fire exists in all areas of life, and the recreational life-style is no exception. Recreational vehicles are complex machines. They are made up of many materials, some of which are flammable. Like most hazards, the possibility of fire can be minimized, if not totally eliminated. This is done by recognizing the danger and practicing common sense safety and maintenance habits. For safety reasons, your unit is furnished with both a fire extinguisher and a smoke alarm.

Fire Extinguisher

The fire extinguisher is rated for Class B (grease, gasoline, diesel fuel, flammable liquids) and Class C (electrical) fires. These are the most common types of fires in vehicles. Read the operator's manual and the instructions on the fire extinguisher. Be sure to know how and when to use the extinguisher and where it is located.

Fire extinguishers are mechanical, pressurized devices. Care must be exercised when they are handled. They must be maintained as the operator's manual instructs for proper and safe operation. The extinguisher should be inspected at least once a month. More frequent inspections may be required if the extinguisher is exposed to the weather or to possible tampering. Do not test the extinguisher by partially discharging. Doing this will cause a loss of pressure.

If a fire occurs in the vehicle, evacuate the vehicle as quickly and as safely as possible. Consider the cause and the severity of the fire and the risk involved before trying to extinguish it. If the fire is major or fuel fed, move away from and stand clear of the vehicle and wait for emergency assistance to arrive.

Smoke Detector

The battery powered smoke detector is mounted on the ceiling in the living area of the unit. Read the operating instructions for details on the testing and care for this important safety device. Test the smoke detector after the unit has been in storage, before each trip, and at least once a week during use. The detector should never be disabled because of nuisance or false alarm from cooking smoke or a dusty furnace. Ventilate the unit with fresh air and the alarm will shut off. Never disconnect or remove the battery from the smoke alarm. The battery should be replaced once a year or when the low battery signal sounds.

Emergency Exit Window

In the bedroom of the unit, there is an emergency exit (egress) window. This window is designed to be used as an additional exit in emergency situations. It can be easily identified by the red color of the handle. To open the egress window, lift the handles and push outward on the window. The window can be closed by pulling the window closed and lowering the handle to the down or locked position.

WEIGHT INFORMATION

Below is a sample of a weight information label which may appear in your unit.

MOTORHOME WEIGHT INFORMATION		
Newmar Serial Number	XXXXX	VIN # XXXXXXXXXXXXXXXXX
GVWR (Gross Vehicle Weight Rating) is the maximum permissible weight of this fully loaded motorhome.		
UVW (Unloaded Vehicle Weight) is the weight of this motorhome as built at the factory with full fuel, engine oil, and coolants.		
SCWR (Sleeping Capacity Weight Rating) is the manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).		
CCC (Cargo Carrying Capacity) is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.		
CARGO CARRYING CAPACITY (CCC) COMPUTATION		
	pounds	(kilograms)
GVWR.....	XXXXX	(XXXXX)
minus UVW.....	XXXXX	(XXXXX)
minus fresh water of 15 gallons @ 8.3 lb/gal	XXX	(XXX)
minus LP-Gas weight of 32 gallons @ 4.5 lb/gal	XXX	(XX)
minus SCWR of 4 persons @ 154 lb / person	XXX	(XXX)
CCC for this motorhome*	XXXX	(XXXX)
*Dealer installed equipment and towed vehicle tongue weight will reduce CCC		
CONSULT OWNER'S MANUAL FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.		

Weighing the Unit

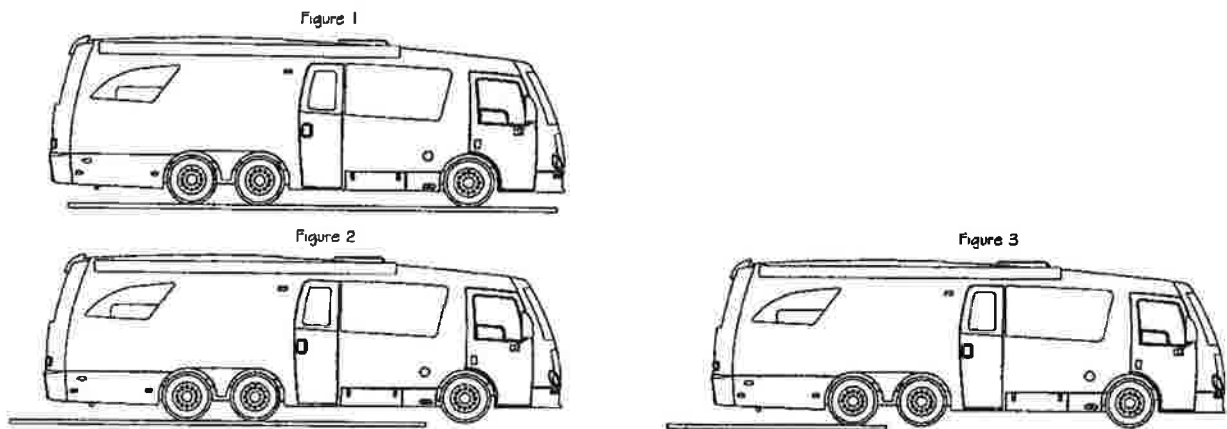
The following definitions are given to help in communications of issues of weight and your unit.

- GAWR:** Gross Axle Weight Rating is the maximum permissible weight for an axle. This takes into consideration the weakest link in the tire, wheel, brakes, hubs, axle, springs, and attaching parts. For example, if the axle is rated at 15,000 pounds and the tires are rated at 3,415 pounds each as a dual, the maximum GAWR would be 13,660 pounds with four tires.
- GCWR:** Gross Combined Weight Rating is the value specified by the manufacturer of the vehicle as the maximum allowable loaded weight of the vehicle with its towed trailer or towed vehicle.
- GVWR:** Gross Vehicle Weight Rating is the maximum permissible weight of this fully loaded motorhome. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Cargo Carrying Capacity.
- UVW:** Unloaded Vehicle Weight is the weight of the motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, or dealer installed accessories.
- CCC:** Cargo Carrying Capacity is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.
- GVW:** Gross Vehicle Weight is the weight of the unit with all items and supplies that are loaded into the unit at any point in time.
- SCWR:** Sleeping Capacity Weight Rating is the manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).

To assure the accuracy of your weights be sure the unit is always level during weighing.

The unit has been built to comply with the component suppliers recommended limits and give you a realistic CCC. When loading the unit, distribute the items so that not all of the weight is added to one area of the unit. If you have questions as to what the weight of the unit is after it has been loaded, take the unit to a drive-on scale or use individual wheel scales and verify that the weights are within the limits of those specified for the unit. When weighing the unit follow these instructions. Failure to follow these instructions may give an erroneous weight reading.

NOTE: The sales literature may give approximates or standards. Each individual unit may weigh differently based on the factory and/or dealer options added.



1. Pull the unit onto the scales shown in Fig. 1. This is the total weight of the unit. To do this, pull the unit onto the scales so that all of the wheels are on the scale. Record the weight. This is the GVW and should not exceed the GVWR supplied by Newmar for the unit.
2. Move the unit so that the front wheels are off the scales as shown in Fig. 2. Record the weight. This is the total weight of the unit except for the front axle. This weight should not exceed the total rating of the axles remaining on the scales. The front axle weight is determined by subtracting this weight from the GVW that was obtained in Step One (1). This amount should not exceed the listed front axle weight rating.
3. If the unit has a tag axle (an axle behind the drive axle), you should move the vehicle so that the tag axle is the only axle remaining on the scales. Record the weight. This weight should not exceed the weight rating of the tag axle. The drive axle weight is determined by subtracting the weight recorded in this step (Step 3) from the weight obtained during Step Two (2) above. This amount should not exceed the rating of the drive axle.

Campsite Parking

If the campground does not have drive-through sites, it is recommended to stop near the site and inspect it for slopes or uneven areas. Back into the site carefully. Watch for low-hanging limbs, posts, large rocks, or other obstacles. Back the unit in so the site is on the driver's left, if possible. This will enable the driver to watch the rear of the unit. Back up slowly using the side mirrors as a guide or with the assistance of another person outside guiding the parking procedure.

Place the vehicle in neutral, set the air park brake, and turn off the ignition. If parked on a steep incline, pre-level the coach by driving the appropriate wheels onto blocks. Finish the leveling process by using the leveling jack system to level and stabilize the unit. Connect the 120 volt shore power to the unit. Connect the fresh water supply and sanitize the water systems, if necessary. Connect the waste drain hose to the sewer hook-up. Start the refrigerator, water heater, and hydronic furnace, if needed. Remember that the refrigerator will not operate efficiently if the unit is unlevel.

CAUTION

Do not lift the wheels of the unit off the ground at any time during this process. The unit can roll forward or backward when the weight of the unit is on the jacks.

Car Towing Hitch

The motorhome is equipped with a class four, 8,000 pound car towing hitch and wire connector. Two extra 14 gauge wires are also included for your use. Your unit is designed for use as a recreational vehicle and is intended for towing light loads. The instructions for towing are listed in the chassis manufacturer owner's manual provided in your Owner's Information Package. The total weight of the motorhome and any vehicle towed by it must not exceed the GCWR. When weighing the motorhome, be sure to take passenger locations into consideration. The towed vehicles must have adequate active brakes. The wire connector installed is the standard seven-pin connector. Chapter 7 of this guide will have more information regarding this connector.

Notes

Notes

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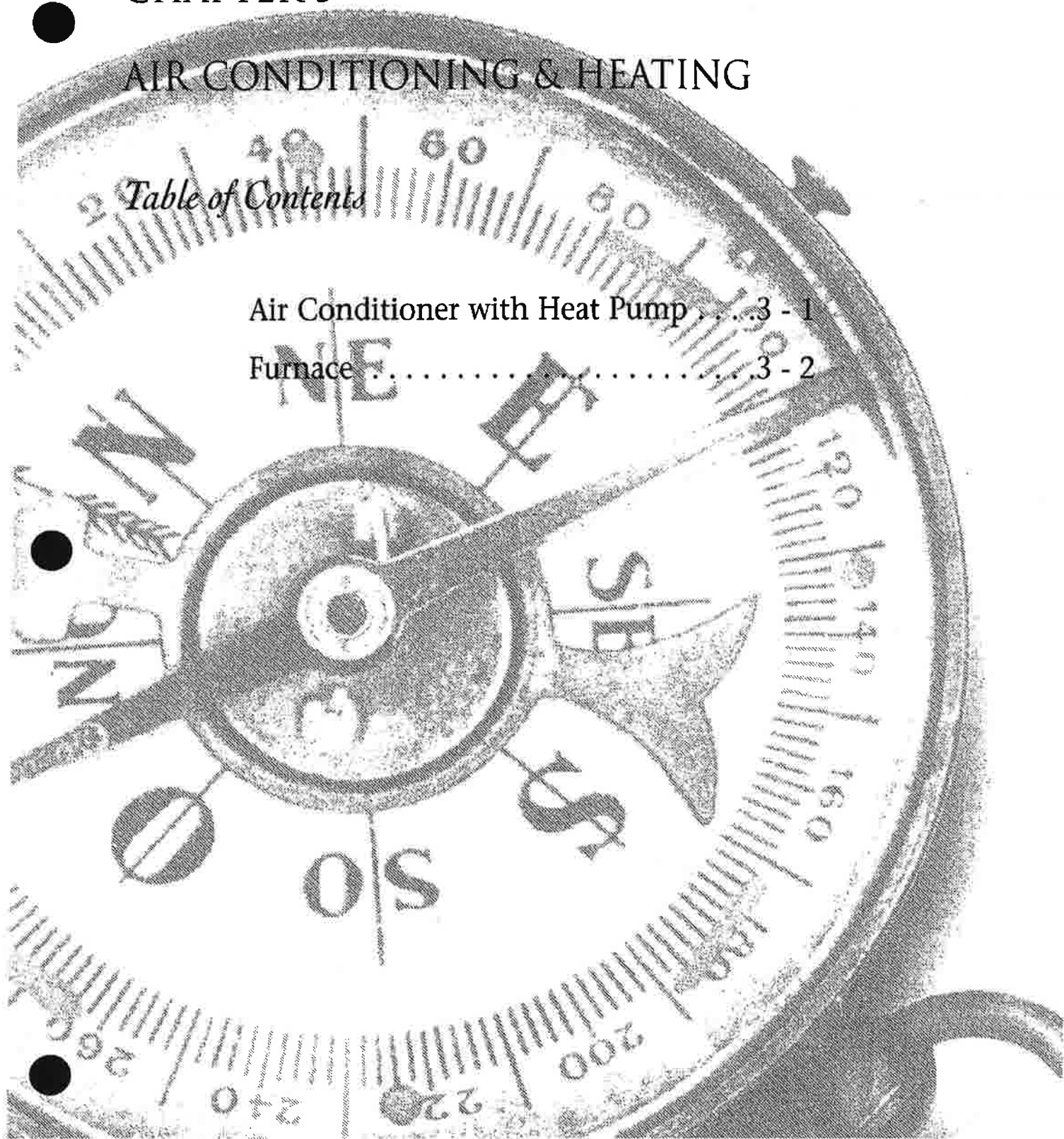
CHAPTER 3

AIR CONDITIONING & HEATING

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AIR CONDITIONER

The roof model central air conditioner/heat pump installed on your coach will operate only when the unit is supplied with 120 volt AC power from the power cord or the generator. The air conditioner circuit breaker must be in the ON position to work.

The ability of the air conditioner to maintain the desired inside temperature depends on the heat gain of the RV. To assist the air conditioner in cooling the coach set the thermostat to the desired temperature and take the following preventative measures to reduce heat gain and improve the performance of air conditioner: park the RV in a shaded area; use window shades and keep them closed; keep windows and doors shut; and avoid the use of heat producing appliances. Starting the air conditioner early in the morning and giving it a "head start" on the expected high outdoor temperature will greatly improve its ability to maintain the desired indoor temperature.

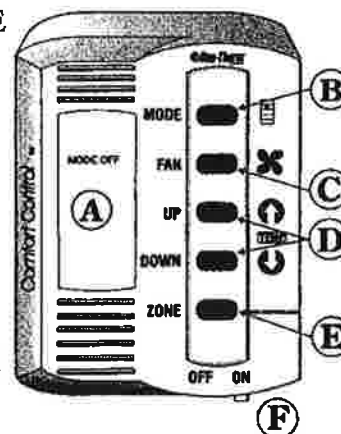
Air conditioners can use a large portion of the available electric power. RV parks may experience low voltage on days with high heat or humidity. This is commonly referred to as a "brown out." A brown out may trip the air conditioner circuit breaker. The circuit breaker protects your air conditioner from damage and is necessary during low voltage conditions. The tripped breaker is normally not a result of a defect in your electrical system.

The cool air from the air conditioner is routed throughout the coach ceiling through air ducts. Below is a drawing of the thermostat that controls the air conditioner, heat pump, and furnace. Simply select the desired temperature. The blower will cycle automatically or you may choose low, medium, or high fan settings. The heat pump installed in the air conditioner is used to warm the living areas of the unit. The Hydronic Zone Heating System is recommended when the outside temperature falls below 40°.

Your motorhome may be equipped with a dash air conditioner/heater equipped with automatic climate control and independent settings for the driver and passenger.

HEAT PUMP

1. Momentarily depress and release the MODE push-button until the Heat Pump indicator on the LCD is illuminated.
2. If you have not previously set your fan speed, you may do so by depressing and releasing the FAN push-button to select the desired fan speed.
3. Depress and release the UP push-button to decrease the desired temperature or the DOWN push-button to decrease the desired temperature. The final selected SET-POINT will be displayed in the LCD area of the Comfort Control Center.



- A. Liquid Crystal Display
- B. Mode Selector Button
- C. Fan Speed Selector Button
- D. Temperature Selector Buttons
- E. Zone and Stage Selector
- F. On/Off Switch

4. After a delay of approximately two minutes the heat pump's compressor will come on and the heating process will begin. Once the room temperature reaches the selected SET-POINT, the compressor will cycle off. Once the Comfort Control Center senses the need for heating, the compressor will restart in approximately two minutes. At this point, the fan will either continue to operate in the single selected fan speed or cycle OFF and ON with the compressor if the AUTO fan speed has been selected.
5. If your vehicle contains more than one ZONE, depress the ZONE push-button to select ZONE 2, and repeat procedures from step 1. Repeat the entire process for each additional zone.

IMPORTANT

When setting the thermostat, remember that ALL ZONES MUST BE IN THE SAME MODE FOR PROPER OPERATION. This means when cooling the unit, each zone must be in the cool mode. When using the heat pump, each zone must be in the heat mode. When using the furnace, each zone must be in the furnace mode.

Shutdown: If you turn the Comfort Control off or if there is a power interruption for any reason, the system will resume operation on the last settings when power returns.

See the manufacturer's literature in your Owner's Information Package for the basic steps for normal operation of your Comfort Control system or for more detailed instructions and special control features.

FURNACE

WARNING

Never attempt to modify this furnace. Fire, explosion, asphyxiation, or carbon monoxide poisoning may occur. If the furnace malfunctions, consult a trained service technician.

The furnace installed in your coach is a Hydronic Zone 50,000 BTU Heating System with independently ducted basement heat. This type of furnace provides hydronic 'radiator' type of heating. The furnace operates on 12 volt electricity (battery powered) along with diesel fuel from the vehicle fuel tank.

To operate the furnace, go to the Dometic thermostat. First, set the thermometer zone to the FURNACE mode. Then select the desired temperature by using the UP or DOWN arrows. Prior to furnace operation with diesel fuel, the diesel burner must be ignited. Check the control center panel to make sure the light in on that is marked hydronic heat.

There are three heat exchangers, each with its own fan, located throughout the living area of this unit. They are located in the bedroom, hall area, and under the dash. Remember, the heat exchanger under the dash is not a part of the chassis air-conditioning/heating system. Each heat exchanger operates as an individual furnace. A separate temperature setting can be

selected for each zone. The hydronic heat exchangers in the living areas are controlled by the Dometic wall thermostat. There are three zones of heating, two of which are in the living area. The zones are listed:

Zone 1	Living Room Area
Zone 1	Hall Area
Zone 2	Bedroom Area
Zone 3	Waterworks Compartment

As previously mentioned, there is a heat exchanger located in the waterworks compartment. This heat exchanger is controlled by a separate thermostat located in the compartment area. Also, to assist in heating your motorhome, a dash heating system with automatic climate control may be installed.

IMPORTANT

When setting the thermostat, remember that ALL ZONES MUST BE IN THE SAME MODE FOR PROPER OPERATION. This means when heating the unit with the furnace, each zone must be in the FURNACE mode.

WARNING

Portable fuel burning appliances are not safe for heating inside the recreational vehicle. Asphyxiation or carbon monoxide poisoning can occur.

Notes

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CHAPTER 4

APPLIANCES & ACCESSORIES

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MAJOR APPLIANCES

Refrigerator

The refrigerator is plugged into its own individual properly grounded electrical outlet rated for 115 volts, 60 Hz, AC and fused at 4 amperes or 12 volts fused at 7.5 amperes. This provides the best performance and also prevents overloading house wiring circuits which could cause a fire hazard from overheated wires.

One control located in the inside of the refrigerator in the back lets you regulate the temperature in the fresh food and freezer compartments. At first, set the control at "2." Allow 24 hours for the temperature to stabilize, whether you are setting the controls for the first time or re-adjusting them. Then, if you want colder or warmer temperatures in either compartment, gradually adjust the control. To test the fresh food compartment, place a bulb-type thermometer into a jar of water on the top shelf. Check it one day later. To test the freezer compartment, put a bulb-type thermometer between two or three frozen packages in the center of the freezer. Check it one day later.

NOTE: Turning the control to OFF turns off cooling in both the freezer and fresh food compartment, but does not shut off power to the refrigerator.

Microwave

A 22" microwave is installed in your unit. In some units, the 22" convection microwave is optional. All microwaves operate on 120 volt electricity. The microwave's control panel is the touch pad type. Simply enter the temperature, mode, and cooking time desired. The microwave is plugged into the electrical outlet through a surge protector. This will help protect the microwave in case of an electrical surge. For instructions on how to operate any of the special features on the microwave oven, please refer to the microwave owner's manual in your Owner's Information Package.

Range

The range installed in this unit is a two burner electric cooktop. To operate the range, push the knob down to clear safety lock and turn counter clockwise to the desired setting. The indicator light will indicate when the burners are on. **Caution:** The entire cooktop surface may be hot, even when using only one burner. For further instructions, refer to the manufacturer owner's manual in your Owner's Information Package.

Your range may be equipped with a Lite Grain, antiscratch fiberglass material, countertop cover that matches your countertop material. If installed, this cover will help to protect the burners when they are not in use. Before cooking on the range top the cover must be removed. Never use the cover while the burners are in use and do not use the cover as a griddle. Never use the range while the RV is moving and remember to install the cover when the range top is not in use.

The following warning label has been placed in the cooking area to remind the user to provide an adequate supply of fresh air for combustion:

WARNING

It is not safe to use cooking appliances for comfort heating. Cooking appliances need fresh air for safe operation. Before operation:

1. Open overhead vent or turn on an exhaust fan.
2. Open a window.

Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle. Proper ventilation when using the cooking appliance(s) 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.

TELEVISION OPERATION

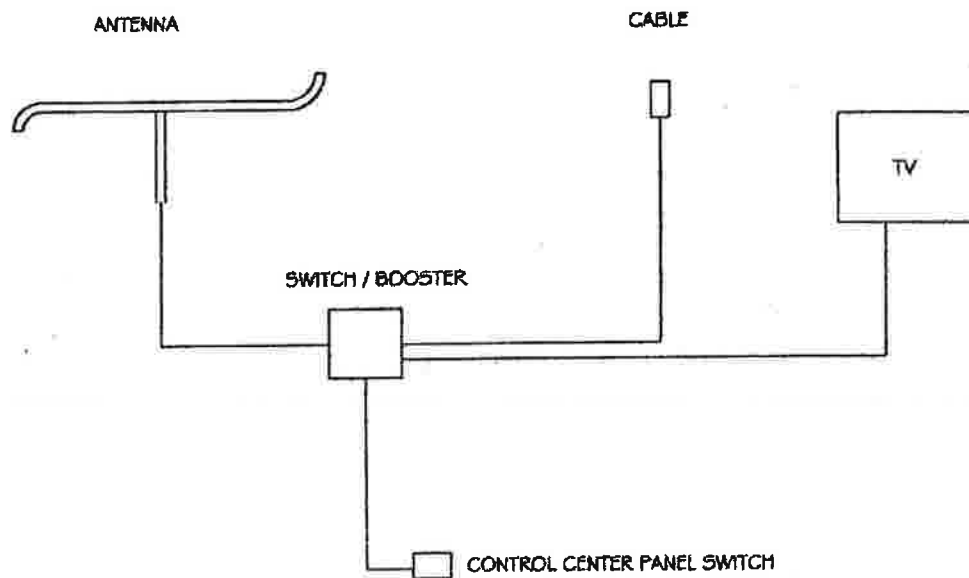
Television Antenna

The TV antenna in your coach is designed for reception of all color and black-and-white channels. If the reception is poor, you should verify that the power switch is in the "ON" position and that all of the connectors are tight. If poor reception still occurs, consult your authorized dealer.

To raise the antenna into the operating position, turn the elevating crank (clockwise) in the "UP" direction, about 13 turns, or until some resistance to turning is noticed. On the power booster, turn the switch to "ON" in order to amplify the signal being received. Once in the "UP" position, rotate the antenna to receive the best picture. This is done by pulling down on the directional handle with both hands until it disengages from the ceiling plate and then rotating it until reception has improved. The antenna must be lowered before moving the vehicle. To lower, rotate the directional handle until the pointer is aligned with the pointer on the ceiling plate. Turn the elevating crank (counter-clockwise) in the "DOWN" direction, about 13 turns, or until some resistance to turning is noticed. The antenna is now locked and in the travel position.

CAUTION

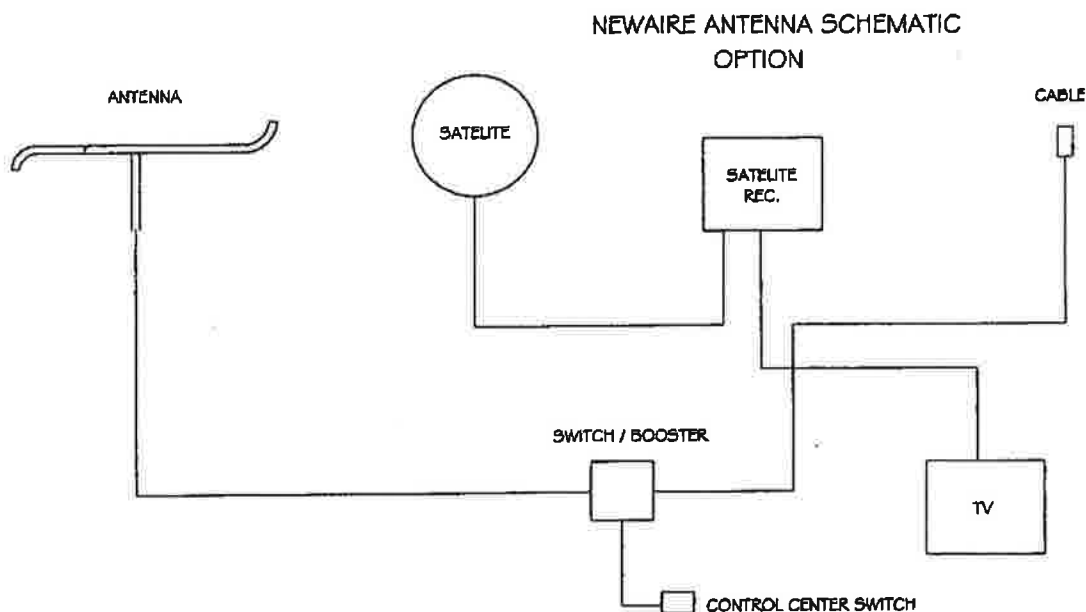
Under no circumstances should you lower the antenna in any position except the travel position.



Antenna Schematic

Satellite Dish (Optional)

Your unit is prewired for an optional automatic satellite dish. This system eliminates the need to execute long and difficult setup procedures. Viewing television broadcasts in minutes can be accomplished by simply pressing a button. Within minutes after initiating the automatic set-up, an extraordinary picture will be received accompanied with CD-quality sound. For detailed operating instructions on this satellite system, please consult the manufacturer user's guide in the Owner's Information Package.



Television

Your unit is equipped with an enhanced sound entertainment system. The coach is cable ready and has a color television installed in the living area of the coach. Some models may have a color television/VCR combination installed. A 9" color television may also be installed in the bedroom. The televisions are powered by 120-volt electricity. Your coach must be plugged into shore power or have the inverter on or the generator running in order for the television to work. The operation of either television is similar to most televisions used in the home. The main unit has the basic power, volume up and down, channel up and down, and a set-up control. The remote control has these in addition to many other function keys. The sound from the 20" television can be routed throughout the unit by using the dash stereo. Once the television is set up for stereo output, and the dash stereo is on "AUX PLAY," the speakers located throughout the unit will carry the program being viewed.

Video Cassette Recorder

Depending on the model of your unit, a video cassette recorder (VCR) may be installed in the living room television as standard equipment. The operation controls are on the face of the VCR and on the remote control. For more detailed information regarding the VCR functions consult the VCR operator's manual in the Owner's Information Package.

TV Cable & Telephone Jack

Standard features on this coach are cable and phone hook ups. This will allow the user to connect the coach to a cable and telephone cable, if the park is so equipped. This feature includes the connector for the incoming telephone line and the cable line. This may be located in the exterior rear side electrical compartment.

Stereo

Depending on the model of your unit, you will either have a AM/FM dash stereo with a compact disc player installed or your coach will be equipped with a 400-watt AM/FM dash stereo with a remote eight-disc CD changer with an amplifier and subwoofer. The stereo operates on 12-volt electricity from the coach batteries. Also, depending on the model of your unit, a rear view color monitor system may be installed in your dash stereo system. For operating instructions, please consult the manufacturer's literature in the Owner's Information Package.

Carbon Monoxide Detector

Carbon monoxide is a colorless, tasteless, odorless gas. It is a by-product of the burning of fossil fuels (gasoline, diesel fuel, etc.). The chassis and generator engines and furnace produce carbon monoxide constantly while they are operating. Carbon monoxide is DEADLY. Please read and understand the following precautions to protect yourself and others from the effects of carbon monoxide poisoning.

WARNING

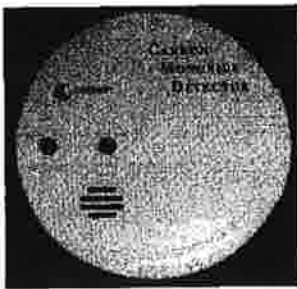
Exhaust gases are deadly. Do not block the tailpipes or exhaust ports. Do not situate the vehicle in a place where the exhaust gases have any possibility of accumulating either outside, underneath, or inside your vehicle or any nearby vehicles. Outside air movements can carry exhaust gases inside the vehicle through windows or other openings remote from the exhaust outlet. Operate engines, carbon monoxide-producing systems, or components only when safe dispersion of exhaust gases can be assured. Monitor outside conditions to be sure that exhaust continues to be dispersed safely.

If you, or anyone else, experience any carbon monoxide symptoms (dizziness, nausea, vomiting, muscular twitching, throbbing in the temples, inability to think coherently, weakness and sleepiness, or intense headaches) exit the coach immediately. Seek medical attention if symptoms persist. Shut down the unit and do not operate it until it has been thoroughly inspected and repaired.

WARNING

UNDER NO CIRCUMSTANCE, SHOULD YOU OPERATE ANY ENGINE WHILE SLEEPING. When you are sleeping, you will not be able to monitor outside conditions to assure that engine exhaust does not enter into the coach. Check the exhaust system frequently for damage. If damage is found, do not operate the system. Never modify the exhaust system in any way.

The detector is equipped with a "sensor activation strip." This strip must be removed for the detector to operate properly. This should have been done during the dealer's Pre-Delivery Inspection. Please check the detector to verify that the activation strip has been removed. Please consult your CO detector User's Manual for more detailed information.



The detector is equipped with a "sensor activation strip." This strip must be removed for the detector to operate properly. This should have been done during the dealer's Pre-Delivery Inspection. Please check the detector to verify that the activation strip has been removed.

Please consult your carbon monoxide detector User's Guide for more detailed information.

Navigation System (Optional)

An optional feature in this unit may be the installation of a navigation system equipped with a seven disc set. This system will be displayed through the rear view monitor screen and will assist you with turn-by-turn route guidance and information whether you are traveling in unfamiliar areas or looking for the nearest gas station. For more detailed information on the navigation system, please consult the owner's manual that can be found in the Owner's Information Package.

CB Radio (Optional)

This coach may be equipped with a citizens band (CB) radio. This radio can be used to communicate with other travelers on the road. The model installed is a remote type. The hand held microphone/speaker contains the power, volume, and channel controls. Simply turn on using the power/volume control. Then select the channel you wish to monitor. Press the "Push-to-Talk-Switch" to transmit and release to receive. For more information regarding the operation of this CB radio, please consult the radio manufacturer's Owner's Manual.

WATER HEATER

The water heater installed in this unit is a six gallon electric heat exchanger water heater with engine and hydronic assist features. Read all instructions in this guide and in the manufacturer's literature before using this water heater. Use this water heater only for its intended use. Do not use an extension cord set with this water heater. If no receptacle is available adjacent to the water heater, contact a qualified technician to have one properly installed.

This water heater is equipped with a heat exchanger. Extended engine coolant circulation through the heater may result in excessively hot water. The water heater tank and heat exchanger is made of aluminum. Some engine manufacturers recommend that the cooling system be flushed periodically. Caustic chemicals are commonly used. **DO NOT** flush caustic chemicals, such as Nalcool, through your system with the heat exchanger hooked up or damage **WILL** occur to the heater.

Hydrogen gas can be produced in a hot water system served by these heaters that have 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 be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system.

To operate, fill the water system and completely fill the tank. Locate and turn remote electrical switch to ON. Turn switch to OFF prior to draining the water system. The temperature/pressure valve may weep during the initial operation. This is normal. The valve will seat itself with use. **NOTE:** Do not operate heater without element being submerged in water.

Check heat exchanger lines for leaks at regular intervals. A leak in the system will cause coolant loss and may damage engine. Flush the tank periodically. Drain the tank if subjected to temperatures less than 32°F, to prevent freezing and possible damage.

CAUTION

If heater has been run without water and now fails to work, push the electric reset button high limit switch under wire access cover.

Water Heater Storage

When storing your coach for the winter months, the water heater must be drained to prevent damage from freezing. The first step is to turn off all electrical power going to the water heater. The water pump must also be turned off. Open both the hot and cold water faucets to drain the lines. Open the drain on the water heater. Drain the entire water system. When preparing the coach for use after it has been stored, make certain the water system, including the water heater, has been filled before re-lighting the water heater. Failure to fill the water heater before lighting may damage the water heater and void the warranty.

Pressure Relief Valve

The temperature and pressure relief valve is located on the exterior of the water heater. It is designed to open if the temperature of the water within the heater reaches 210° F, or if the water pressure in the heater reaches 150 pounds. Recreational vehicle water systems are closed systems and during the water heating cycle the pressure build-up in the water system may reach 150 pounds. When this pressure is reached, the pressure relief valve will open and water will drip from the valve. This dripping will continue until the pressure is reduced to below 150 pounds, and the valve closes. This condition is normal and does not indicate a defective relief valve.

WARNING

Do not plug the relief valve under any circumstances.

Rear View Monitor System

If your coach does not have the rear view color monitor system installed as part of the dash radio system, it will have a rear view monitor system installed on the dash. The rear view monitor system assists the driver in the backing and parking of the vehicle. This system consists of a camera mounted on the rear cap and a monitor located on the dash. With the MODE switch in the "MANU" position, the monitor will be on when the ignition is turned on. With the MODE Switch in the "AUTO" position, the monitor will display the picture from the camera when the vehicle transmission is placed in reverse (R). For detailed instructions on this and all procedures regarding the monitor system, refer to the monitor operating instructions in the Owner's Information Package.

Notes

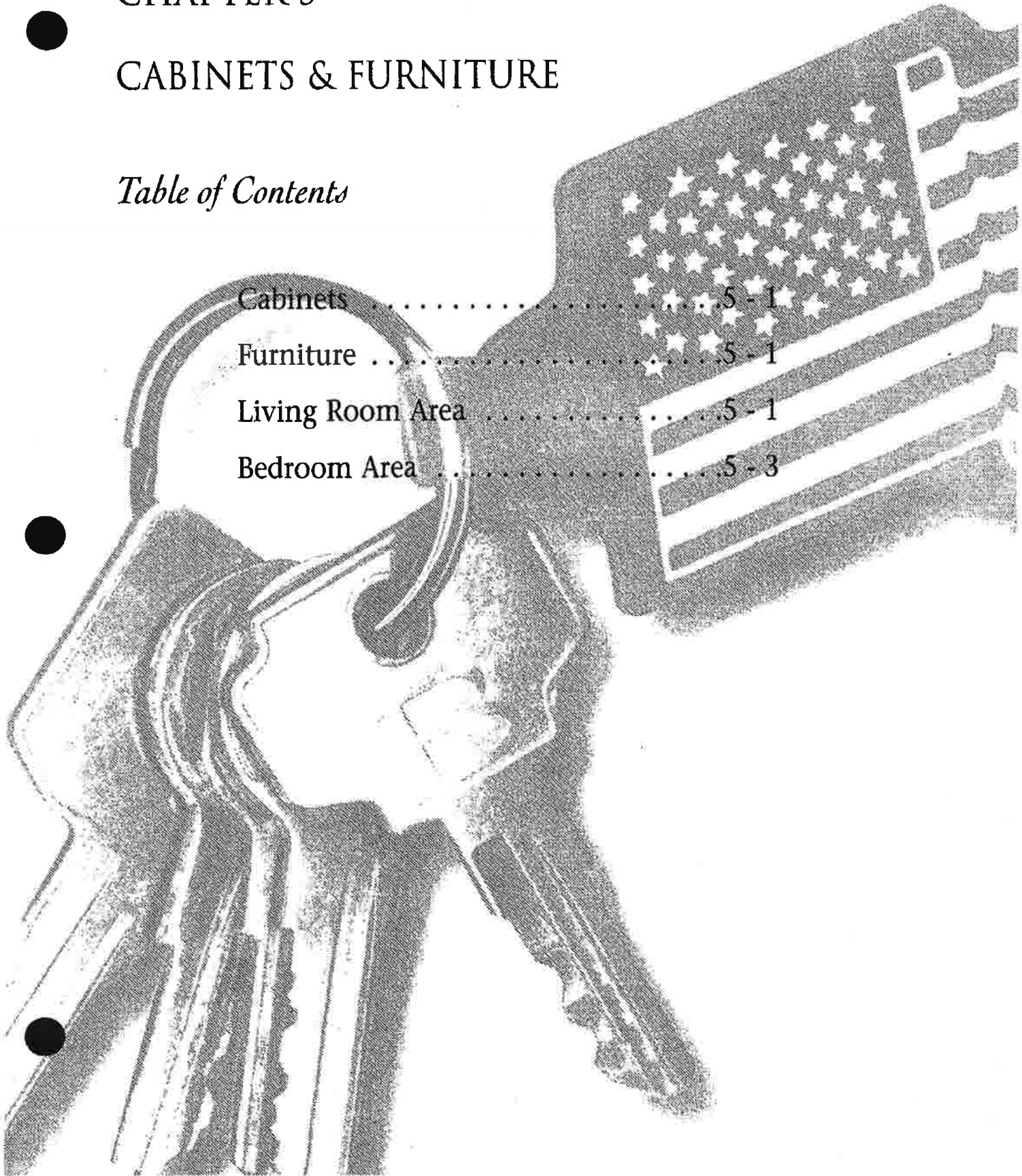
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CHAPTER 5

CABINETS & FURNITURE

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CABINETS

The cabinets in this unit are constructed on site at the Newmar production facility. High pressured laminate cabinetry with doors are standard in all units.

Storage is an important factor to all RV owners. Keeping this in mind, the cabinetry is structured to provide as much storage as possible.

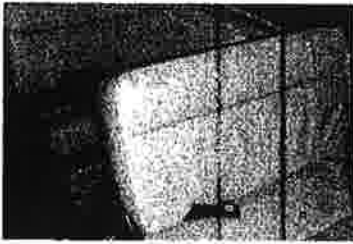
In the kitchen, the countertop may be made of a Lite Grain antiscratch fiberglass material or of a laminate material and have an integrated, molded sink bowl. To clean the matte finish surface wipe with a damp cloth and for "dried on" spots or rings, wipe with a damp cloth and a mild liquid soap. Strong chemicals and solvents may damage the surface and should be wiped up immediately, then rinse the surface with water. Avoid cutting directly on the countertop surface, avoid excessive heat, and keep harmful chemicals away to avoid countertop surface damage. In the bathroom, the countertop may also be made of Lite Grain and have an integrated lavatory. Consult the manufacturer's care instructions in the Owner's Information Package provided with this unit for more information regarding your countertop.

Metal drawer guides are standard on all of the drawers throughout the unit. The metal drawer guides provide a smooth opening and closing of the drawers. To open a drawer, lift up slightly and pull open. The way this mechanism works will prevent the drawers from unintended opening while traveling. The silverware drawer may contain a molded silverware divider tray for added storage. All of the cabinet doors may also be equipped with positive catches and hidden hinges. The catches secure the door in the closed position for extra security while traveling. All of the cabinetry can be easily cleaned with any commercial furniture cleaner or polish. As with any wood product, do not saturate these cabinets with water or any other liquid. Be sure to wipe up spills as they occur to avoid staining.

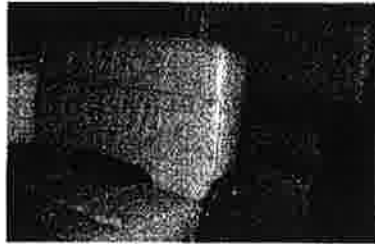
FURNITURE

Living Room Area

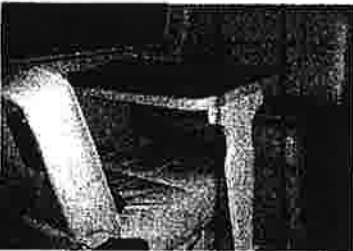
In the living area of this coach, either a Lite Grain dinette table top with multi-positional fabric/ultra suede upholstered bench dinette seats or a built-in dinette table will be installed. Leather/vinyl ultra suede upholstered bench dinette seats may be optional. The booth-style dinette and molded table has a molded leg that is installed. The leg can be folded under the table and the two can be stored flat against the sidewall. Dinette seating can be positioned into five or more different combinations by using the levers on the side of the seats and the lever in the front of the seats.



Two seats facing forward like a van.



Two seats facing rearward to view the TV.



One seat facing forward, one seat facing rearward with the table makes the common dinette.



Both seats laying flat makes into a bed.



One seat back up, one seat laying flat to use like a chaise lounge.

There are also two storage drawers located under the dinette seating for convenient storage space.

The driver and passenger seats are equipped with integrated seat belts. These should be used whenever the vehicle is in motion. To adjust these chairs for driving ease, the six-way electric powered bases move the chairs forward and backward, as well as up, down, forward and reverse tilt. These chairs also have swivel/recline features, ergo flex arms, and power lumbar support. The power base control switches are located on the left side of the chair. As an option, you may have the front seats made of leather/vinyl.

In the living room, the standard sofa will either be a a fabric/ultra suede Jack Knife sofa with one storage drawer or just a plain Jack Knife sofa. A leather/vinyl ultra suede sofa may be optional. If you have any questions regarding the warranty on these sofas, contact the sofa manufacturer.

Bedroom Area

The decor coordinating bedspread included as part of this unit's standard package may include a quilted bedspread with a reverse sham and an accent pillow. For best results, it is recommended that the bedspread be DRY CLEANED ONLY.

The bed in this unit is a queen size bed. Individually controlled reading lights may be installed in the bedroom for your nighttime reading convenience. On each side of the bed you may also find nightstands with drawers for your convenience. On the side walls of the lighted wardrobe closet, cedar paneling may be added.

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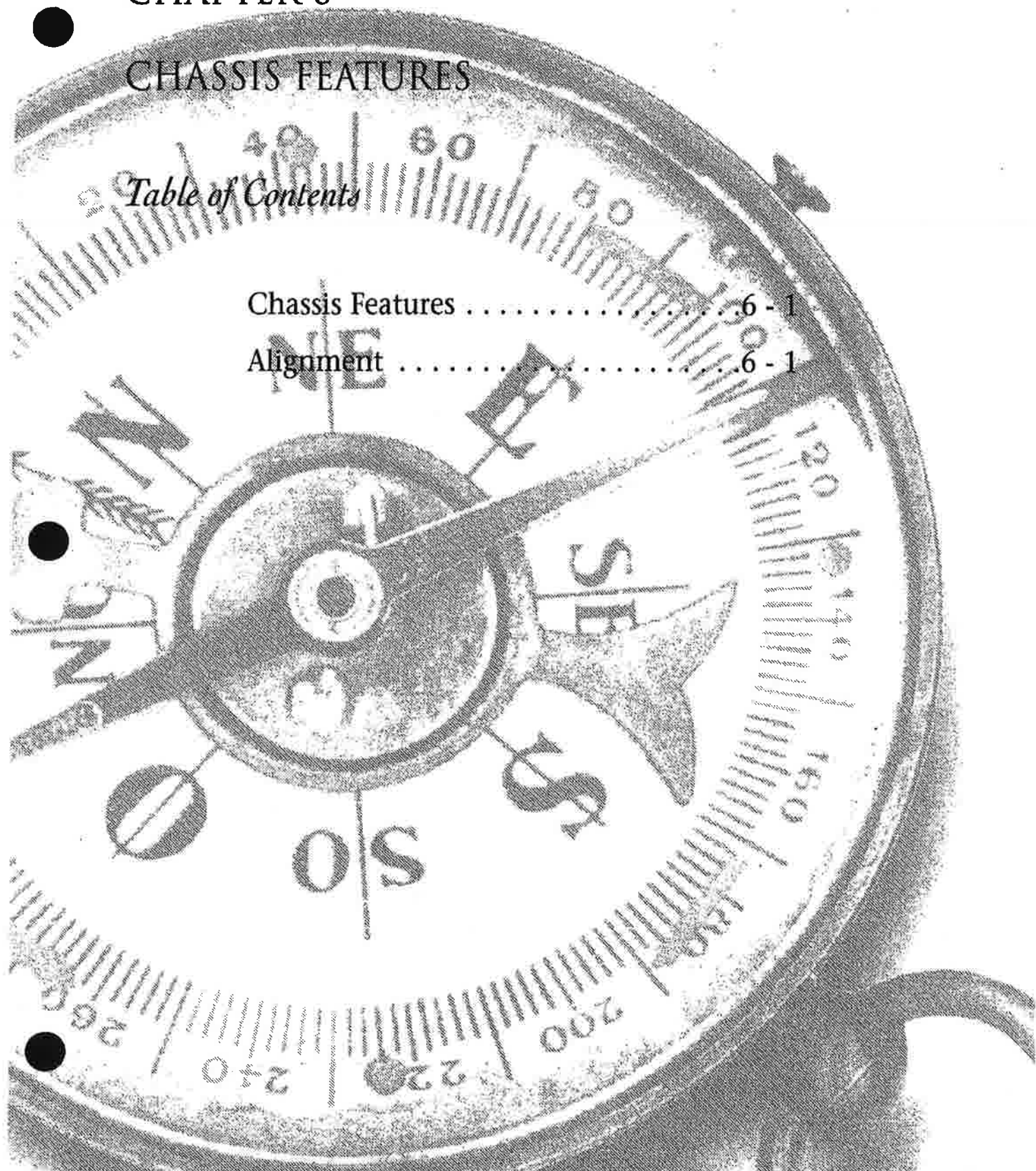
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CHASSIS FEATURES

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CHAPTER 7

ELECTRICAL FEATURES

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ELECTRICAL SYSTEMS

General Information

There are two electrical systems in your coach. They are the 12 volt DC system and the 120 volt AC system. Most standard appliances require 120 volt electricity while the majority of the lighting used in recreation vehicles is powered by 12 volt electricity. The power for the 12 volt system is supplied by the coach batteries, which are charged by the inverter/converter. The power for the 120 volt systems is supplied by the power cord when the unit is connected to an outside power source or by the generator. The inverter can also supply 120 volt power. It will transform 12 volt electricity from the batteries into 120 volt power for basic appliances.

CAUTION

Failure to turn off the 120-volt appliances when starting or stopping the generator may damage the transfer switch and/or electrical appliances.

To connect the unit to 120 volt shore power, first make sure all of the breakers are in the off position. This is done to avoid a power surge. Unwind the power cord from the electrical compartment. The standard electrical service in this unit is 50 amps with a flexible cord. Check to make sure the pins in the outlet are oriented correctly, that they match the power cable, and that they are in good condition. If there is a circuit breaker switch at the plug, it should be turned OFF before making the connection. Insert the plug completely into the outlet and turn the circuit breaker on. Close and lock the electrical compartment door to keep the contents clean, dry, and secure. Close the cover on the power box, if equipped, to avoid an unintended disconnection and to keep contents clean. Switch the main breaker to the ON position. The 120 volt system will energize all 120 volt circuits and outlets when the main breaker is turned on.

Breaker Boxes

The 120 volt and 12 volt breaker boxes are generally located under the bed in the rear bedroom, but the location varies. Circuit breakers and fuses are installed to protect the electrical system from overloading. Do not attempt to change the circuitry or add appliances yourself. Please consult an authorized Newmar Service Center.

Electrical Diagrams

In Chapter 14, you will find electrical diagrams. Some circuits may not apply to certain brand and unit types.

Batteries

The chassis batteries on your motorhome are installed and warranted by the chassis manufacturer. The four-6 volt coach (or house) batteries on your motorhome are installed by Newmar Corporation, but warranted by the battery manufacturer. These batteries are used to operate the 12 volt items that are not a direct part of the chassis. They are located on a pull out tray in an outside storage compartment at the rear of the coach.

CAUTION	
Do not use the motorhome with the coach batteries disconnected.	

The coach and chassis batteries are recharged by the vehicle's electrical system whenever the engine is running. A decline in the coach battery voltage may be noticed while the chassis batteries are being charged. The converter will automatically charge the coach batteries when the unit is connected to a 120 volt outside power source. The chassis batteries are isolated from the coach batteries. This prevents the chassis batteries from being drained by the interior 12 volt equipment, allowing ample voltage for engine ignition.

Battery Boost Switch

On the dash you will find a battery boost switch. This switch briefly connects the coach batteries to the chassis batteries. This allows the chassis batteries to borrow power from the coach batteries to assist in starting the engine. If the chassis batteries cannot turn the engine over in the normal mode, hold down the battery boost switch and attempt ignition. By using the battery boost switch while trying to start the chassis engine, a jump start situation is created between the coach and chassis batteries. If the battery boost switch is required to start the engine on a regular basis, ask your dealer to check the chassis batteries and charging system.

Battery Inspection & Care

WARNING	
Remove rings, metal watch bands, and other metal jewelry before working around batteries. Use caution when using metal tools. If a tool contacts a battery terminal or metal connected to it, a short circuit could occur which could cause personal injury, explosion or fire.	

CAUTION	
Disconnect the 120 volt electrical power cord and the negative terminal from the coach batteries before working on the electrical system.	

Remember that when batteries are not used for an extended period of time, they may lose their charge. Periodic charging of the batteries during storage of the unit will increase the life of the battery. Check the external condition of the battery periodically. Look for cracks

in the cover and case. Check the vent plugs and replace them if they are cracked or broken. Keep the battery clean. Accumulations of acid film and dirt may permit current flow between the terminals, which could drain the battery.

To clean, wash the batteries with a diluted solution of baking soda and water to neutralize any acid present. Rinse thoroughly with clean water. Foaming around the terminals or on top of the battery is a sign that acid is being neutralized. Avoid getting the baking soda solution in the battery. Secure all vent caps. Dry the battery cables and terminals to prevent corrosion. Do not use grease on the bare metal inside the cable terminals. Grease can act as an insulator, and electricity will not flow through it. A plastic ignition spray will protect the terminals after they have been cleaned.

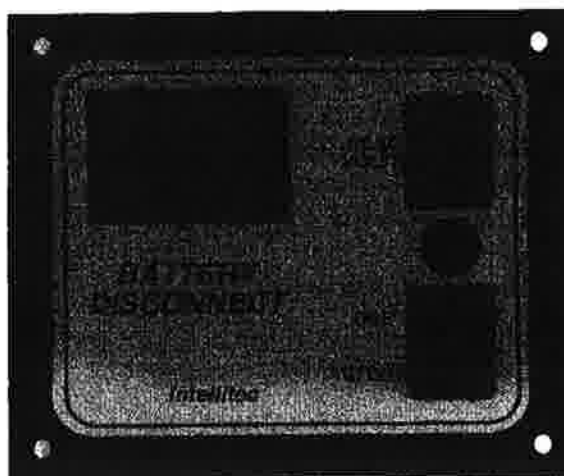
WARNING

Do not allow the battery fluid to contact your skin, eyes, fabric, or painted surfaces. The fluid could cause serious personal injury or property damage. Wear eye protection when working with any battery.

The batteries should be removed and stored in a warm place when not using your motorhome for an extended period of time. Mark the cables, positive and negative, for easy identification. Batteries are not to be stored on concrete floors. The batteries require periodic charging during storage. If the motorhome is to be stored for a long period of time, it is recommended that all of the batteries inside the unit be removed from clocks, radios, smoke alarms, etc. This will prevent unnecessary drain and corrosion of the batteries. The coach batteries are 6 volt RV/Marine deep cycle batteries. This type of battery consumes water and must be filled periodically. **Please be sure to check the battery water level on a regular basis.** Consult the owner's manual supplied by the battery manufacturer. This can be found in the Owner Information Package received with this unit.

Battery Disconnect Panel

The battery disconnect panel for the house batteries is located in the power panel above the refrigerator. There are two switches on the panel. The top switch is used to measure the battery voltage. The lower switch is used to disconnect the battery when the unit is stored for any period of time. Pressing downward disconnects the coach batteries, not the chassis batteries. This is done to prevent the coach batteries from being drained during storage. It disconnects all of the 12 volt circuitry from the batteries. When taking the unit out of storage, press upward to re-connect the batteries. This will make the 12 volt system ready for use.



Depending on the chassis of the coach, some diesel pusher motorhomes may be equipped with a second disconnect switch strictly for the chassis batteries. If equipped, this "Master Kill Switch" may be located in the rear engine compartment. This switch disconnects all power to the coach so that it cannot be started. It is used to prevent accidental ignition when the engine is being serviced.

12 Volt Receptacles

Your unit is equipped with two 12 volt receptacles conveniently located in the dash area. These 12 volt receptacles can be used for items such as cellular phones or personal computers.

120 Volt Receptacles

For your convenience, there are 120 volt receptacles located throughout the interior of the unit. These receptacles require three-pin plugs that provide proper grounding to protect you from electrical shock. Do not use an adapter, cheater, or extension cord that breaks the continuity of the ground circuit to the ground pin. Never remove the ground pin from a plug in order to connect it to a two-pronged ungrounded outlet. Never operate the camping vehicle with an electrical short. An electrical short may cause the exterior of the unit to shock you when touched. If you feel even the slightest shock, disconnect the unit from the 120 volt power source. It is usually a break in the grounding circuit. The grounding circuit must be continuous from the frame to the distribution panel, to the power cord, and to the earth ground.

Ground Fault Circuit Interrupt Receptacles

The 120 volt electrical outlets in the kitchen area are ground fault circuit interrupt (GFCI) receptacles. If an item plugged into an outside receptacle is not working, check for a tripped GFCI in the kitchen. These outlets protect the user from ground faults between a hot wire and ground. The GFCI will not reduce the shock hazard if the short is between a neutral and hot wire, or two hot load wires.

The GFCI should be tested at least once a month. The 120 volt electrical system must be on in order to test the GFCI. The reset button needs to be pushed in all of the way before starting the test. Push the test button. This will cause the reset button to pop out which means that the protected circuits have been disconnected. Push the reset button back in until a click is heard. This will reactivate the protected circuit. If the GFCI is working properly the reset button will remain in the "IN" position.

Inverter/Converter

When 120 volt power is not available, either from the power cord or the generator, simply turn on the inverter/converter. The control panel for the inverter is located in the power panel above the refrigerator. Once turned on, the inverter transforms 12 volt power to 120 volt power for the operation of lights, appliances, televisions, etc. The 120 volt power that is generated from the inverter is routed to the electrical sub-panel located next to the main breaker box in the cabinet below the bed.

The breakers in the sub-panel are labeled to explain where the 120 volt power is routed. It generally supplies power to the microwave, kitchen, bath and selected receptacles. The inverter is equipped with an automatic transfer switch. This allows automatic switching from inverter to converter. When you are connected to an outside power source or running the generator, the converter (in the inverter) will automatically switch on to charge the 12 volt batteries. For more detailed information consult the manufacturer owner's manual located in the Owner Information Package.

Daytime Headlight System

This unit is equipped with the Daytime Headlight System. This feature will cause the headlights to activate automatically when the ignition is on. The headlights are on, but dimmer than normal. At dusk, the driver is required to turn the headlights on by using the headlight switch. This will allow the driver to control the bright or dim capabilities of the headlights.

ICC Flasher

On the dash you will find a switch labeled "ICC Flasher." This switch is a momentary type of switch. This means it is only active while the switch is being pressed. It enables the driver to communicate with other traffic by flashing the clearance and side lights of the coach. If the lights are on, it will turn them off. If the lights are off, it will turn them on.

Generator

This unit is equipped with a 7.0 Power Tech Diesel Quiet Series Custom Generator with automatic changeover features and mounted for easy access. The generator is located under the hood in the front of the motorhome. Prior to starting or stopping the generator, make sure all of the 120 volt appliances are turned off. After the generator has started, wait until the transfer switch has connected before turning on any of the appliances. The generator can be started from either the remote start switch located on the dash, on the wall in the bedroom, or directly at the generator itself. The hour meter installed on the generator calculates the number of running hours of the generator motor. This is used for maintenance schedules.

CAUTION

Failure to turn off the 120 volt appliances when starting or stopping the generator may damage the transfer switch, if installed, and/or electrical appliances.

Consult the manufacturer owner's manual for detailed operating instructions.

Automatic Transfer Switch

Your unit may be equipped with an automatic transfer switch. If so, when the generator is turned on, this switch automatically transfers from shore power to generator power. There will be a slight delay between the start of the generator and the electrical connection. This delay allows the generator to reach normal operating speed without needing to supply a required load. When the unit is plugged into the outside power source, a click will be heard in the transfer switch box. The sound is normal and indicates that the unit is changing over to the outside power source.

Automatic Generator Start System

Your unit may be equipped with an automatic generator start system. This switch may be located in the power panel above the refrigerator. The automatic start system will automatically turn on and off a generator for cooling, heating, or battery charging; reduce generator maintenance and fuel consumption by reducing generator run time; allow selection quiet time so generator does not operate during certain hours of the day; and allows for easy changing of time with time zone selection.

The system is not intended to be left unattended or to keep batteries fully charged. The charge period is normally 2-4 hours. The system is not intended to maintain area temperature at a specific temperature.

For detailed operating instructions, please refer to the manufacturer's owner's manual included in your Owner's Information Package.

Notes

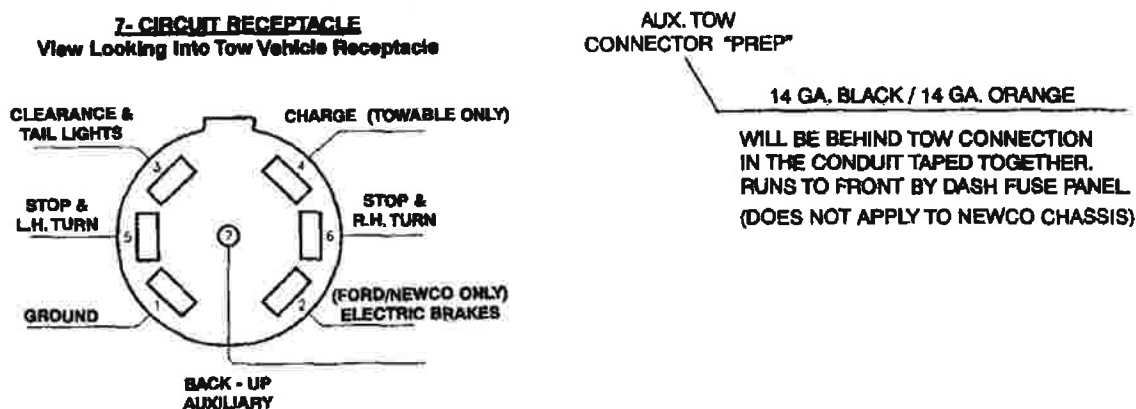
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Wiring Connector

Standard on your Newmar motor home is a class four, 8,000 pound rating car towing hitch. This allows the consumer the capability of towing their passenger car while traveling. Also installed with the hitch is the wiring pigtail to connect tail lights, brake lights, turn lights, etc. of the towed vehicle with that of the motor home. The pigtail used is the standard seven-pin connector. The color scheme for the pigtail is as follows:

Left Turn Signal	Red	Clearance	Green	Charge	Black
Right Turn Signal	Brown	Ground	White	Brakes	Blue
		Back Up Lights	Yellow		

Following is the diagram of the tow plug. This view is looking into the tow vehicle receptacle. As stated earlier, this is a standard seven-pin pigtail.



Notes

Notes

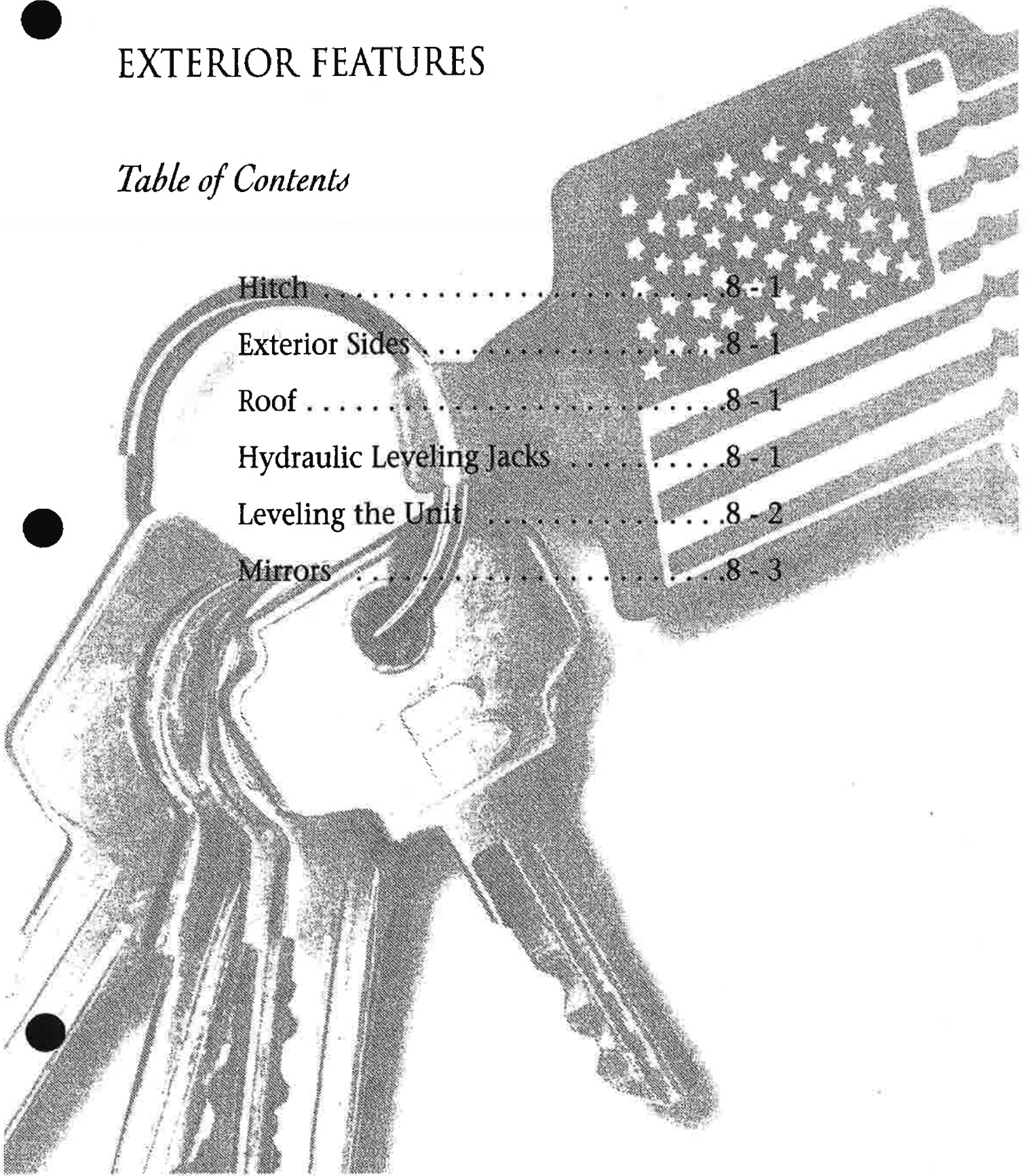
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CHAPTER 8

EXTERIOR FEATURES

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EXTERIOR FEATURES

Hitch

On the rear of this unit you will find a class four, 8,000 pound car towing hitch with two extra 14-gauge wires. This is installed for towing passenger cars to be used when the vehicle is parked. The wire connector installed with this hitch is a standard seven-pin connector. For more information on the connector, please see Chapter 7 of this guide.

Exterior Sides

The exterior body and roof of this unit is constructed of a fully molded gel-coated fiberglass. Clean the fiberglass material with a mild cleanser and warm water. Use only soft cloths. Using stiff bristle brushes may cause scratches in the fiberglass surface. Please note, Newmar is **NOT** responsible for weathering/oxidation of gel-coated surfaces.

Two pull out storage trays may be located in exterior compartments. These compartments provide additional space for your belongings while you are traveling. These exterior compartment doors are equipped with locks for added security.

Roof

The standard roof on this unit is also made of gel-coated fiberglass material. See chapter 13 for cleaning instructions.

Hydraulic Leveling Jacks

This unit may be equipped with hydraulic leveling jacks with semi-automatic control and air dump features. If these jacks are installed, they can be operated by the fully automatic method or the manual method. In either case, the jacks work in pairs: front, right side, left side, and rear. Before extending, using either method, the unit should be parked with the front of the vehicle facing downhill, if possible, the engine must be off, the ignition switch must be in the "ACC" position, and the transmission must be in neutral. If parking on soft ground or asphalt paving, wood blocks or pads should be placed under the jacks. The park brake needs to be set, either manually or automatically. There is a control panel that operates the hydraulic jack system. The panel is located on the left hand side of the driver in the console beside the driver's seat.

CAUTION

Do not raise the rear of the vehicle too high and do not lift the wheels off the ground when leveling. The unit can roll forward or backward when supported only by the jacks.

IMPORTANT

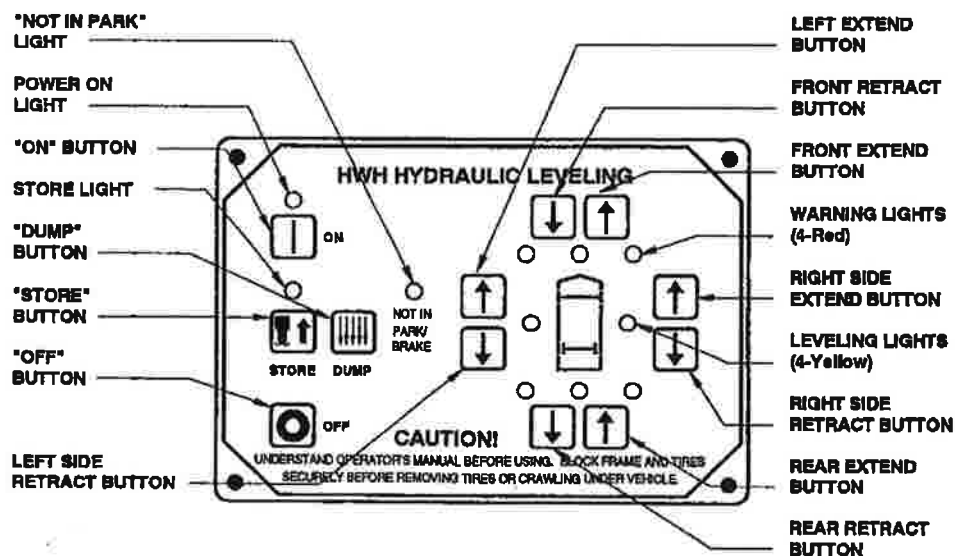
If the hand/auto park brake is not set, the "NOT IN PARK/BRAKE" light will come on when the "ON" button is pushed. The panel will turn on, but the system will not operate.

Leveling the Unit

Turn the key to the accessory position. To extend, press the "ON" button on the HWH control panel. The indicator light will illuminate. Press the "DUMP" button and continue holding the button until the air is dumped from the system. On the right-hand portion of the touch panel note the outline of the coach and the various up and down arrows touch buttons. Press the respective up arrow button to raise the respective side or end of the coach. A yellow light to the front, side, or rear of the coach outline indicates which side or end is low. Push the "EXTEND" (up arrow) button to extend jack pairs according to the yellow light. **ALWAYS LEVEL THE VEHICLE FROM SIDE TO SIDE BEFORE LEVELING FROM FRONT TO REAR.** After the vehicle is level, the jacks not used for leveling may be extended until they touch the ground. This provides additional stability against wind and activity in the vehicle. Do this by pushing the front or rear "EXTEND" button. When finished push the "OFF" button on the panel and turn the ignition switch off.

To retract the jacks, start the coach engine to build air in the suspension system. Press the "I" button and store the jacks immediately. Do not move the vehicle until the coach is at the proper ride height for traveling. Press the "STORE" button. As each jack retracts, its red WARNING light will go out. The system will automatically shut down approximately two minutes after the four individual red WARNING lights are out. The vehicle can be moved as soon as the suspension air bags are inflated and the vehicle has returned to the proper travel height.

CONTROL IDENTIFICATION



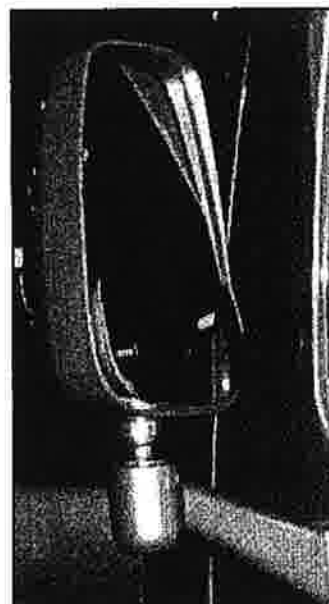
IMPORTANT

Do not interrupt power to the system until the system automatically shuts itself off. NOTE: The air dump button will work with the coach on and the leveling system off.

For manual jack retraction instructions, please refer to the manufacturer's literature in the Owner's Information Package.

MIRRORS

This vehicle may be equipped with automotive style exterior mirrors equipped with remote control, defrost, and convex features. Always adjust the mirrors for maximum rear visibility prior to driving. Make sure the seat is positioned for proper vehicle control. The mirrors are adjusted using a multiple directional switch located on the driver's door. The upper knob controls the driver's side mirror. The passenger's side mirror is controlled by the lower knob. When the arrow on the knob is pointed to the left, it adjusts the upper portion of the mirror. When the arrow is pointed to the right, adjustments can be made to the mirror's lower portion. The mirrors also contain a heating element to defog or de-ice the mirror glass during cold weather operation. The ON/OFF switch for this feature is located by the adjustment controls.



IMPORTANT

Objects viewed in convex mirrors appear smaller and farther away than they actually are.

Depending on the model of your unit, there may also be an inside rearview mirror that has a built-in compass and exterior temperature reading feature. If installed, to turn the compass feature on or off, simply push in the "COMP" button on the mirror. This compass must be set for the variation between true north and magnetic north. To set variation, turn the ignition on and using the map in the manufacturer's literature that you received in your Owner's Information Package, note the zone you are in. To select zone, push in the comp button and hold for three seconds until the zone selection appears. Release, then toggle until the correct zone is found and release the button.

Push in the "TEMP" button to display the outside temperature and to toggle temp on or off. Push temp button for three seconds until display blinks °F or °C. Release, then toggle temp button to select between °F or °C. After five seconds of no button activity, display will return to normal temperature reading. Display will indicate "ICE" to alert driver to potential driving hazard when the temperature is below 38°.

Notes

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CHAPTER 9

INTERIOR FEATURES

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INTERIOR FEATURES

Bedsread

All units have a decor-matching quilted bedsread with reverse sham and an accent pillow included as part of the standard package. The recommended cleaning instructions for these items are Dry Clean Only. The materials used to make these have been treated and dry cleaning will preserve this treatment.

Flooring

The floor covering throughout the unit may be carpeting. In the Owner's Information Package you will find literature supplied by the carpet manufacturer. This information will be helpful in maintaining and extending the life of the carpet. Please refer to this information for the carpet care and cleaning instructions.

Ceramic floor tile may be optional floor covering in the kitchen area. To clean this floor treatment, use a mild soap with warm water and a soft cloth.

Ceiling

The ceiling in this unit may be covered with a multi layered padded vinyl ceiling headliner with hidden air conditioning vents. The cleaning instructions recommended would be a soft cloth and mild detergent.

Window Treatment

The standard window treatment throughout this unit is lined day/night pleated window shades with valances in the bedroom area. These shades have two sections. The first section visible when closing the shade is the "DAY" section. This material is translucent. Sunlight passes easily through the material into the unit. The second visible section is the "NIGHT" section. This material is a heavier, more opaque material. Very little to no light passes through it. It is generally used in the evening or when more privacy is desired. If drapes or curtains are installed in this unit, cleaning instructions for these items are DRY CLEAN ONLY. Water-based products are not recommended for cleaning. They may cause excessive fading or shrinking.

Notes

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CHAPTER 10

PLUMBING & BATH FEATURES

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FRESH WATER SYSTEM

Kitchen Sink

The kitchen sink is a molded double bowl sink. The unit may have two sink covers to provide additional counter space when the sink is not in use. In the Owner's Information Package furnished with this unit you will find care instructions for the countertops and sink in this unit. Avoid using "S.O.S." type cleaning pads because they may scratch the surface. It is not recommended to use the countertop as a cutting surface. Knives can scratch the surface while, in turn, the countertop may dull the knives. The kitchen faucet may be a Moen single-handle faucet.

Bath Sink, Shower & Accessories

The bathroom consists of a combination toilet/shower area with a small sink. Your unit may be equipped with white bath accessories that include two towel bars, one tissue holder, and one robe hook. The bathroom is equipped with a pull out lavatory and shower faucet. Simply pull the faucet from its holder and hold or put into its wall mounted bracket. A button on the faucet will change the spray pattern. A second button will stop and restart the water flow as needed without touching the controls on the bath sink.

The whole bathroom itself is made of fiberglass, including the floor. There is a shower curtain to help protect splashing water on mirrors, etc. The bathroom door also serves as a shower door. The toilet may be used as a seat during the shower. Avoid using abrasive type cleaners to clean the sink, countertop, walls, etc. They could mar the finish.

Monitor Panel

The monitor panel allows you to check the approximate levels in the fresh, gray, and black water holding tanks, as well as the battery condition. The monitor panel is located in the power panel above the refrigerator. Simply press the button of the item to check its status. The empty indicator light will always light when the button is pressed. If the tank is full, all of the lights will be on. Lights are sequential, and indicate the level in approximately 1/4 tank increments. For example: If the tank selected is approximately 1/2-full, then the indicator lights E, 1/4, and 1/2 will be lit. Located to the right hand side of the monitor panels and in the bath is a water pump switch. This is a monoplex type of switch controls the power going to the water pump, turning it either on or off.

Monitor Panel Calibration

The monitor panel comes to you factory calibrated for accuracy and should not need to be adjusted. In the event that the system does not read accurately, then re-calibration may be necessary. The procedure for re-calibration is simple: First, fill the tank to be re-calibrated. Second, using the adjustment tool enclosed in the Owner's Information Package (or any small flat-bladed screw driver), simultaneously push the button for that tank and rotate the adjustment screw located above the button and behind the face plate counter-clockwise until

some of the lights turn off in sequence. Then slowly rotate the adjustment screw clockwise until the full light is completely on. Repeat this procedure as necessary for the remaining tanks. The system is now calibrated properly.

Water Pump

The water pump is self-priming and totally automatic, operating on demand whenever water is required. The water pump is used to pressurize the fresh water system when the unit is not connected to city water. Monoplex water pump switches are located above the refrigerator in the power panel and in the water works compartment. To start the pump follow these instructions:

1. Fill or partially fill the fresh water supply tank.
2. Open the kitchen and bathroom faucets.
3. Turn the water pump switch on and allow the water to fill the water line and the hot water heater. The water pump switch is located above the entrance door. The monoplex pump switches are two additional water pump switches. One is located in the bathroom and the other is in the exterior water compartment.
4. Close each faucet after it delivers a steady stream of water (close the cold water first). Leave the hot water faucets on until they also deliver a steady stream of water. This will ensure that the water heater is filled with water.
5. The water pump should stop running once all faucets are closed.
6. The pump is now ready for automatic operation. The pump will run when a faucet is opened and stop when a faucet is closed.
7. Never allow the pump to run for long periods of time without water in the supply tank. Pump damage or blown fuses may result.

If water doesn't flow when a faucet is turned on while using the demand system, use the following trouble shooting chart:

SITUATION	SOLUTION
Pump running - no water	<ol style="list-style-type: none">1. Fill tank2. Clear the water line to the pump3. Check the fresh water fill valve position
Pump doesn't run	<ol style="list-style-type: none">1. Check the pump switch2. Check the 12 volt fuses3. Check the electrical connections4. Check the battery

All of the water should be drained from the fresh water system when the unit is not in use for more than one week. For more detailed information regarding the water pump, refer to the water pump manufacturer's brochure in your Owner's Information Package.

City Water Hook-Up

When connecting your unit to city water, be certain to use a water hose manufactured and labeled for potable water. This will ensure that the hose will not alter the taste of the water. To hook the city water supply to the unit, connect one end of the hose to the city water supply. This will usually be a faucet or valve similar to your garden hose valve at home.



Turn the city water supply on for a few seconds in order to clear the line. Once the hose has been flushed, turn the supply off. Connect the other end of the hose to the city water connections. Turn on the water supply and open all of the faucets to clear the air from the lines in the unit. Once air pockets have been purged from the water lines and water flows freely, close all of the faucets. The city water supply is under pressure, therefore the water pump is not necessary when connected to city water. Once the city water fill valve is opened, water is supplied to the fresh water system including the hot water heater, faucets, and stool. To disconnect from the city water supply, close the valve and remove the hose from the city water supply. Disconnect the hose from the city water connection and store the hose in a compartment.

Fresh Water Tank Fill

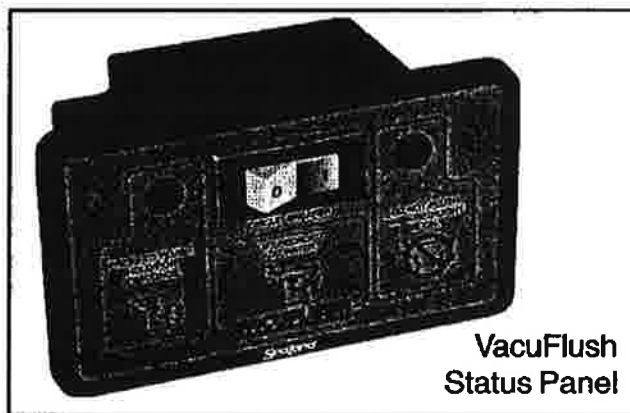
The fresh water tank is filled from the city water hook-up. The valve located in the service compartment near the water hook-up determines whether the city water is going through the water system or into the fresh water tank. An additional way to fill the fresh water tank is with the antifreeze hose placed in a bucket of water. With the water supply valve open, turn on the water pump to fill the tank. Since there is not an automatic shut-off for the fresh water tank fill, check the level from the monitor panel while filling the unit. The excess water will be vented from an overflow vent pipe onto the ground when the tank capacity has been reached. This pipe is installed in the fresh water tank to prevent tank rupture from overfilling. All of the water should be drained from the fresh water system when the unit is not in use for more than one week. Whenever possible, drain the fresh water tank before traveling. Water in the tank will reduce the carrying capacity of the unit.

SANITIZING

To assure complete disinfecting of your fresh water system, it is recommended that the following procedure be followed on a new system, on one that has not been used for a length of time, or one that may have become contaminated. This procedure is also recommended before long periods of storage, such as over the winter months:

1. Drain the fresh water tank by opening the drain valves. There is one valve per water tank. All of the faucets should be in the closed or off position.

2. Prepare a chlorine solution using one gallon of water and 1/2 cup of chlorine bleach (5% sodium hypo-chlorite solution). Prepare enough of the chlorine solution to administer one gallon of solution for every 15 gallons of tank capacity. For sanitizing this unit, prepare 4 1/2 gallons of the chlorine solution. This mixture puts a 50 PPM (parts per million) residual chlorine concentration in the water system that will act as a quick kill dosage for harmful bacteria, viruses and slime forming organisms. Concentrations higher than 50 PPM may damage the water lines and/or tank.
3. Once the fresh water tank is empty, close the drain valves on the water tank.
4. Pump the chlorine solution into the tank when the fresh water tank is empty. This is done by placing the winterizing hose into the chlorine solution. Close the valve from the fresh water tank to the pump and open the valve from the solution to the pump. Turn the tank fill valve from city water to tank fill. Turn on the water pump until all of the solution is pumped into the fresh water tank.
5. Turn off the water pump. Close the valve to the solution. Open the valve from the tank to the water pump. Fill the water tank with the city water tank fill (or by using the same method as was used to put the sanitizing solution into the tank). Remove the water filter (from the drink dispenser faucet, if installed) and install the by-pass pipe to allow the sanitizing solution access to the faucet. Open each faucet in turn including the kitchen faucet, bath faucet, inside and outside shower, turning on both the hot and cold, and flushing the stool until all of the air has been purged from the pipes and the water runs freely. The entire system will then be filled with the sanitizing solution.
6. Allow the 50 PPM disinfecting solution to stand in the system at least four hours.
7. Drain the system and flush with fresh water. The water system needs to be flushed with clean water repeatedly, if necessary, until there is no chlorine taste or smell left in the system. To remove any excessive chlorine taste or odor that might remain, prepare a solution of one quart vinegar to five gallons of water. Allow this solution to agitate in the tank for several days by vehicle motion. Drain the solution and refill the tank with clean water.



Water Heater By-Pass System

The water heater by-pass valve is located under the kitchen sink near the water heater. By closing the water heater supply valve and opening the by-pass valve you can divert water away from the water heater. This is done when winterizing your unit. Using the by-pass will keep antifreeze out of the water heater when winterizing the system. Draining the water heater during winterizing is a MUST.

Fresh Water Lines

Vibration and flexing during traveling can cause pipes and fittings to work loose. Check all of the plumbing connections for leaks on a yearly basis. If the water pump runs when all faucets are turned off, check for a leak. Be sure the drain valves are closed. Connections at the kitchen and bathroom faucets normally seal with hand tightening and a half turn with a wrench. If a fitting leak persists, disconnect it completely and check for mineral deposits or foreign material on the sealing surfaces. Clean the surfaces thoroughly and reinstall the fitting. Take the coach to an authorized service center for repairs if the system continues to leak. Follow the winterizing instructions given in Chapter 14 to reduce the risk of leaks caused by cracks from freezing pipes. Freezing damage can be extensive and expensive.

WASTE WATER SYSTEM

General Information

The waste drainage system was designed to provide adequate and safe storage and/or disposal of waste materials. All of the materials used in the making of this system are tested by a nationally recognized testing laboratory. The drainage system uses plastic piping and fittings connected to the sinks, toilet, and holding tanks. This provides for their drainage to an outside termination. The unit should be reasonably level for best operation of the system. There are two separate waste systems. The gray water system is for waste water from the sinks and shower. The black water system is generally for sewage waste from the stool. Each tank has its own control valve, and both tanks drain through the sewer drain hose.

Toilet

The toilet in this unit is a SeaLand VacuFlush system with a status panel. The system operates with water from either the fresh water tank or the city water supply. The VacuFlush system uses a small amount of water in addition to a simple vacuum. The system is equipped with an integral vacuum breaker which prevents the possible contamination of the potable water supply. The system pump switch is in an instructional panel that is attached to the bath wall under the medicine cabinet. Turn on the switch and a red light will come on while the vacuum pump is building a vacuum. This cycle lasts from 30 to 90 seconds. **DO NOT** flush during this cycle. When the pump shuts off, the green light should come on signaling the system is ready for use. Press and hold the flush lever for three seconds and release. The pump will start the cycle again and repeat itself. To add water to the bowl, if needed, lift flush lever upward and release. A small amount of water should remain in the bowl.

The toilet should be cleaned regularly for maximum sanitation and operational efficiency. Clean the toilet bowl with a mild bathroom cleaner. **DO NOT USE CHLORINE-BASED OR CAUSTIC CHEMICALS, SUCH AS LAUNDRY BLEACH OR DRAIN OPENING TYPES, AS THEY WILL DAMAGE THE SEALS IN THE TOILET AND DUMP VALVES.**

Please note that a VacuFlush toilet system will experience clogging due to the accumulation of toilet tissue in the vacuum tank. Therefore, it is recommended that you do not use a thick bathroom tissue as it does not dissolve or flow well, making it difficult for low water toilets to move the tissue through the system. To avoid clogging problems with some household tissues, it is recommended to use rapidly dissolving tissue. To determine a tissue's ability to dissolve, immerse one square of tissue in a jar of water and shake five times. The tissue sample should disintegrate so that it is no longer in one piece.

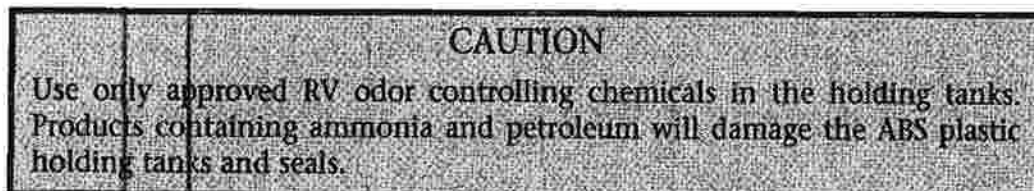
Refer to the toilet manufacturer's owner's manual in your Owner's Information Package for complete instructions and a troubleshooting guide.

P-Traps

Each of the sink drains, the shower drain, and the washing machine drain (if equipped) has a water trap (P-Trap) to prevent holding tank odors from entering the coach. These traps must have water in them in order to trap the odors. While traveling, the water may splash out of the sink and shower drains. While stored, the water may evaporate allowing an odor to enter the coach. If this occurs, run water from the faucet into the drain, allowing water to fill the trap.

Black Water Holding Tank

The black water, or sewage, holding tank is located under the floor. Before using the stool, you will need to treat the tank with water that is mixed with an odor controlling chemical. These chemicals are readily available at any RV supply store. Be careful not to spill the chemical on your hands, clothing, or the carpet because it may cause a permanent stain. Pull the toilet levers forward to allow the chemical to mix with the toilet water. Continue pulling the toilet levers until at least one inch of solution is directly under the toilet. Release the levers, and the waste tank is ready for use.



Gray Water Holding Tank

The gray water holding tank is located under the floor. It is primarily used for the drainage from the kitchen and bath sinks and the shower.

Waste Water Disposal

Both of the holding tanks terminate in a valve arrangement that permits draining each tank separately or together. It is recommended to drain the black water tank before the gray water tank. This will allow the water from the gray tank to wash the black water residue from the drain lines and hose. The valves that open to release the water are called gate valves. The

blade that closed the opening in the sewer drain pipes is connected to the T-handle to release the contents of the tank(s) when pulled. The sewer line must be securely capped during self-containment use to prevent leakage of waste material onto the ground or pavement. Do not pull the holding tank gate valve open when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.

WARNING

Holding tanks are an enclosed sewer system and must be drained into an approved dump station. Both black and gray water holding tanks must be drained and rinsed thoroughly on a regular basis in order to prevent the accumulation of harmful or toxic materials.

Whenever possible, drain the holding tanks prior to traveling. The carrying capacity of your unit will be reduced if water is left in the black or gray tanks.

The holding tanks should only be drained when they are at least $\frac{3}{4}$ full. Doing this will provide sufficient water to allow the complete flushing of waste materials in the drain lines and hose. If the tanks are not full, add enough water to allow for sufficient flushing.

To empty the waste water tanks, connect the adapter to the drain hose. Use the adapter supplied with your unit. If the adapter is lost or broken, one can be purchased from any RV supply store. Once you have placed the adapter on the drain hose, it can remain there for the life of the hose. One end of the hose threads up through the hole in the bottom of the service compartment, and the other end of the hose feeds into the sewer at the dump station. Unscrew the cap off the drain. Connect the hose with the adapter in place to the drain fitting. Open the gate valve all the way by pulling on the T-handle. The tank will start to drain as soon as the T-handle is pulled. After you have drained the black water tank, immediately drain the gray water tank. Doing this helps to flush the black water from the sewage hose.

When both of the tanks are empty, flush them with a fresh water rinse before you close the valves. The gray tanks are easily flushed by pouring a couple of gallons of water into a sink drain. The drain outlet is engineered for quick release of the drain hose adapter. Always close the gate valves and secure the end cap to prevent leakage while in transit. After draining the black water tank, it is recommended to add a holding tank deodorant (such as SeaLand Aqua-Kem) to help control the odor and break down the solids. Follow the instructions given on the holding tank deodorant package.

When using dump stations for draining the holding tanks, keep other travelers in mind. Practice good housekeeping. Leave the dump stations in good order. Above all, do not pollute.

Camping with Sewer Hook-Up

When camping at parks with sewer hook-up, it is important to keep the black water holding tank gate valve closed at all times, except when dumping. The gray tank can be kept open while hooked to a sewer connection but again, the black water tank must be kept closed. This is done so that an ample supply of liquid remains in the tank to provide a smooth flow

through the gate and drain valve when dumping. Sufficient liquid in the tank causes a swirling action that should take any accumulated solid wastes with it. Accumulation of solid wastes in the black water tank can be avoided by keeping the gate valve closed when connected to the sewer hook-up. If the valve is left open, solid wastes may accumulate in the tank. This may eventually result in costly repairs.

No Fuss Flush

This unit is equipped with a wasteholding tank flushing system. When draining your sewer tank, attach a water hose to the sewer spray hookup. Open the dump valve and let the tank empty. After the tank is drained, leave the gate valve open and open the water valve to allow water to spray inside the sewage tank. This will clean the inside of the tank of any debris that may be left inside the tank. After this is done, disconnect the water hose and close the gate valve. When unsure if any solids are still left inside the tank, fill the sewage tank with approximately ten gallons of water through the stool. As you travel, the agitation of the water should help liquefy any solids left in the tank. You can dump the sewage tank again at your next destination.

CAUTION

Do NOT use the same hose for the No Fuss Flush that is used for filling the fresh water tank.

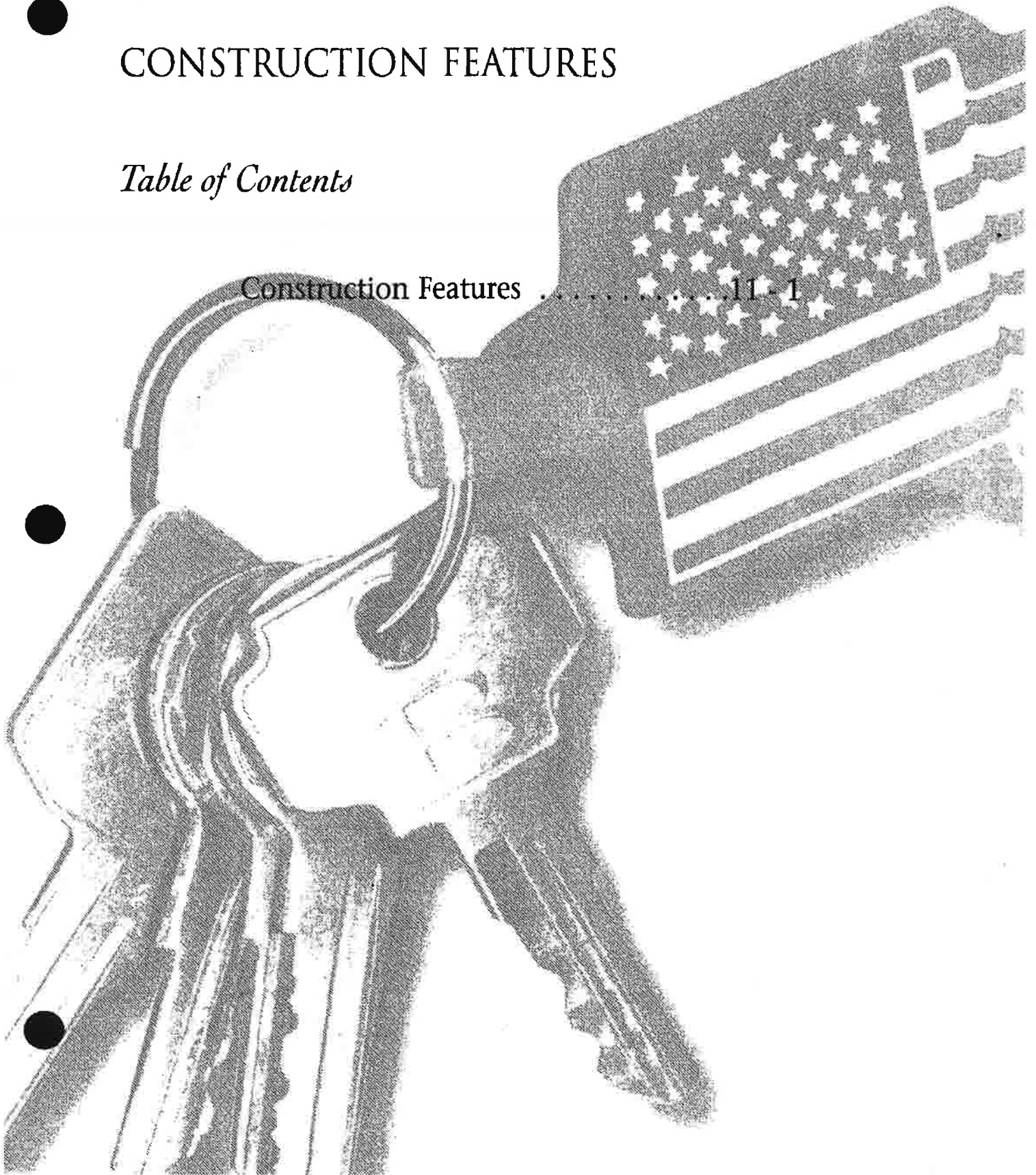


CHAPTER 11

CONSTRUCTION FEATURES

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CONSTRUCTION FEATURES

This coach has a chassis frame with a torque-tube construction vs. the "C" channel ladder type construction. In the cab area only the floorboard and front wheel wells are a one piece molded fiberglass construction with a special insulating, sound deadening material bonded on it. The automotive type carpet is cut and molded to fit the floorboard area.

In the living area, floor decking is structure wood and plywood and covered with sound suppressing carpet padding. This padding has sound deadening and insulating features within its composition. On top of this, there is a high quality of carpeting.

The body shell is constructed with the uni-body construction technique using a welded aluminum frame work with 16" on center studding and rafters. This frame assembly is bonded into a molded fiberglass component part. There are five major body components: two side walls; a roof; and front and rear caps that are bonded together and molded onto the chassis frame.

The side walls, roof, and front and rear caps are completely insulated to maintain an excellent comfort zone inside regardless of outside weather conditions. The sidewalls and roof fiberglass insulation has a rating of R11.

The exterior look and finish are comparable to that of an automobile, completely painted with automotive paint and then clear coated to protect the look for years to come.

Notes

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CHAPTER 12

WINDOWS, AWNINGS, VENTS & DOORS

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WINDOWS

The windows installed in this unit may be the automotive style windows. If these windows are installed, they are frameless tinted safety glass style. Depending on the model of your unit, you may have double pane tinted safety glass windows, except in the driver and passenger areas.



Your unit is equipped with automotive style driver and passenger doors that have power windows. Depending on the model of your unit, these doors may also have keyless entry features.

In the bedroom of the unit, the rear window is an emergency escape, or egress, window. To open in case of an emergency, lift the red handles at the bottom of the window and push out.



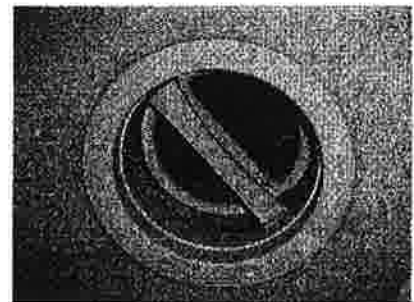
AWNING

This unit may be prepped for the installation of the optional Girard Systems automatic awning. At the touch of a button, this awning will extend to a full 8' or it can be stopped at any point. One of the many features of this awning is the manual override capability. This allows you to retract the awning manually with the extendable crank handle supplied in the event of a power failure. The awning should be retracted during heavy rain or wind.

If you have this optional awning installed, please refer to the manufacturer's instructions in your Owner's Information Package for further details regarding this feature.

Vents

There is a vent located in the kitchen area of this unit. To operate, simply turn the switch that is located on the vent to the ON position and open the vent by pushing the handle up. When you are finished using the vent, turn the switch to the OFF position and close the vent by pulling the handle down. It is important to remember to shut the vent off and close it when it begins to rain so that the inside of your unit does not receive water damage.



The standard vent in the bathroom is a 120-volt light and vent combination. The switches for this vent is located on the wall. As an option, a vent with a rain sensor may be installed in the bathroom.

Doors

The side entrance door has a dead bolt lock and may have a keyless entry system. The dead bolt lock is separate from the keyless entry system. If your coach is equipped with the keyless entry system, see below for operating instructions. The door can be held open with the positive lock door stop.

Using the Keyless Entry System

This vehicle may have been equipped with a keyless entry system. The main entrance door and driver's door can be locked or unlocked without using a key. The buttons for the system are to the left of the doors. When using the keyless system, the entry keypad buttons illuminate for ease of visibility at night. Do not push the buttons with a car key, ball point pen, pencil, or any other hard object. These objects could damage the buttons.

The permanent code to the keyless entry system is found on the owner's wallet card placed in the Owner's Information Package, which is provided with this unit. In addition to the permanent code, the lock can be operated by a five digit personal code. To program the personal code, follow these instructions.

1. Enter the permanent code found on the owner's wallet card.
2. Within five seconds press the **[1/2]** button.
3. Select five digits for your personal code. Within five seconds of pressing the **[1/2]** button, enter your personal code, pressing each digit within five seconds of the previous digit.

The keyless entry system registers this second code. To lock or unlock the vehicle, you can use either code. To erase your personal code, enter the original code and press the **[1/2]** button. Wait six seconds. The keyless entry system automatically erases your second code. It is not recommended to set a code that presents the numbers in sequential (**[1/2]**, **[3/4]**, **[5/6]**, **[7/8]**, **[9/0]**) or repetitive order. In addition to using the keys or the keypad, the entrance door can also be locked or unlocked from the interior of the unit. This is done by using the power door lock switch which is located above the refrigerator in the power panel.

Unlocking

To unlock the entrance doors, enter the five digit code. When entering the code, do not let more than five seconds pass between the numbers you press. If this occurs, the system will shut down and you will have to enter the entire code again. If the keyless entry system does not work properly, use the key to lock and unlock the door.

Locking

The keyless entry system can also be used to lock the entrance doors. Locking the door is done by pressing the **[7/8]** and **[9/0]** button at the same time.

CHAPTER 13

ROUTINE MAINTENANCE

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EXTERIOR CARE

IMPORTANT

Damage caused by improper or unapplied maintenance is not covered by your Newmar Limited Warranty.

Washing

The complete exterior of your new camping vehicle is painted fiberglass. Frequent washings and thorough cleanings are recommended to prevent damage to the vehicle finish after exposure due to damaging salts, calcium chloride, road tar, tree sap, insects, and other foreign material. Never wash the vehicle in direct sunlight, while the vehicle is hot, or with hot water. Build up of mud and dirt under the body can cause damaging rust on steel parts and can add needless weight to the vehicle. Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of the vehicle. These materials should be removed by flushing the underbelly regularly with water, especially areas where mud and other foreign materials collect. The chance of corrosion can be minimized by frequent washings of the vehicle. When washing the vehicle, make certain that the undercarriage and the wheel wells are cleaned, as well as the exterior of the coach. Care should be taken when cleaning the exterior finish. Do not use strong soaps or detergents for washing the vehicle. Always use a soft cloth with mild soap in warm water, a commercially prepared product for automotive finishes, or your local car wash. Avoid using stiff bristle brushes that may cause scratches in the painted surface. After washing, carefully inspect the caulking around window frames and vents and any other joints that may have separated. Recaulking, if necessary, is relatively simple and is considered routine maintenance which is the responsibility of the owner.

IMPORTANT

Never use a strong solvent, such as lacquer thinner, or harsh abrasives, on any of the exterior painted surfaces.

Waxing

The exterior finish will require a routine waxing. When water will not bead and roll off a freshly washed vehicle, a new coat of wax is needed. Wax not only improves the appearance of the vehicle, but it also protects the finish against oxidation and corrosive materials. The recommended type of wax is one that is compatible with painted or gel-coated fiberglass finishes and contains a UV (ultra-violet) inhibitor. Buffing with a polishing compound will improve a dull or discolored finish.

IMPORTANT

When using a polishing compound that does not contain a wax preservative, reapplying a coat of hard wax after polishing is recommended.

Seals

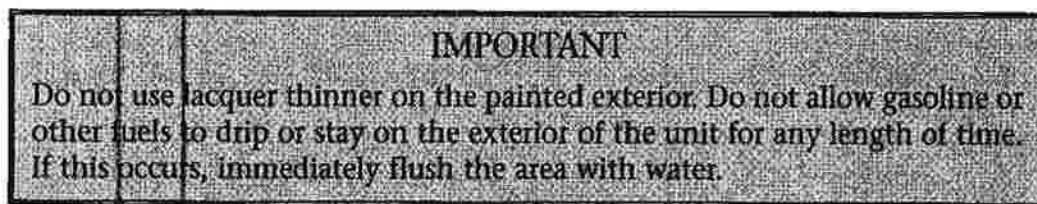
The seals around doors, windows, and vents should also be checked at least twice a year. In addition, the roof seams should be inspected twice a year for cracking or peeling. If deterioration is noted during a routine maintenance inspection, reseal the seams or seals with an approved sealant to prevent leaks. Your dealer can perform the resealing inspections and work for you. It is recommended that a Newmar Authorized Service Center perform these inspections and reseal when necessary.

Proper Sealants for Application

Plas-T-Cote	Metal or fiberglass roof
Surebond #SB-140	All skylights and roof vents
Silicone Sealant	To cover butyl and other sealants; not to be used as the main sealant
Parbond	To seal across tops of windows, etc. on exterior where silicone is not used

Striping & Decals

If there are any striping or decals on your vehicle they have been hand painted and require very little maintenance. Treat these as you would any painted surface on your vehicle. Wash them with mild soap and warm water, or any retail car soap. Rinse thoroughly to prevent soap residue accumulation. Use caution with high pressure wash nozzles. Test small sections of the exterior of the unit when using any type of cleaning solution.



Roof Care & Maintenance

Proper care and maintenance of your recreational vehicle, including your fiberglass roof, is important for trouble free performance. Normal maintenance is simple and easy and does not require special materials.

Keep the roof clean. Clean the roof at least four (4) times annually. For normal cleaning:

1. Use a soft cloth and general purpose cleaner or a mild laundry detergent. **CAUTION:** Do not use general purpose cleaners or conditioners containing petroleum solvents, harsh abrasives or citric-based cleaners. You may cause irreparable damage to your roof.

2. Rinse the complete roof with clean water to remove any loose dirt or debris.
3. Using a medium bristle brush, along with your selected cleaner mixed with water, scrub the entire roof. Rinse thoroughly with clean water to avoid residue build up on the roof or sidewalls of the vehicle.
4. For more difficult stains, you may use cleaning materials mentioned above in a more concentrated mixture. For stubborn stains, use of a cloth dampened with automotive type cleaners.

WARNING

Use caution when working on top of your vehicle. The wet fiberglass roof may be extremely slippery.

INTERIOR CARE

WARNING

Urea-formaldehyde is used in the production of particle board, hardwood plywood, and most paneling. Urea-formaldehyde resin may release formaldehyde vapors into the air, which may cause headaches, and in some people, eye, nose, and throat irritation. Formaldehyde may intensify some allergies or upper respiratory problems like asthma. Proper ventilation should reduce the risk of such problems.

IMPORTANT

The fading of upholstery, carpet and other interior fabrics is generally caused by excessive sunlight. The drapes, blinds or shades should be kept closed when the vehicle is parked for an extended period of time to minimize the fading. Normal deterioration of appearance items due to wear and/or exposure is not covered by the Newmar Limited Warranty.

Carpet

A weekly routine of vacuuming the carpet and fabrics throughout the vehicle is recommended. Doing this will prevent an accumulation of dirt that can detract from the material's appearance and shorten its life.

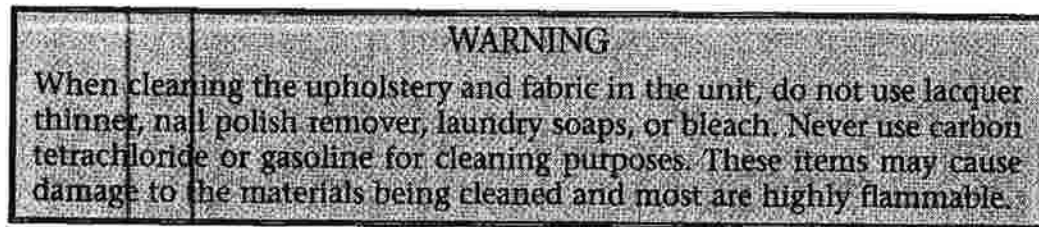
Included in the Owner's Information Packet is the carpet manufacturer's Carpet Care Guide. The Carpet Care Guide lists detailed information on cleaning soiled areas and removing stains from the fine carpet installed in the unit.

Fabrics

The fabrics that may be used in this motorhome for the bedspread, draperies, headboard and valances contain fire retardant additives that may be damaged by the use of improper cleaning products. Therefore, cleaning instructions for these items are DRY CLEAN ONLY.

Water-based products are not recommended for cleaning the fabrics in your new unit. Most water-based household cleaning products are not formulated for use on these fabrics and may cause excessive shrinkage or fading.

Spills, spots or stains should be treated as soon as possible to avoid permanent damage. If a spill occurs, blot the fluid with a dry towel. Do not rub the spill. Rubbing may cause the liquid to "set" in the fabric. When attempting to clean a spot or stain, always start from the outside and work inward to avoid spreading it further. Some stains or soils are extremely difficult or impossible to be removed completely. These should receive immediate, professional attention. Spills, spots, stains or soils are the responsibility of the owner and are not covered by the Newmar Limited Warranty.



Walls & Ceiling

The wall and ceiling coverings should be cleaned periodically to maintain a new appearance. Use a non-abrasive cleaner with a soft cloth.

Dash

In order to keep the dash in like-new condition, follow these guidelines:

DO—

- Dust and clean the dash with a soft, damp cloth, or chamois, wiping the surface gently.
- Use a mild detergent and lukewarm water.
- Dry the surface, after washing and rinsing, by blotting with a damp cloth or chamois.

DO NOT—

- Use harsh chemicals that may damage the dash.
- Use cloths containing grit or abrasive particles or kitchen scouring compounds to clean or dust the dash.
- Subject the dash to hard, direct blows.
- Use boiling water, strong solvents, or other materials to clean the dash, as they will soften the plastic.

Woodwork

The cabinetry wood is covered with a high pressure laminate material. To clean, wipe cabinetry with a damp cloth. For stains, wipe with soapy water or ammonia based cleaners.

Countertops

To properly care for the countertop in your new unit, always use a heat pad or trivet to protect the surface from hot objects that may mar or damage the surface. Wipe the counter top with a damp cloth to remove water spots. For stains, wipe with soapy water or ammonia-based cleaners.

Accessories

The brass light fixtures, bath accessories and faucets can be cleaned by wiping with a soft, damp cloth. Washing with warm water will remove dry water spots. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or similar solvents should never be used.

Detector

The CO detector is self-contained and DOES NOT require any maintenance other than normal cleaning and dusting. The smoke detector installed in this coach is 9 volt battery operated. The battery needs to be tested periodically and replaced when necessary. When cleaning the case on any detector, use a damp cloth or paper towel. Do not spray cleaners or wax directly into the case as it may cause false alarms.

Condensation

IMPORTANT

Since surface condensation within the coach cannot be controlled by the manufacturer, damage caused by condensation is not covered by your Newmar Limited Warranty.

Damage may occur to your unit if excessive condensation exists. Accumulation of condensation on surfaces within your unit occurs when warm, moist air contacts a cool surface. It is most evident on the inside of windows. This problem can be controlled by:

1. Slightly opening a window or roof vent to allow the moisture to escape from the unit.
 2. Using a small dehumidifier is also very effective in removing moisture from the air.
- Condensation levels are highest during times when a person is cooking or taking a shower in the unit, but these are not the only times condensation is present.
 - Condensation can migrate through ceiling panels and saturate the fiberglass insulation in your ceiling cavity. This condition often causes the occupants to believe the recreational

vehicle has a roof leak. Walls and ceiling panels may also become wet when the moisture accumulates on these surfaces.

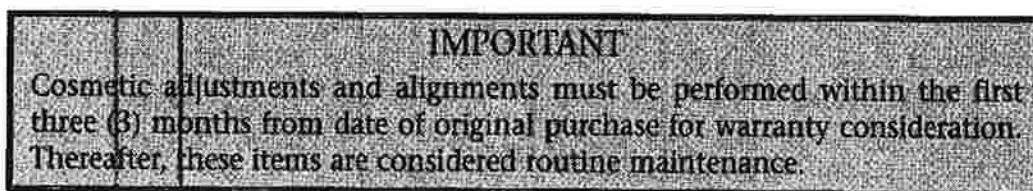
- Newmar Corporation does not recommend the use of any catalytic heaters.

ROUTINE MAINTENANCE



All routine maintenance is the responsibility of the owner and is not covered by the Newmar Limited Warranty. Use the maintenance record found in Chapter 15 to record all performed maintenance as required. Please note that damage caused by improper or unapplied maintenance is not covered by the Newmar Limited Warranty.

Items supplied by other manufacturers may require specific individual maintenance not listed herein. Please refer to the manufacturers' suggested maintenance guidelines in the Owner's Information Packet.



Monthly

- Check battery water level.

Every Three (3) Months

- Clean exhaust fan filter and blades.
- Test smoke alarm and carbon monoxide detector.
- Check operation of windows, latches and hinges.
- Clean the roof ducted air conditioner filter(s).
- Clean and inspect all door and window seals; reseal where necessary.
- Inspect and reseal around the shower area where necessary.
- Lubricate the exterior door hinges and latches with a graphite (silicone) lubricant.
- Check, clean and tighten battery cables, and inspect batteries for proper fluid level.

Every Six (6) Months

- Rotate tires as recommended by the tire manufacturer.
- Check all appliances for proper operation.

- Have the Hydronic heat system burner and ignitor inspected by a qualified technician.
- Lubricate the moveable parts on the entrance doors.

Annually

- Inspection of roof seams and joints should be performed by an Authorized Newmar Service Center. If resealing is necessary, it is the owner's responsibility and is not covered by the Newmar Limited Warranty.
- Sanitize the fresh water system.
- Wax and buff all gel-coat surfaces on the vehicle as described previously in this chapter.

WINTERIZING

The Hydra Hot domestic hot water heater must be completely drained of water anytime the heater is stored where freezing temperatures may be experienced. Follow the instructions below when draining the domestic water system.

1. Shut off the water pump and make sure the water supply valves are closed.
2. To drain the fresh water tank, open the drain valves.
3. Open the low point drain valves. There is one drain valve for each water line, one cold and one hot. This is done to drain all of the water out of the system.

CAUTION

If the coach is equipped with appliances that use domestic water (i.e. ice makers, water purifiers, etc.) follow the manufacturer's recommendation for winterization.

4. Disconnect the demand water pump suction line. In the water compartment you will find an antifreeze hose. This hose is used only to antifreeze the fresh water system. Place the end of the hose into an adequate supply of FDA-approved RV antifreeze. Use only non-toxic antifreeze that has been approved for use in drinking/potable water systems. Approximately three (3) gallons will be required.
5. Close the low point drains to prevent the antifreeze from draining through the lines onto the ground. Close the water supply valve that flows from the pump to the tank.
6. Place the in-take hose into the antifreeze supply. Open the antifreeze valve to allow the solution to flow freely. Once the water pump is turned on, proceed to the kitchen faucet, bath faucet, inside and outside shower, turning on the hot and cold, and flushing the stool until the antifreeze solution flows freely. This forces the antifreeze through all of the water lines and faucets. It also allows the antifreeze solution to enter the drain lines and prevent the P-traps from freezing. Check the antifreeze solution from time to time to make sure there is an adequate supply.
8. Close the antifreeze valve when the winterizing process is complete. Remove the winterization hose from the antifreeze supply. Open the low point drains.
9. Open the water supply valve that flows from the pump to the tank to help prevent freezing on that water line.

- NOTE:** Remember, if your unit is equipped with an exterior shower, you must winterize this system as well.

Although great care has been taken to build a well-insulated unit, recreational vehicles are not intended for extended use in subfreezing weather without special precautions.

When the temperature drops below freezing, the furnace must be turned on to keep the unit warm. Continued use in cold weather will require the unit to be winterized.

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CHAPTER 14

CHARTS & DIAGRAMS

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IMPORTANT INFORMATION ABOUT YOUR NEWAIRE DIESEL PUSHER MOTORHOME

Coach: **Year** 2002 **Model** _____ **Serial #** 4 _____

Appliance	Brand	Model	Serial
Refrigerator	_____	_____	_____
Water Heater	_____	_____	_____
Range	_____	_____	_____
Converter	_____	_____	_____
Microwave	_____	_____	_____
Television, front w/VCR	_____	_____	_____
Television, bedroom	_____	_____	_____
Radio	_____	_____	_____
CD Player	_____	_____	_____
Generator	_____	_____	_____
Air Conditioner	_____	_____	_____
Furnace	_____	_____	_____

MAINTENANCE RECORD

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MAINTENANCE RECORD

[illegible]

MAINTENANCE RECORD

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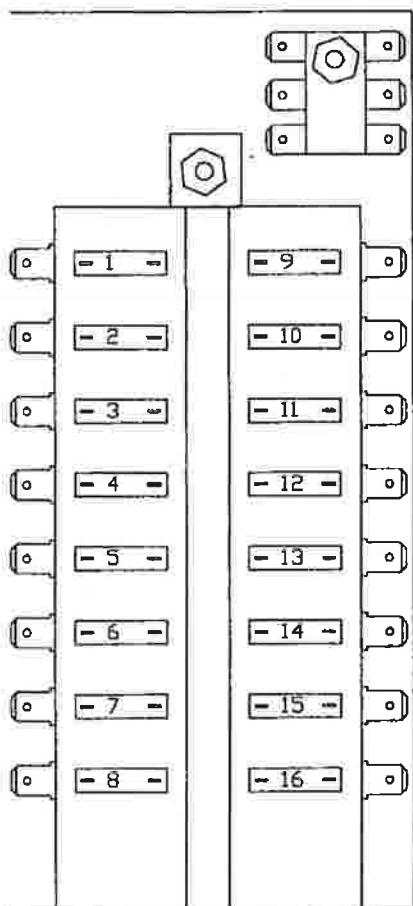
FUEL, OIL & MPG RECORD

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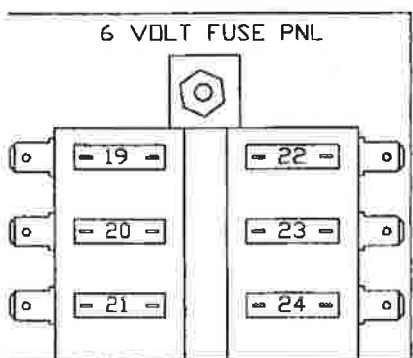
FUEL, OIL & MPG RECORD

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INTERIOR FUSE PNL



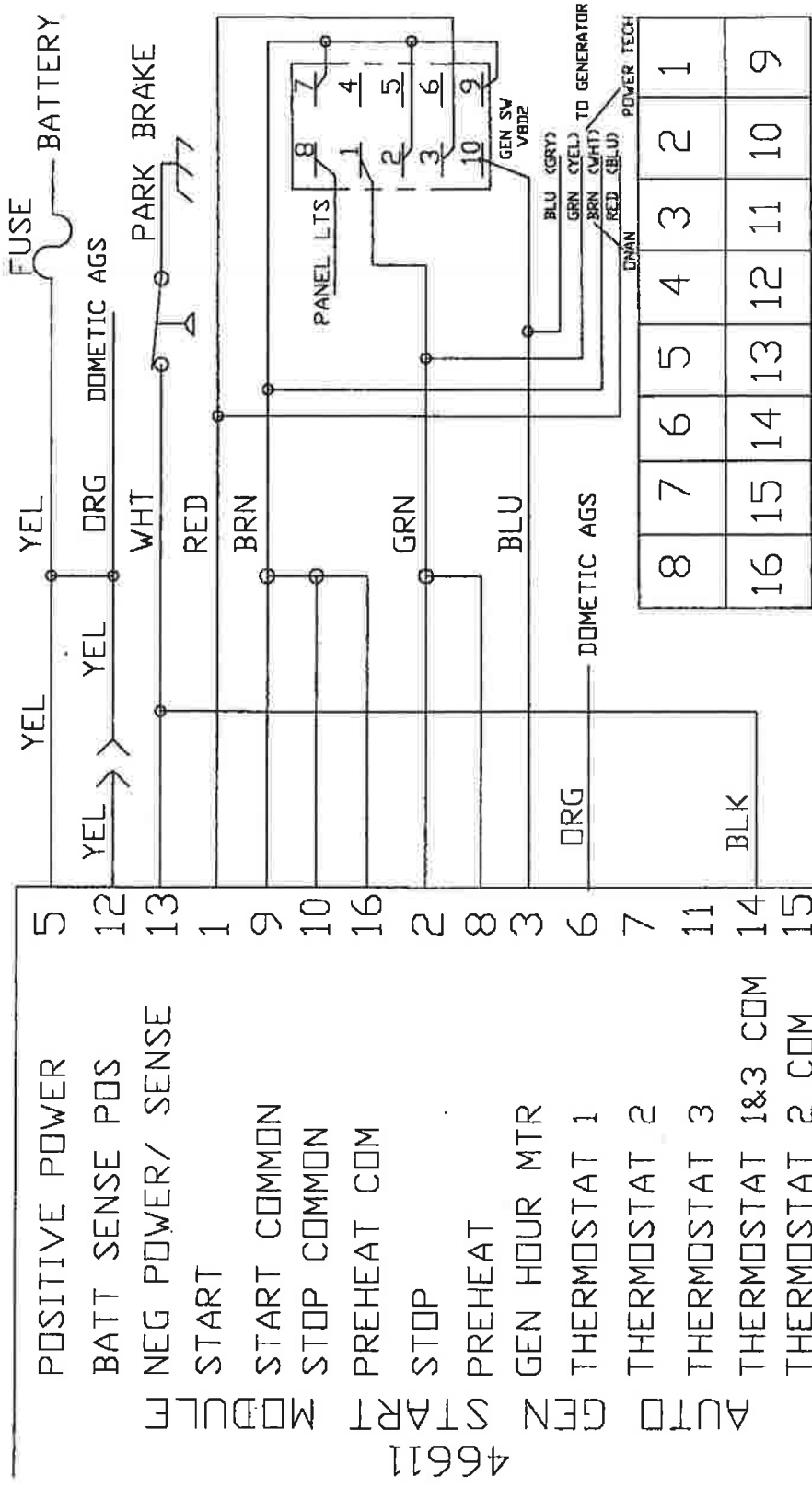
FUSE #	RATING (AMPS)	DESCRIPTION
1	20	KITCHEN CEILING, HALL, CLOSET
2	20	CURB SIDE LIVING RM, PORCH LT
3	5	A/C CONTROLS
4	20	REFER
5	20	ENTERTAINMENT CENTER
6	20	COMPARTMENT LIGHTS
7		N/A
8		N/A
9	20	BEDROOM
10	20	KITCHEN BASE & D/H, DINETTE LT, OFF-CURB SIDE LIVING RM
11	20	BATHROOM
12	10	MONITOR PANEL/ WATER PUMP
13	7.5	ROOF VENT(S)
14	5	AUTO GENERATOR START
15	20	aisle lights
16		N/A



6 VOLT FUSE PNL

19	20	LIVING ROOM CEILING LTS
20	20	KITCHEN CEILING LTS
21	20	BEDROOM CEILING LTS
22		N/A
23		N/A
24		N/A

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CONNECTOR VIEW IS LOOKING INTO THE AGS CONTROLLER

8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9

NEWMAR CORP P.O. Box 30, Nappanee, IN 46550 Title Block—1-24-78	Model:	NEW AIRE/ LA BUS	Sheet:	1 OF 1	Drawn by:	Checked by:	Revision:	By:
	Title:	DIAGRAM, AUTO GEN START HARNESS	I.D. #		Date:	Date:	Revision:	By:

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WIRING COLOR SCHEME

16 GAUGE

Grounds	White
Back-up Lights	Yellow
Ignition to Power Step	Pink
Clearance & Running Lights	Green
Right Turn Lights	Brown
Left Turn Lights	Red
Ignition to Slide Out Motor	Pink w/Green
Class A Blower Fan (in holding tank area)	Orange
Courtesy Lights (hot to switch)	Grey
Courtesy Lights (switched)	Grey w/White
Detectors, CO & LP	Red w/Black
Rear Center Brake Light	Blue
Air Conditioner Controls	Pink w/Black
Monoplex Water Pump Switch	Yellow w/Black
Vent Thermostats	Black
Power Tech Generator	Gray*
	Yellow*
	White*

* - multiple applications for this color

WIRING COLOR SCHEME (CONT.)

12 GAUGE

Grounds .....	.White
Living Room & Entryway Lights (hot to switch) .....	.Red
Living Room & Entryway Lights (switched) .....	.Red w/White
Bedroom Lights (hot to switch) .....	.Orange
Bedroom Lights (switched) .....	.Orange w/White
Bathroom Lights (hot to switch) .....	.Brown
Bathroom Lights (switched) .....	.Brown w/White
Kitchen Lights (hot to switch) .....	.Green
Kitchen Lights (switched) .....	.Green w/White
TV and Stereo .....	.Pink
Furnaces .....	.Green w/Black
3 Way Switches (commons) .....	.Red w/Black
Fantastic Vent and Water Heater .....	.Brown w/Black
Monitor Panel .....	.Yellow
Refrigerator Controls .....	.Red w/ Yellow
Security Lights (hot to switch) .....	.Purple
Security Lights (switched) .....	.Purple w/White
Water Pump .....	.Yellow w/Black

WIRING COLOR SCHEME (CONT.)

10 GAUGE

Grounds	White
Living Room Entry Lights (hot feed)	Red
Bedroom Lights (hot feed)	Orange
Kitchen Lights (hot feed)	Green
Bathroom Lights (hot feed)	Brown
Power Jacks	Yellow
Electric Brakes (tri-axle)	Blue
100 Watt Inverter	Red w/White

8 GAUGE

Grounds	White
Battery	Red
Converter	Black
400 Watt Inverter (Class A)	Red 6 GA Wire
	White 6 GA Wire

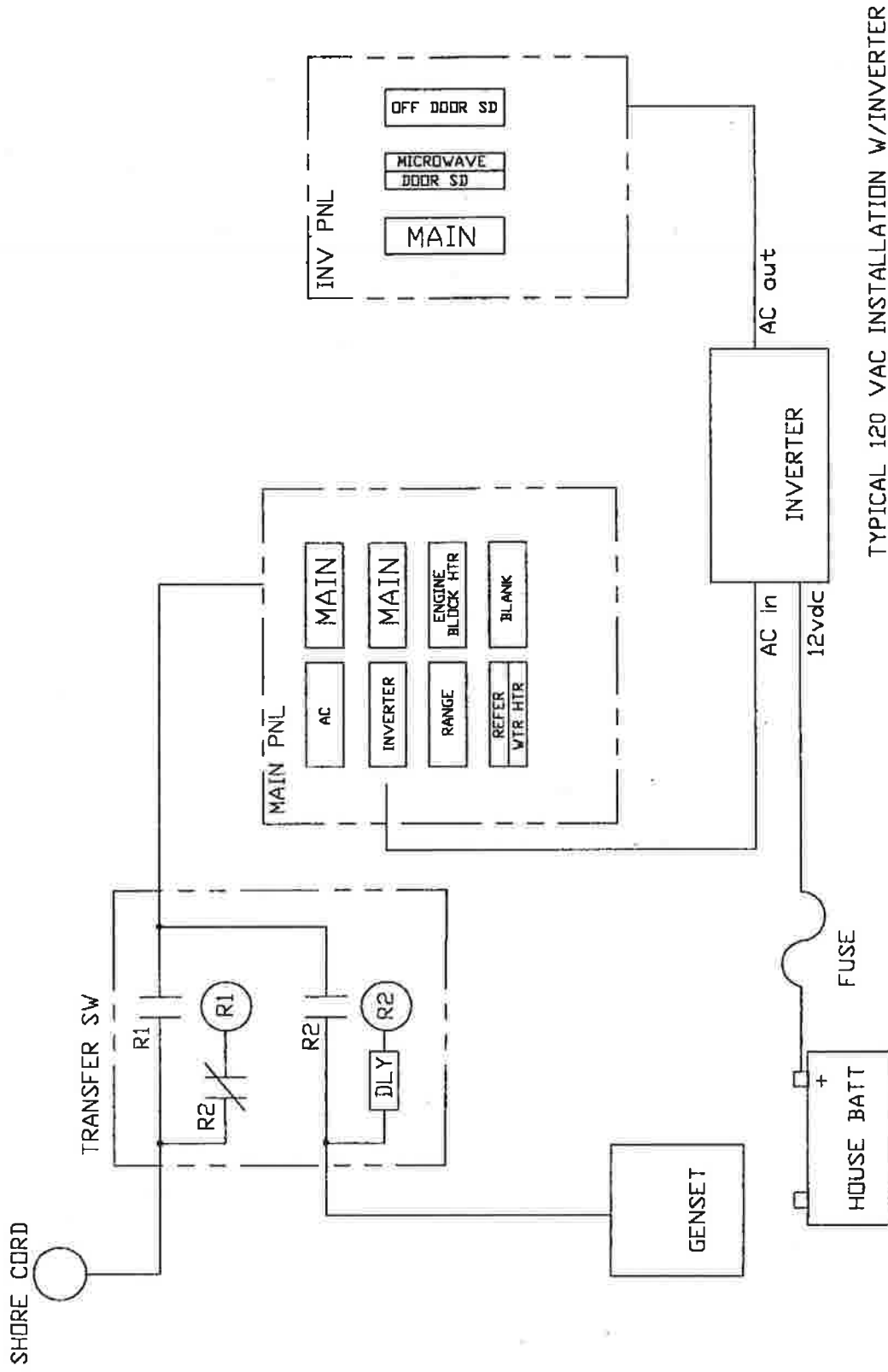
16 GAUGE

MONITOR PANEL TANK HARNESS

Fresh Water Tank	White*
	Grey w/Black (replaces Red tank lead) *
	Black w/Yellow (replaces Blue tank lead) *
Grey Water Tank	White*
	Green w/White (replaces Red tank lead) *
	Blue w/Black (replaces Blue tank lead) *
Black Water Tank	White*
	Red w/White (replaces Red tank lead) *
	Blue w/White (replaces Blue tank lead) *

* - multiple applications for this color

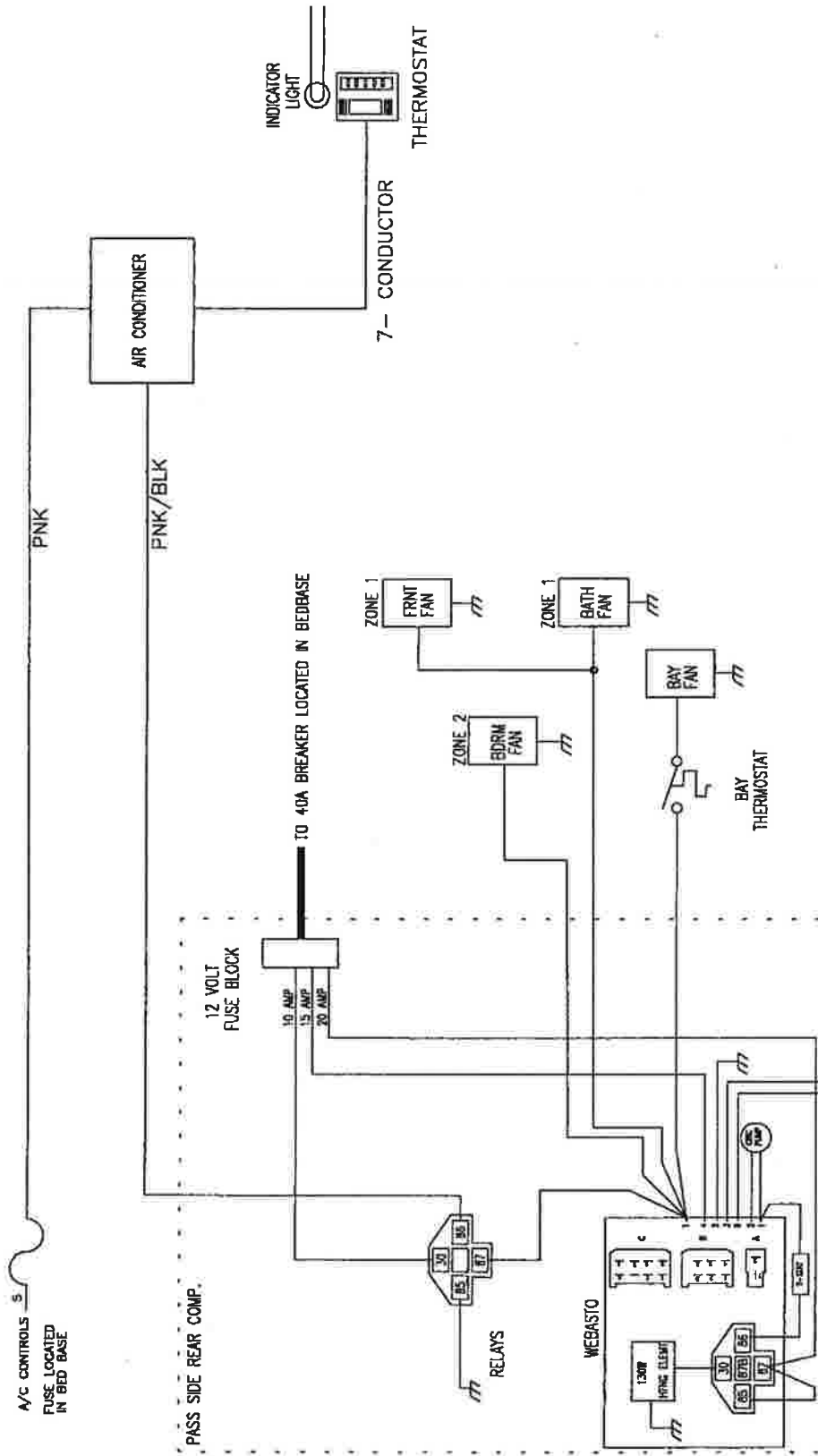
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TYPICAL 120 VAC INSTALLATION W/INVERTER

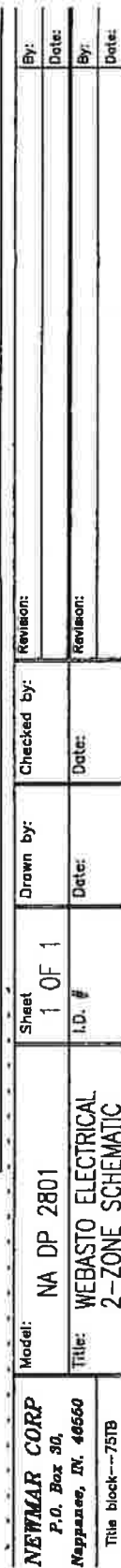
Model:	NEWMAR CORP	Sheet	1	Drawn By:	Checked By:	Reviewed:	By:
Title:	NEVAIRE	1	DF	1	Date:	Date:	Date:
	DIAGRAM, SINGLE LINE	I.D.	#	Date:	Date:	Date:	Date:
	120VAC W/INVERTER						
	This block--1-2u11B						

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

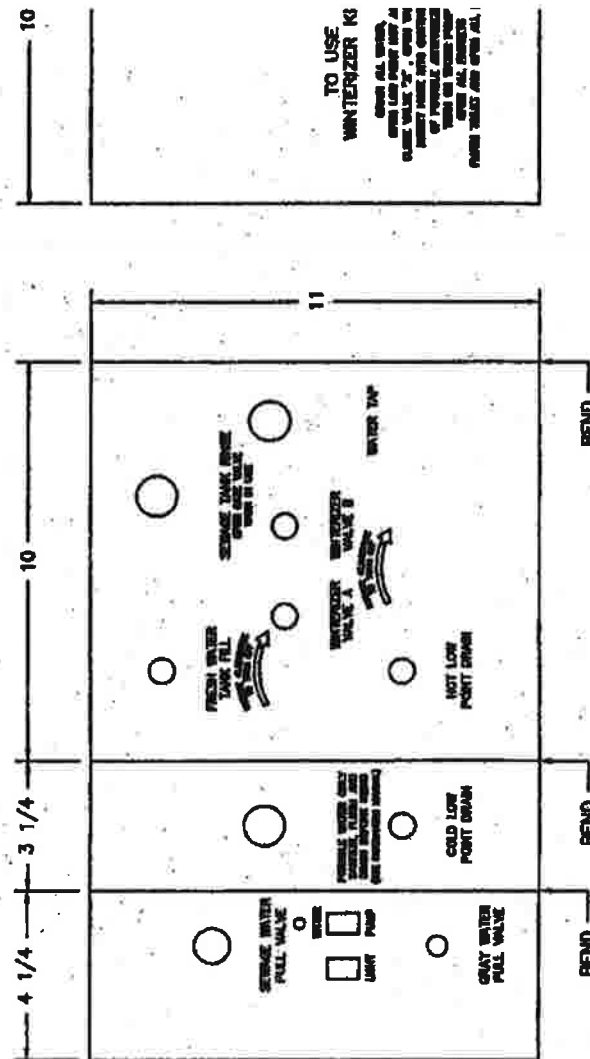


NEWMAR CORP P.O. Box 50, Naples, IN. 46560 Title block--75TB	Model:	NA DP 2801	Sheet	1 OF 1	Drawn by:	Checked by:	Revision:	By:
	Title:	WEBASTO ELECTRICAL 1-ZONE SCHEMATIC	I.D. #		Date:	Date:	Revision:	Date:

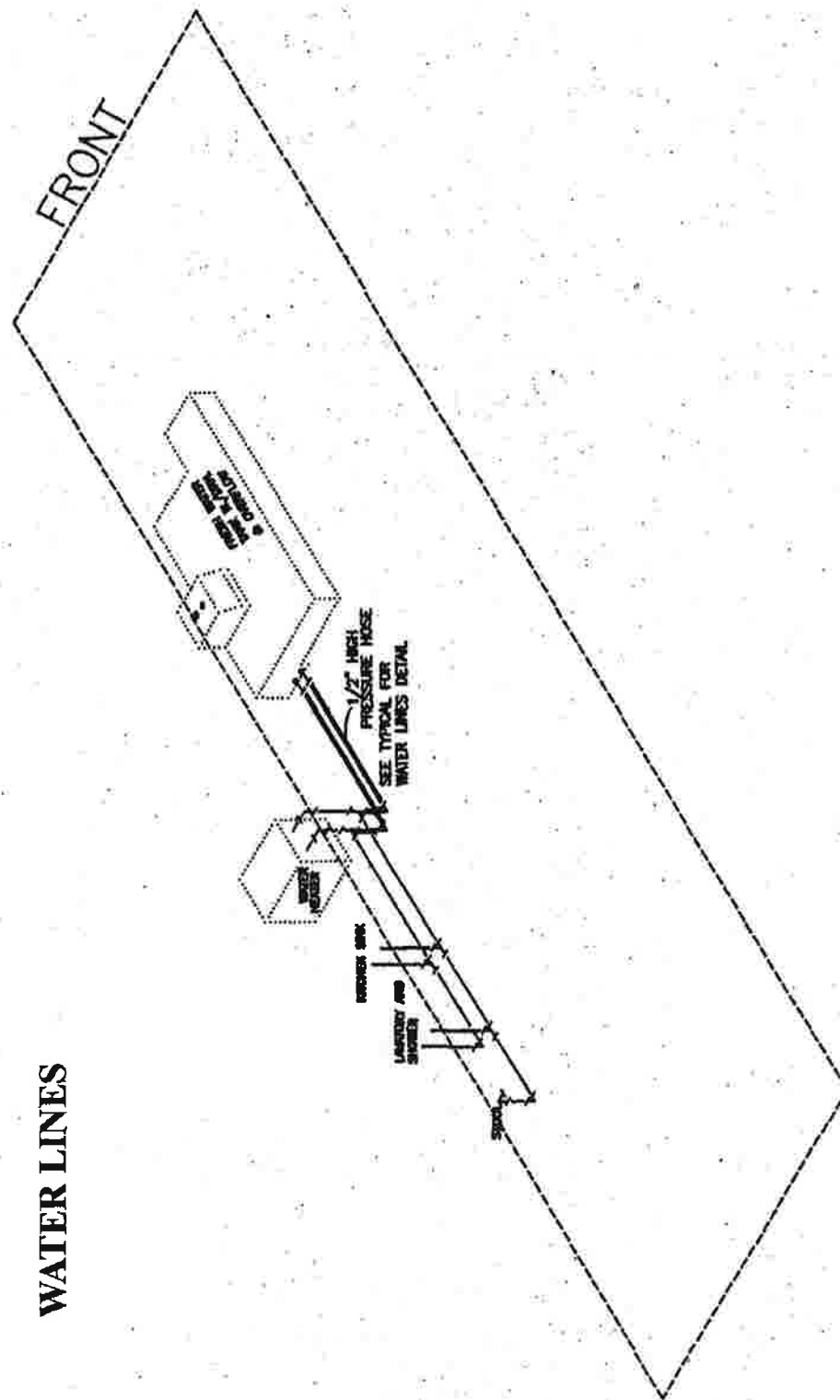
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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

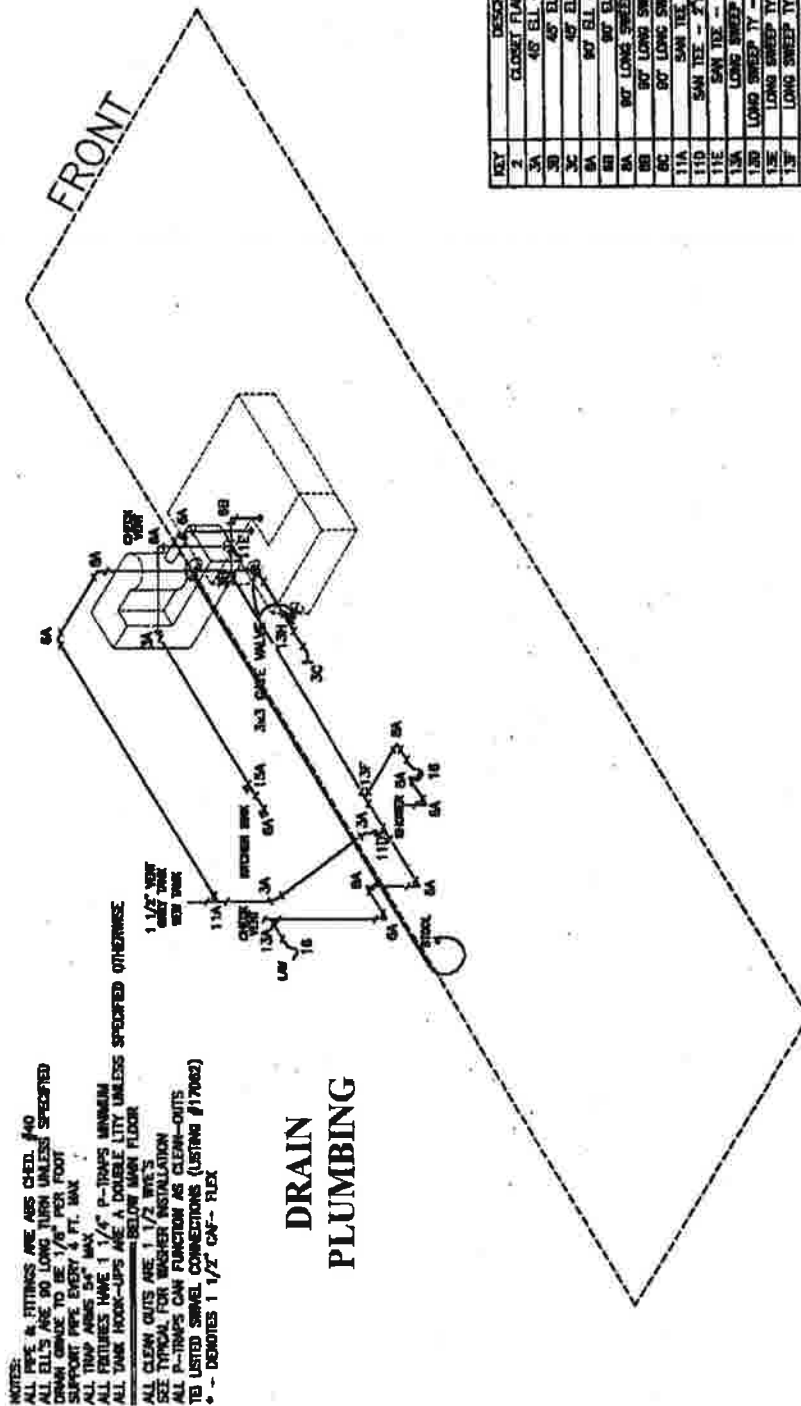


UPDATED BY MOVING LETTERING DOWN
FOR A BETTER VIEW 8-17-99



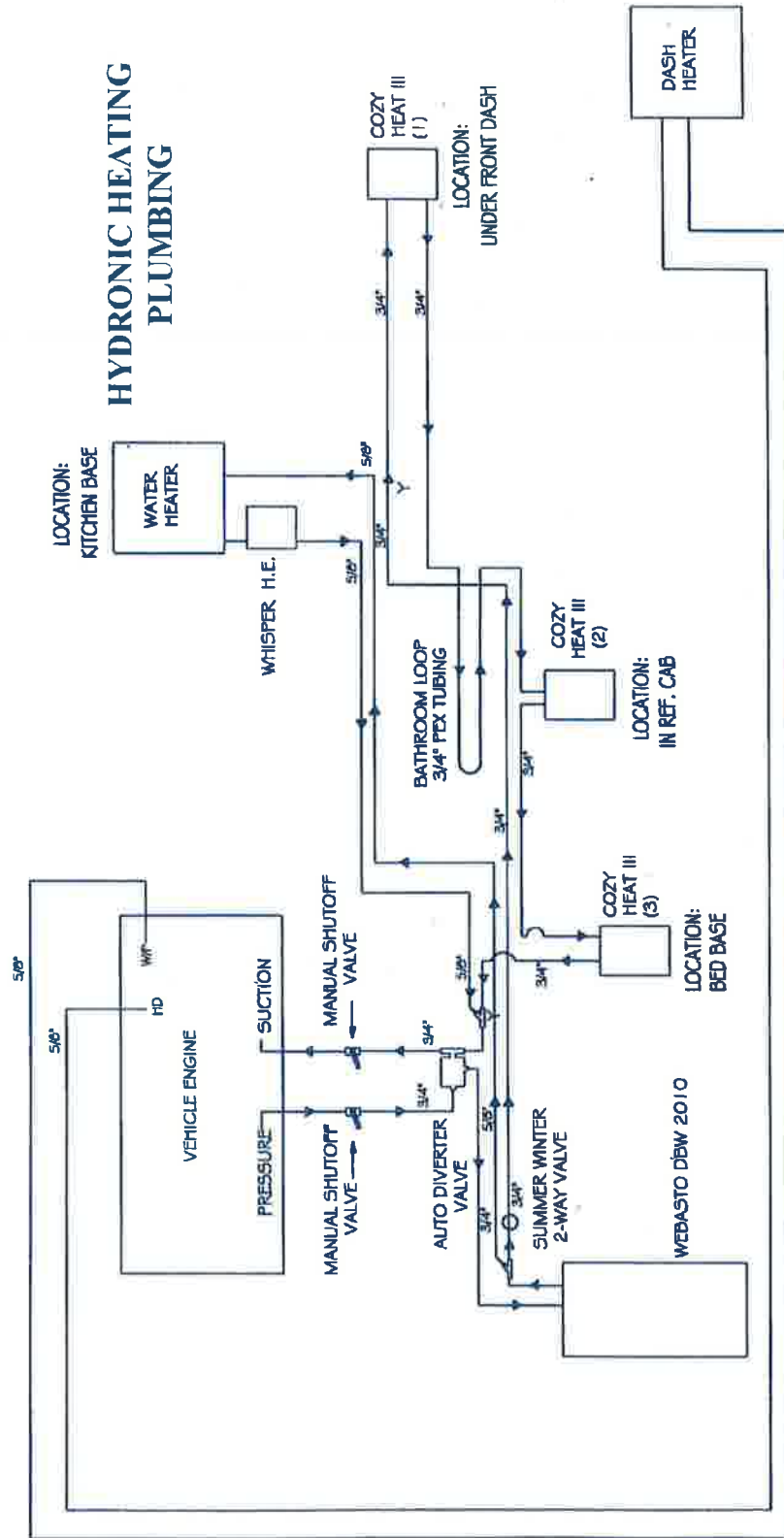
WATER LINES

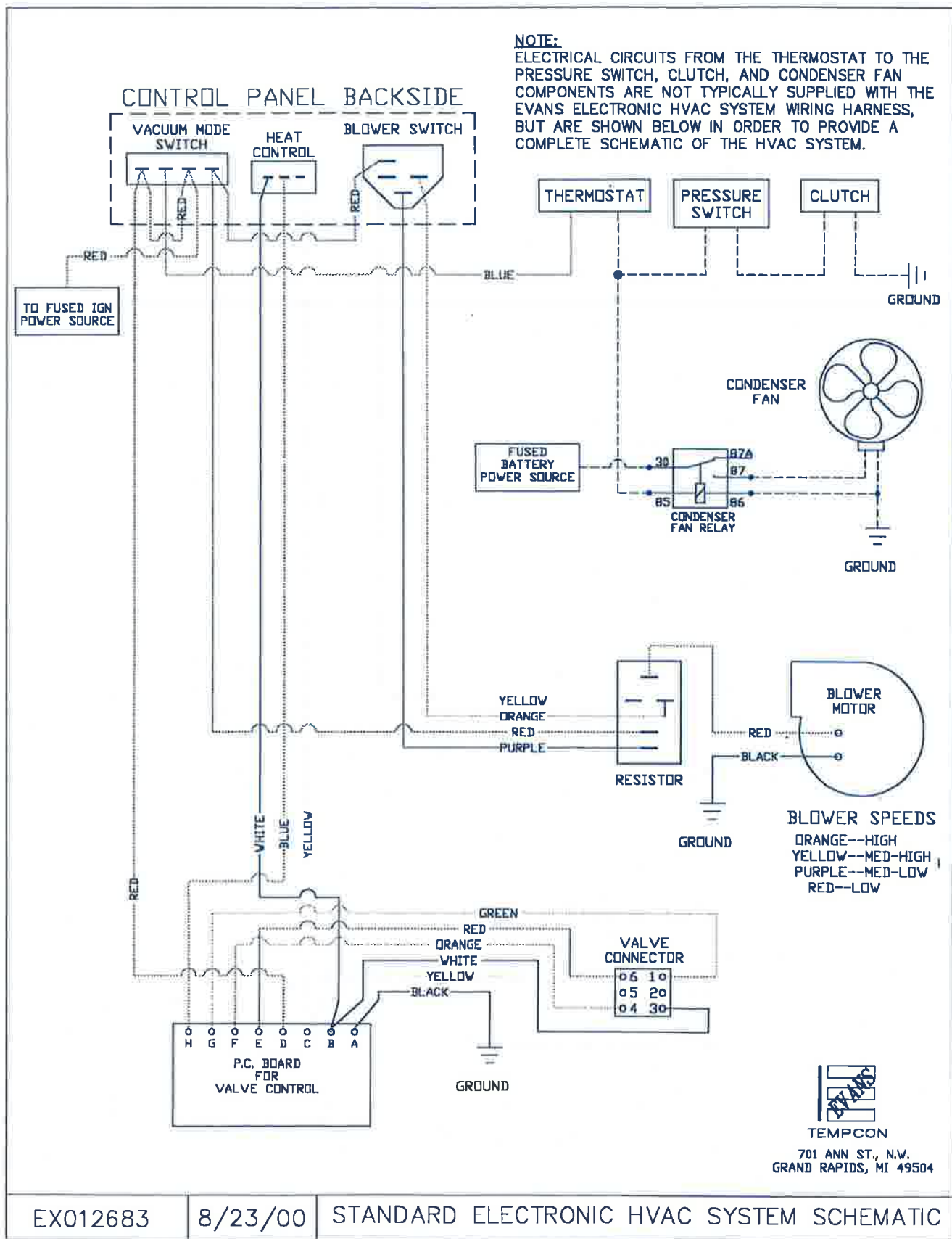
This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



KEY	DESCRIPTION
2	CLOSET FLANGE - 4"x3"
3A	45° ELL - 1 1/2"
3B	45° ELL - 3"
3C	45° ELL - 3"
3A	90° ELL - 1 1/2"
3B	90° ELL - 2"
3A	90° LONG SWEEP ELL - 1 1/2"
3B	90° LONG SWEEP ELL - 2"
3C	90° LONG SWEEP ELL - 3"
11A	SAN TEE - 1 1/2"
11B	SAN TEE - 2"x1 1/2"x1 1/2"
11C	SAN TEE - 2"x2"x1 1/2"
11A	LONG SWEEP TY - 1 1/2"
11B	LONG SWEEP TY - 2"x1 1/2"x1 1/2"
11C	LONG SWEEP TY - 2"x2"x1 1/2"
11D	LONG SWEEP TY - 2"x1 1/2"x2"
11E	LONG SWEEP TY - 3"
11A	DOUBLE LONG SWEEP TY - 3"
11B	TY - 1 1/2"
11C	P-TRAP W/ LUBRIC JOINT

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

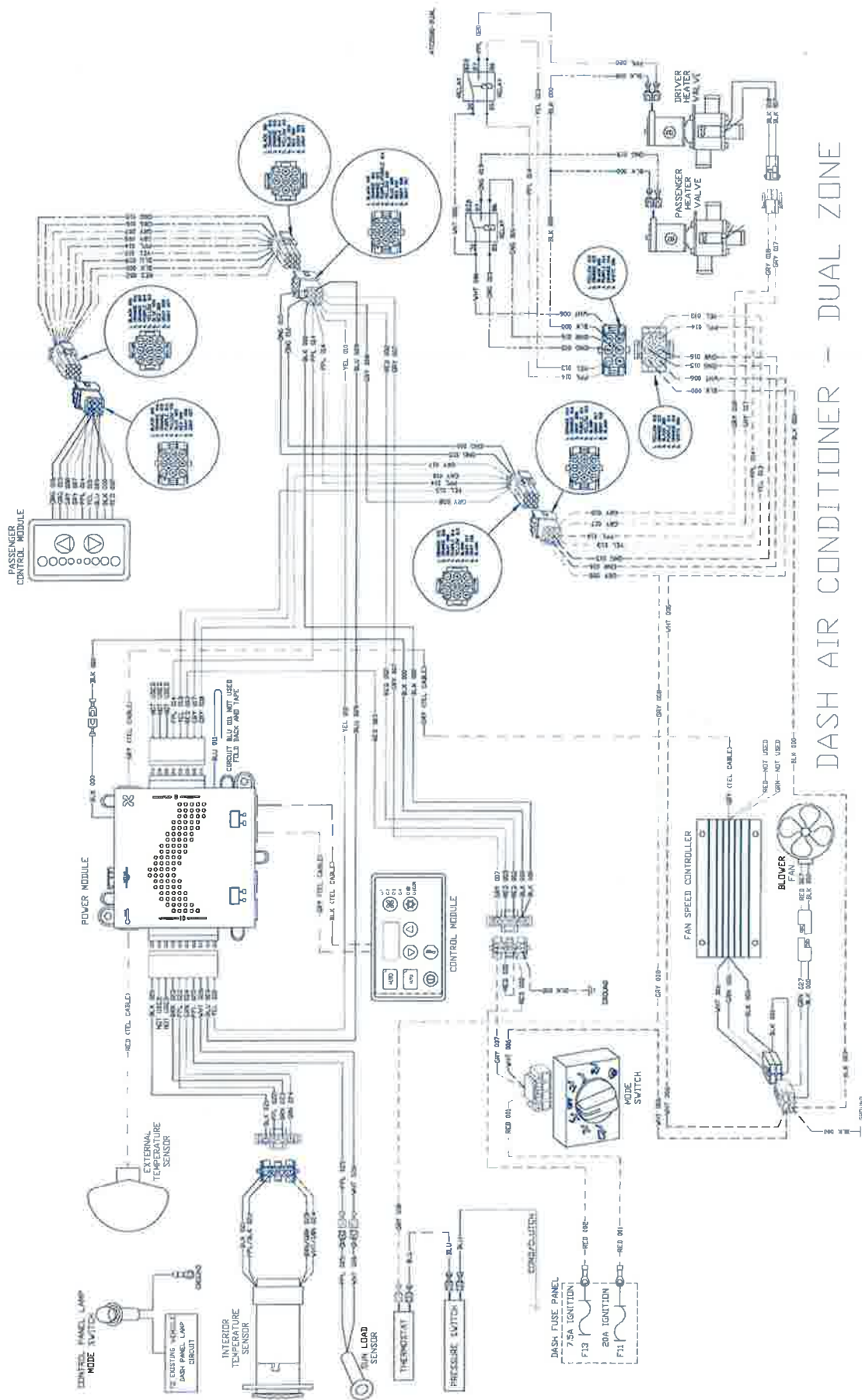




EX012683

8/23/00

STANDARD ELECTRONIC HVAC SYSTEM SCHEMATIC



DASH AIR CONDITIONER - DUAL ZONE

NEWCO FRONT FUSE PANEL

CHASSIS

HOUSE

GENERATOR

TAG

TAG BRAKE

NEWAIRE FRONT #1

NEWAIRE FRONT #2

ABS PUMP RELAY

HYDROMAX RELAY

TRAILER BRAKE FUSE PANEL

14-32



2002 NEWAIRE DIESEL PUSHER

DESCRIPTION	ITEM #
Antenna, CB	34783
Antenna, Radio	40052
Antenna, TV	34841
A/C, Dash	39644
Bumper, Rear,	39625
Door, Driver	46542
Door, Entrance	39622
Door, Passenger	46544
Faucet, Bath/Shower	39574
Faucet, Kitchen, Sgl Hdl, Ltd.	39634
Faucet, Kitchen, Sgl Hdl, Classic	49634
Hood	28343
Light, Back Up	39732
Light, Brake, Center	39604
Light, Clearance, Amber	18684
Light, Clearance, Red	20619
Light, Docking	41591
Light, Driving	39605
Light, Fluorescent	39793
Light, Head, Left Hand, High	39610

DESCRIPTION	ITEM #
Light, Head, Right Hand, High	39603
Light, Head, Left Hand, Low	39609
Light, Head, Right Hand, Low	39608
Light, Rear, Left, Marker	39658
Light, Rear, Right, Marker	39657
Light, Turn	39654
Light, Turn, Left	39606
Light, Turn, Right	39607
Light, Tail	39655
Mirror, Rear View Heated Remote, Ltd.	39642
Mirror, Rear View Heated Remote, Cl.	45860
Recept, 120 Volt	10551
Recept, GFCI	10553
Register, Ceiling	37946
Switch, 12 Volt, Double	28410
Switch, 12 Volt, Single	28409
Switch, 12 Volt, Triple	28411
Switch, 120 Volt	10543
Windshield	39619
Windshield Gasket	39618



CUSTOMER INFORMATION UPDATE FORM

Newmar Corporation strives to keep the most accurate and current customer information in its files.

If you bought this unit new, we have your information from the warranty registration form on file. However, if you purchased this unit as used then we ask that you complete the following information and mail it or fax it to us so that we can be sure that our records are updated.

Upon receipt of this form, we will send you a warranty registration card. This card is to be presented when you are having warranty work done on your unit at an authorized Newmar service center. Please note that the date of purchase on the card will show the original date the vehicle was first purchased and is the date applicable warranties originated.

If you have any questions, please contact a Newmar representative.

DATE _____

COACH # _____

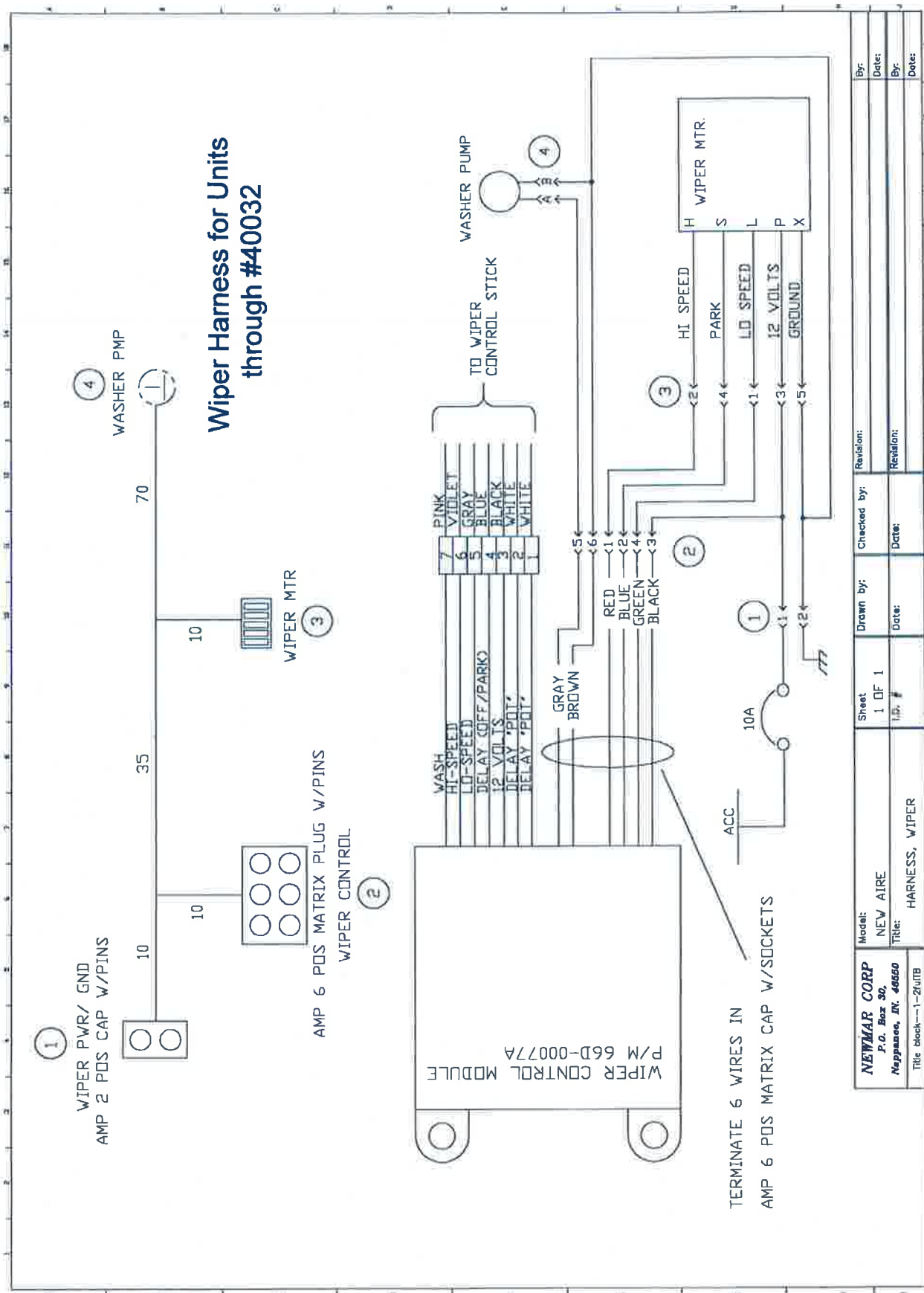
CUSTOMER FULL NAME _____

CUSTOMER COMPLETE ADDRESS _____

PURCHASED FROM _____

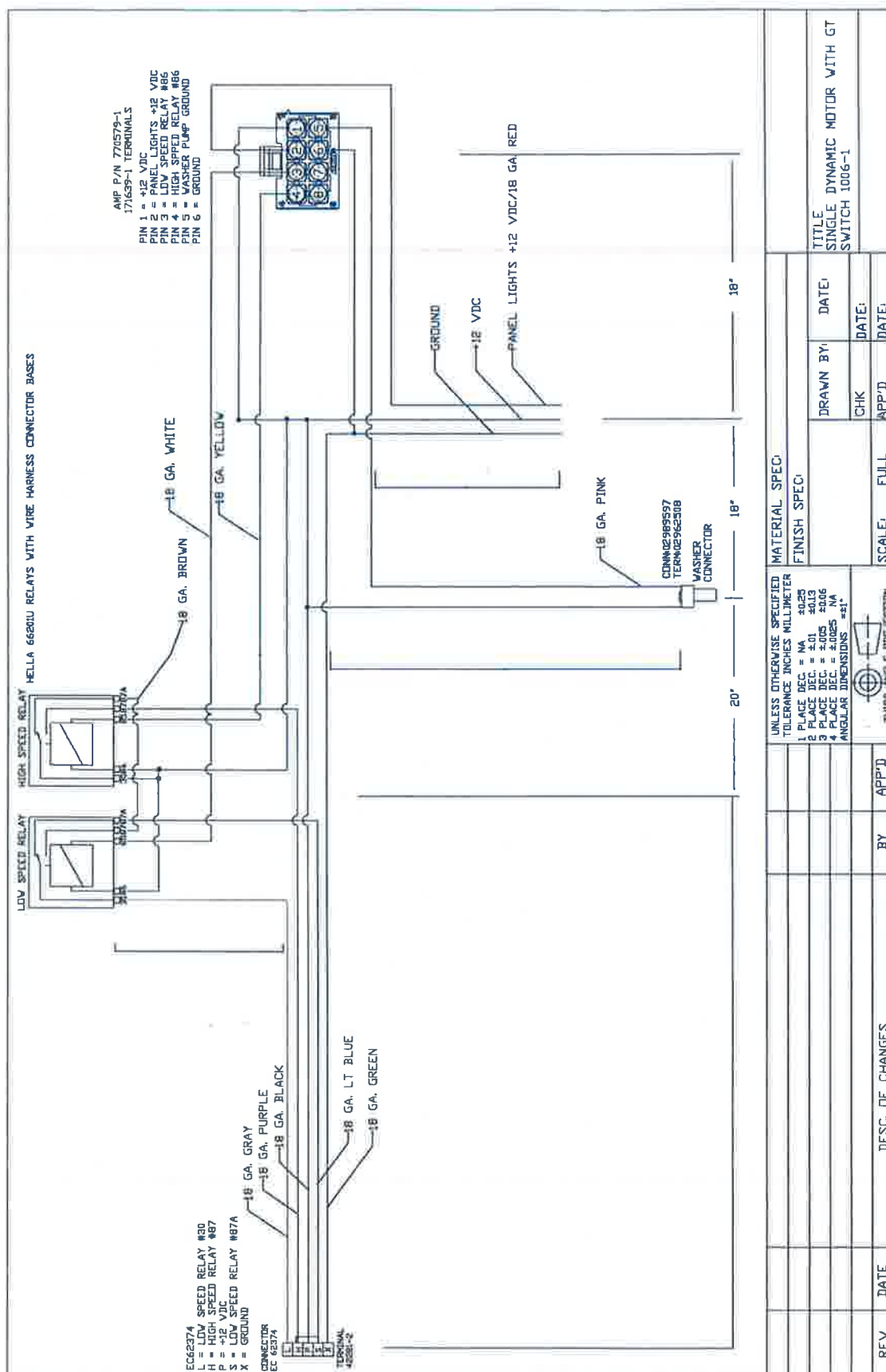
ADDRESS _____

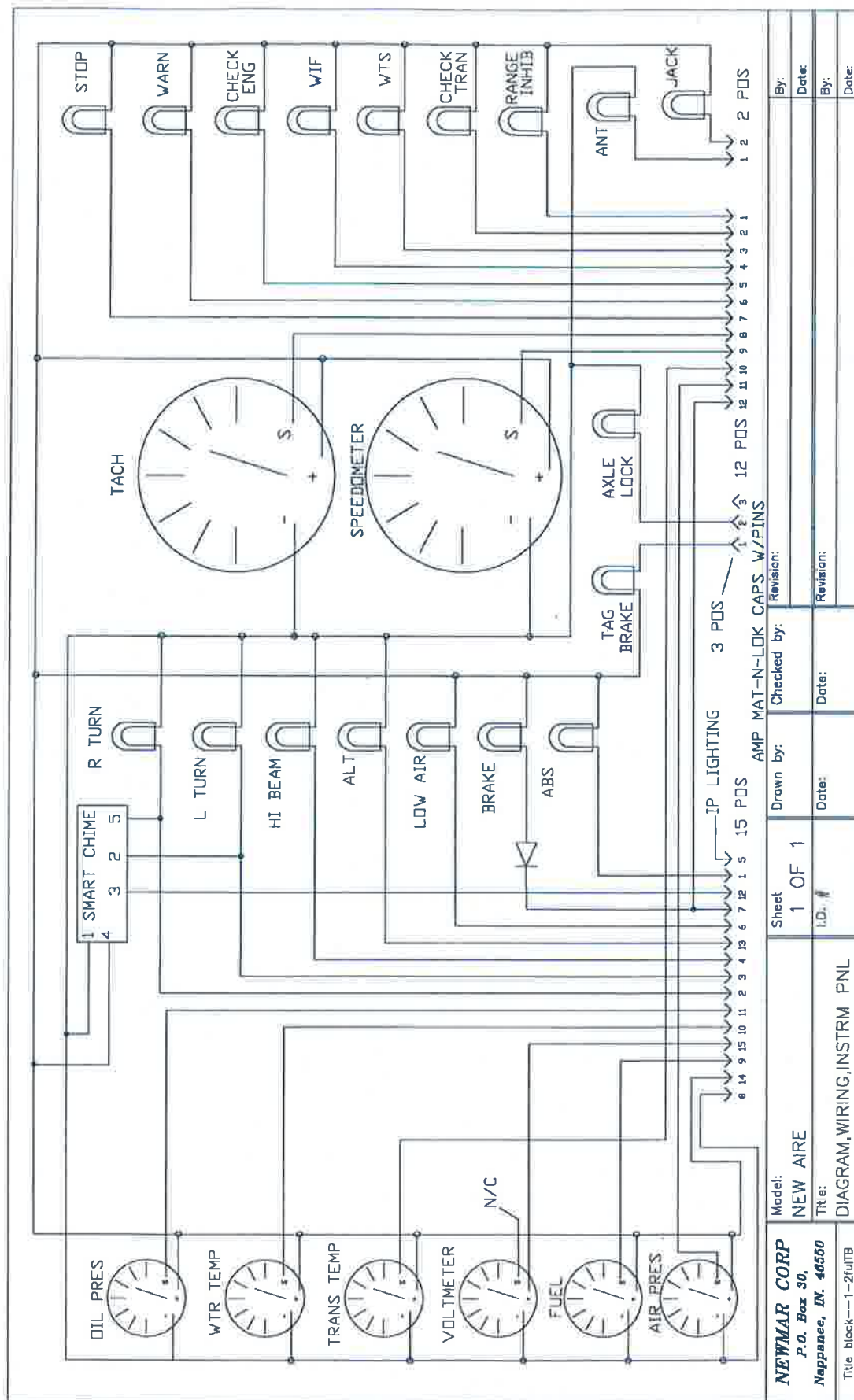
**NEWMAR CORPORATION
ATTN: SERVICE DEPARTMENT
P.O. BOX 30
NAPPANEE, IN 46550 FAX: (219) 773-2007**



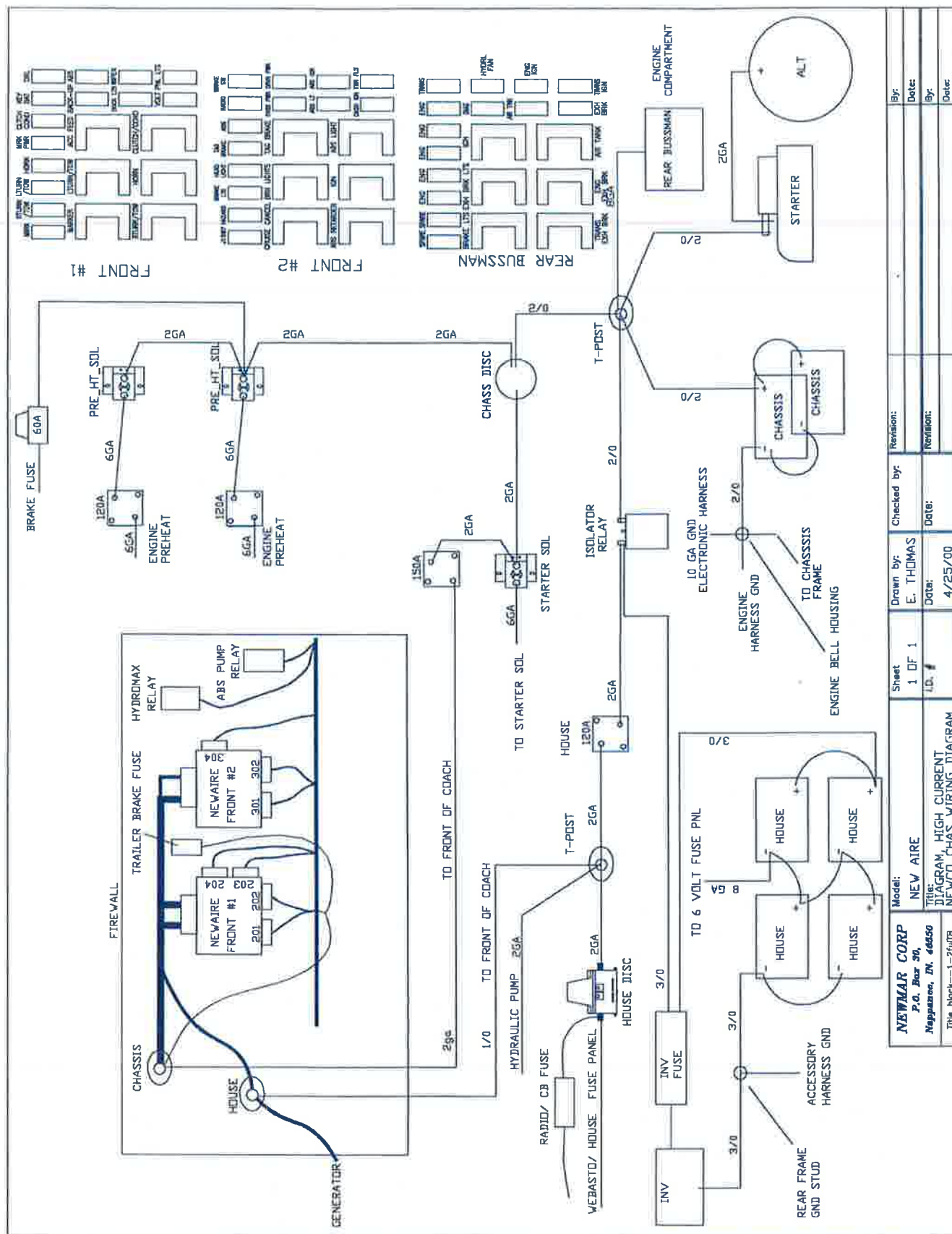
Wiper Harness for Units #40033 and Above.

ECD 2002 #187 STARTING UNIT #40033

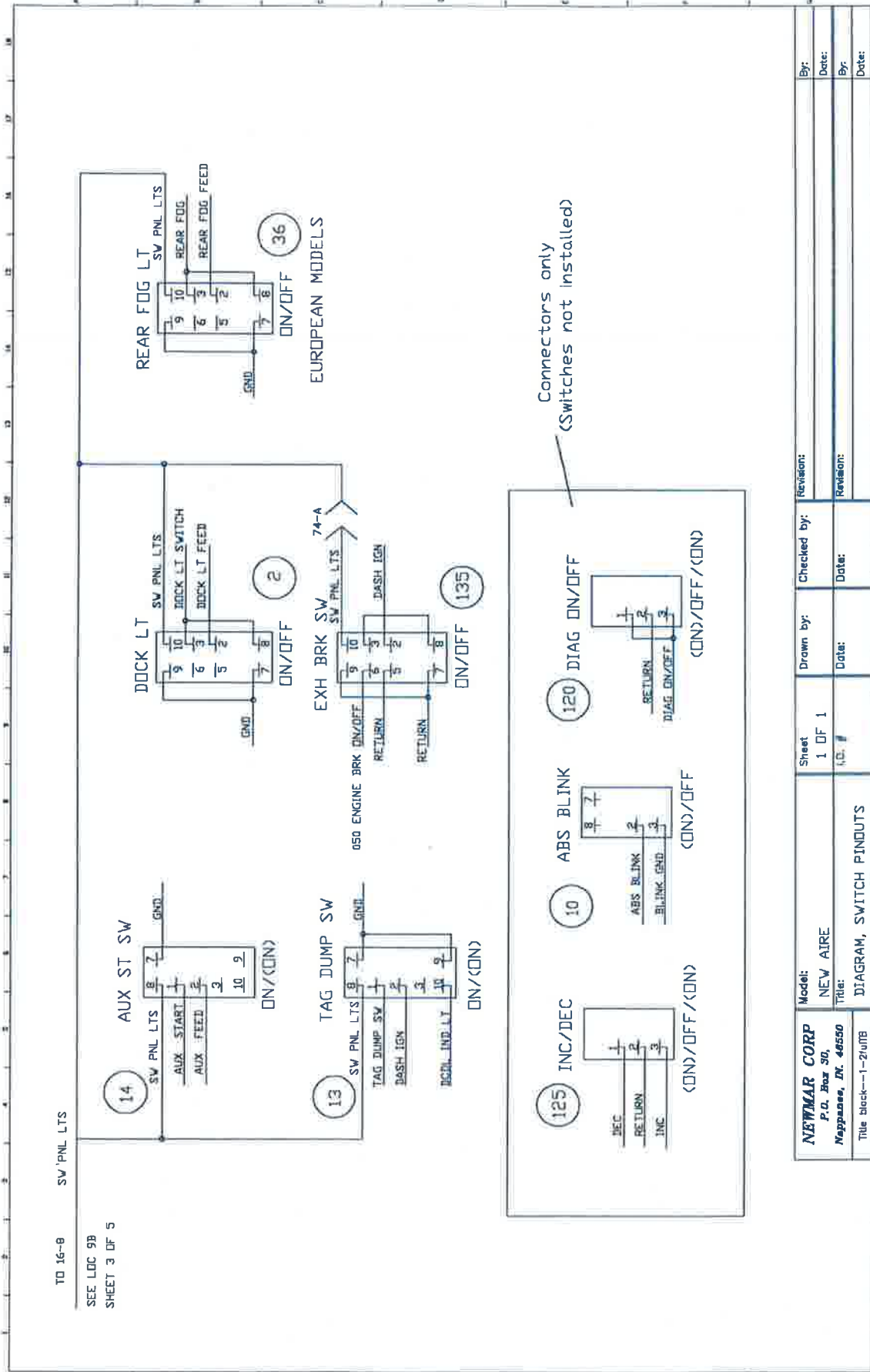




NEWMAR CORP P.O. Box 30, Nappanee, IN 46560	Model: NEW AIRE	Sheet 1 OF 1	Drawn by:	Checked by:	Revision:	By:
						Date:
Title block--1-2fuTB	Title: DIAGRAM, WIRING, INSTRM PNL	I.D. #	Date:	Date:	Revision:	By:
						Date:



Model:	NEW AIRE	Sheet	1 OF 1	Drawn by:	E. THOMAS	Checked by:		Revision:		By:		Date:	
Part No.	Box 30	1.D.	#	Date:	4/25/00	Date:		Revision:		By:		Date:	
Part No.	44550												
Part No.	1-240TB												



NEWMAR CORP P.O. Box 30, Napaville, IN 46550 Title block—1-2/07B	Model:	NEW AIRE	Sheet	1 OF 1	Drawn by:	Checked by:	Revision:	By:
	Title:	DIAGRAM, SWITCH PINDOTS	(C.D. #)		Date:	Date:	Revision:	Date:

Sheet 3 of 5

CHASSIS COMPONENT FINDER

	DESCRIPTION	LOCATION ON	SHEET #	ITEM #	PHYSICAL LOCATION
1	ABS ECU	B14	4 OF 5	27	FRONT LEFT CORNER UNDERNEATH
2	ALTERNATOR	B3	4 OF 5	91,90,87,84	DRIVER SIDE FRONT OF ENGINE
3	ALTERNATOR FAIL MODULE	A5	4 OF 5	4	DASH ACCESS PNL
4	A/C CLUTCH	A13	4 OF 5	75	PASS SIDE FRONT OF ENGINE
5	A/C CONDENSER	A13	4 OF 5	42	RIGHT FRONT CORNER UNDERNEATH
6	BI-DIRECTIONAL ISOLATOR CONTROL	F12	4 OF 5	80	REAR WALL BATTERY COMPARTMENT
7	BREAKER, TAG BRAKE	F3	4 OF 5	N/A	PASS SIDE ENGINE BOX WALL
8	CIRCUIT BREAKER, A/C CLUTCH/CONDENSER	E18	5 OF 5	BUSSMAN 1	FIREWALL
9	CIRCUIT BREAKER, DRVR POWER SEAT	B2	5 OF 5	BUSSMAN 2	FIREWALL
10	CIRCUIT BREAKER, PASS POWER SEAT	B1	5 OF 5	BUSSMAN 2	FIREWALL
11	CIRCUIT BREAKER, WIPER	E1	5 OF 5	BUSSMAN 1	FIREWALL
12	CRUISE CONTROL	F9	2 OF 5	130	STEERING COLUMN
13	DASH/CHASSIS INTERFACE	A10	3 OF 5	16	DASH ACCESS PNL
14	DOCK LTS	F13	4 OF 5	48,57	BETWEEN REAR AXLES
15	DRL MODULE	F7	3 OF 5	5	DASH ACCESS PNL
16	ENGINE ECU	E5	1 OF 5	206,224	PASS SIDE MID ENGINE
17	ENGINE HARNESS INTERFACE	C1	3 OF 5	66,67	PASS SIDE REAR ENGINE
18	ENGINE INTERFACE TO ELECTRONIC HARNESS	D4	2 OF 5	201	REAR OF ENGINE
19	FAN CONTROLLER	D3	1 OF 5	208	DRIVER SIDE ENGINE BOX WALL
20	FLASHER, HAZARD	D13	3 OF 5	26	DASH ACCESS PNL
21	FLASHER, TURN	D13	3 OF 5	23	DASH ACCESS PNL
22	FUSE, ABS ECU	E10	5 OF 5	BUSSMAN 1	FIREWALL
23	FUSE, ABS ECU IGN	E6	5 OF 5	BUSSMAN 2	FIREWALL
24	FUSE, ABS LIGHT RELAY	E6	5 OF 5	BUSSMAN 2	FIREWALL
25	FUSE, ABS PUMP	E9	5 OF 5	BUSSMAN 2	FIREWALL
26	FUSE, BACK-UP LTS	E3	5 OF 5	BUSSMAN 1	FIREWALL
27	FUSE, BRAKE LTS	E15	5 OF 5	BUSSMAN 2	FIREWALL
28	FUSE, BRAKE SWITCH	A5	5 OF 5	BUSSMAN 2	FIREWALL
29	FUSE, DASH IGN	E6	5 OF 5	BUSSMAN 2	FIREWALL
30	FUSE, DASH VOLT METER	E2	5 OF 5	BUSSMAN 1	FIREWALL

CHASSIS COMPONENT FINDER

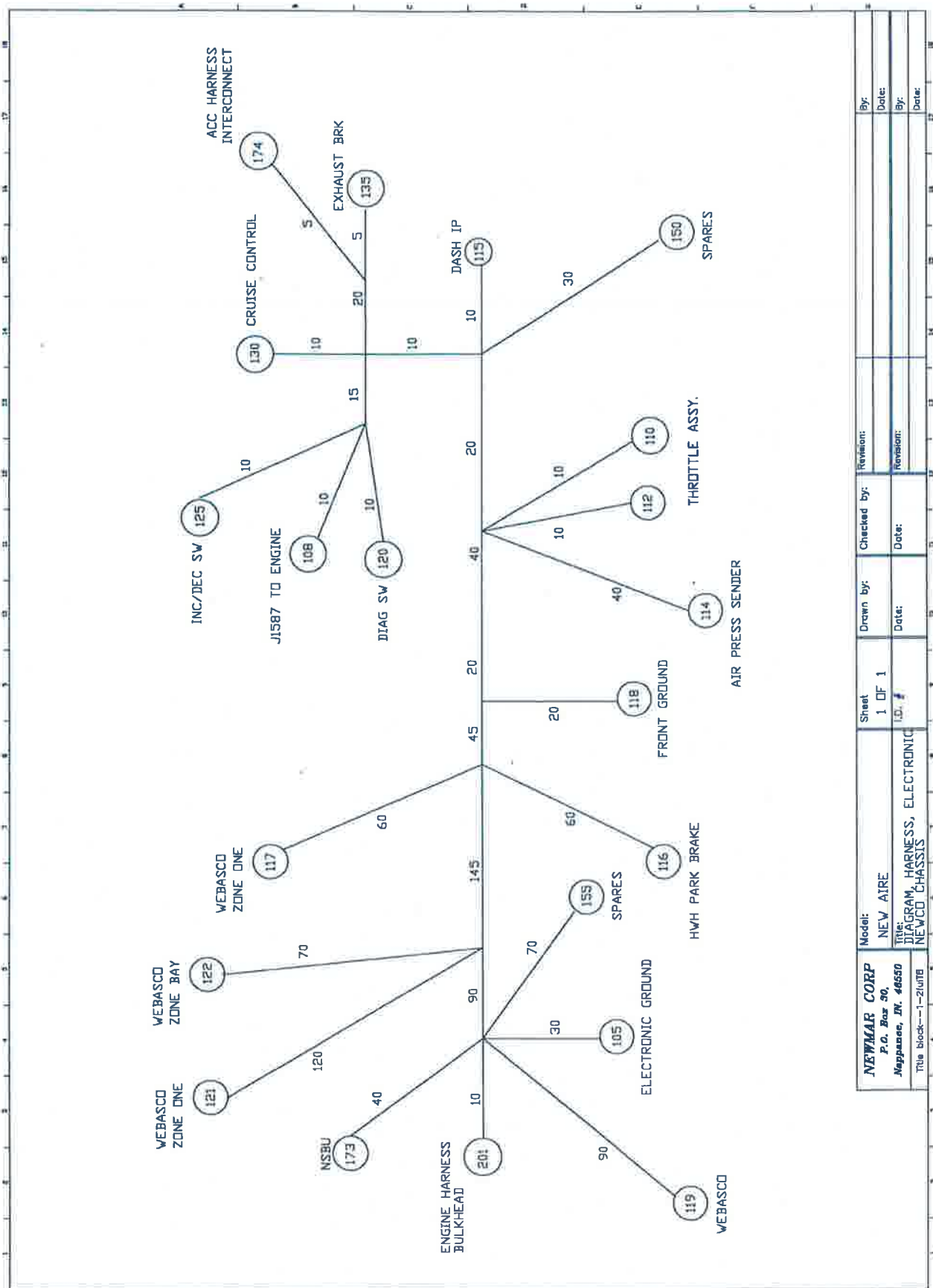
31	FUSE, DAYTIME DRIVING LIGHTS	E13	5 OF 5	BUSSMAN 1	FIREWALL
32	FUSE, DIAGNOSTIC	C10	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
33	FUSE, DOCK LTS	E1	5 OF 5	BUSSMAN 1	FIREWALL
34	FUSE, ENGINE BATTERY 3-7.5, 2-10	C10	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
35	FUSE, ENGINE IGNITION	C11	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
36	FUSE, EXHAUST BRAKE	C11	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
37	FUSE, FRONT DIAGNOSTIC CONNECTOR	E10	5 OF 5	BUSSMAN 2	FIREWALL
38	FUSE, HAZARD FLASHER	E13	5 OF 5	BUSSMAN 2	FIREWALL
39	FUSE, HEADLIGHT SWITCH POWER	E12	5 OF 5	BUSSMAN 2	FIREWALL
40	FUSE, HORN	E9	5 OF 5	BUSSMAN 1	FIREWALL
41	FUSE, HYDRAULIC FAN	C11	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
42	FUSE, HYDROMAX	D3	4 OF 5	70	PASS SIDE ENGINE BOX WALL
43	FUSE, INSTRUMENT PANEL LTS	A13	5 OF 5	BUSSMAN 1	FIREWALL
44	FUSE, KEY SWITCH	E18	5 OF 5	BUSSMAN 1	FIREWALL
45	FUSE, MARKER LTS	E11	5 OF 5	BUSSMAN 1	FIREWALL
46	FUSE, MARKER SWITCH POWER	E11	5 OF 5	BUSSMAN 1	FIREWALL
47	FUSE, MOISTURE EJECTOR	C11	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
48	FUSE, RADIO	B1	5 OF 5	BUSSMAN 2	FIREWALL
49	FUSE, RADIO/C.B.	B8	3 OF 5	76	PASS SIDE ENGINE BOX WALL
50	FUSE, TAG BRAKE	E14	5 OF 5	BUSSMAN 2	FIREWALL
51	FUSE, TOW LEFT TURN BRAKE	E16	5 OF 5	BUSSMAN 1	FIREWALL
52	FUSE, TOW RIGHT TURN BRAKE	E17	5 OF 5	BUSSMAN 1	FIREWALL
53	FUSE, TRAILER BRAKE CONTROLLER	A2	3 OF 5	43	FIREWALL
54	FUSE, TRANSMISSION BATTERY	C10	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
55	FUSE, TRANSMISSION IGNITION	C11	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
56	FUSE, TURN FLASHER	E7	5 OF 5	BUSSMAN 2	FIREWALL
57	HEADLIGHT INTERFACE	F11	3 OF 5	39	PASS SIDE NEAR HORNS
58	HORNS	E14	4 OF 5	40	RIGHT FRONT CORNER NEAR GEN
59	HYDROMAX MOTOR	D9	4 OF 5	34	LEFT FRONT CORNER UNDERNEATH
60	INSTRUMENT PANEL INTERFACE	F9	3 OF 5	18	DASH ACCESS PNL
61	INSTRUMENT PANEL INTERFACE	A7	4 OF 5	18	DASH ACCESS PNL
62	ISOLATOR RELAY	F13	4 OF 5	79	REAR WALL BATTERY COMPARTMENT
63	NEUTRAL SAFETY/BACK-UP INTERFACE TO ELECTRONIC HARNESS	A15	3 OF 5	73	PASS SIDE REAR ENGINE
64	POWER SEATS	G15	4 OF 5	45,54	

ASSIS COMPONENT FINDER

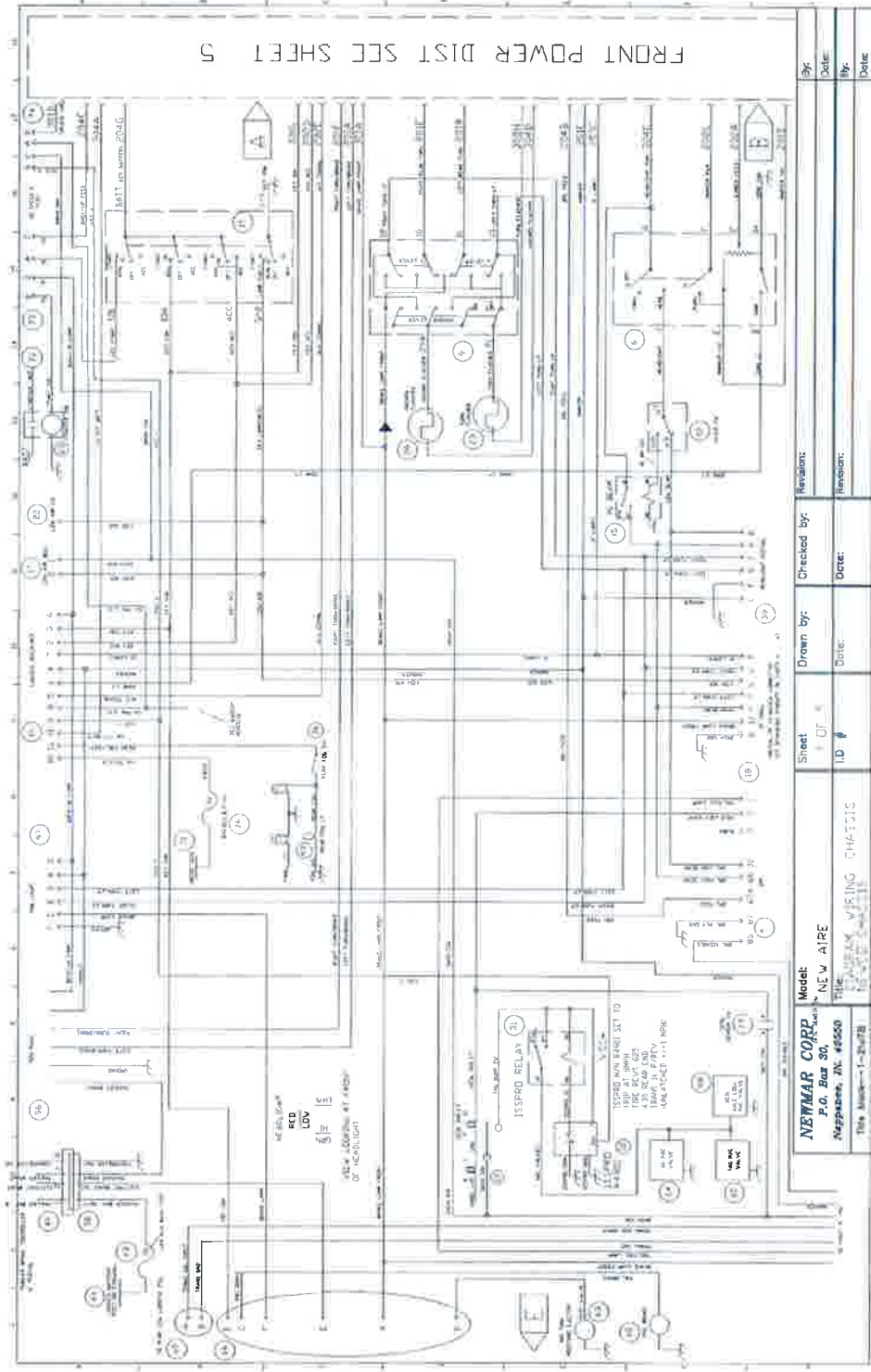
65	REAR DIAGNOSTIC CONNECTOR	D2	1 OF 5	236	PASS SIDE ENGINE BOX WALL
66	RELAY, ABS LT	C7	5 OF 5	BUSSMAN 2	FIREWALL
67	RELAY, ABS PUMP	B11	4 OF 5	25	FIREWALL
68	RELAY, ABS RETARDER	D4	5 OF 5	BUSSMAN 2	FIREWALL
69	RELAY, ACCESSORY	E2	5 OF 5	BUSSMAN 1	FIREWALL
70	RELAY, A/C CLUTCH	C18	5 OF 5	BUSSMAN 1	FIREWALL
71	RELAY, BRAKE LAMP	C15	5 OF 5	BUSSMAN 2	FIREWALL
72	RELAY, CRUISE CANCEL	E15	5 OF 5	BUSSMAN 2	FIREWALL
73	RELAY, CUMMINS ROAD	B11	4 OF 5	1	CENTER DASH PANEL
74	RELAY, ELECTRIC BRAKE	D16	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
75	RELAY, ENGINE EXHAUST BRAKE	B14	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
76	RELAY, EXHAUST BRAKE LAMPS	C16	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
77	RELAY, HI BEAM	F12	3 OF 5	35	NEAR HEADLIGHT SW
78	RELAY, HORN	D4	5 OF 5	BUSSMAN 1	FIREWALL
79	RELAY, HYDROMAX	D8	4 OF 5	24	FIREWALL
80	RELAY, IGN	B13	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
81	RELAY, IGNITION	E7	5 OF 5	BUSSMAN 2	FIREWALL
82	RELAY, ISSPRO SPEED	E4	3 OF 5	31	DASH ACCESS PNL
83	RELAY, MARKER LTS	C11	5 OF 5	BUSSMAN 1	FIREWALL
84	RELAY, MOISTURE EJECTOR	D13	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
85	RELAY, TAG BRAKE	C14	5 OF 5	BUSSMAN 2	FIREWALL
86	RELAY, TAG BRAKE (POWER FEED)	F8	4 OF 5	94	PASS SIDE ENGINE BOX WALL
87	RELAY, TOW RIGHT TURN/BRAKE	C17	5 OF 5	BUSSMAN 1	FIREWALL
88	RELAY, TOW LEFT TURN/BRAKE	C16	5 OF 5	BUSSMAN 1	FIREWALL
89	RELAY, TRANSMISSION EXHAUST BRAKE	C14	1 OF 5	BUSSMAN REAR	ENG BED ACCESS
90	SENDER AIR PRESSURE	A7	2 OF 5	114	DRIVER SIDE FRONT OF GENERATOR
91	SENDER, FUEL	A9	4 OF 5	51	PASS SIDE TOP OF FUEL TANK
92	SENDER, OIL	B9	4 OF 5	81	PASS SIDE MIDDLE OF ENGINE
93	SENDER, WATER TEMP	B9	4 OF 5	78	DRIVER SIDE TOP FRONT ENGINE
94	STARTER SOLENOID	A13	3 OF 5	69	PASS SIDE ENGINE BOX WALL
95	SWITCH TAG DUMP	D3	3 OF 5	13	LEFT SIDE OF STEERING COLUMN
96	SWITCH, AUXILIARY START	F15	4 OF 5	14	LEFT SIDE OF STEERING COLUMN
97	SWITCH, BRAKE	D11	4 OF 5	21	CENTER OF FORWARD OF STEERING
98	SWITCH, DCDL SENSOR	F5	3 OF 5	77	LEFT SIDE OF STEERING COLUMN
99	SWITCH, DIAGNOSTIC	D14	2 OF 5	120	DASH ACCESS PNL

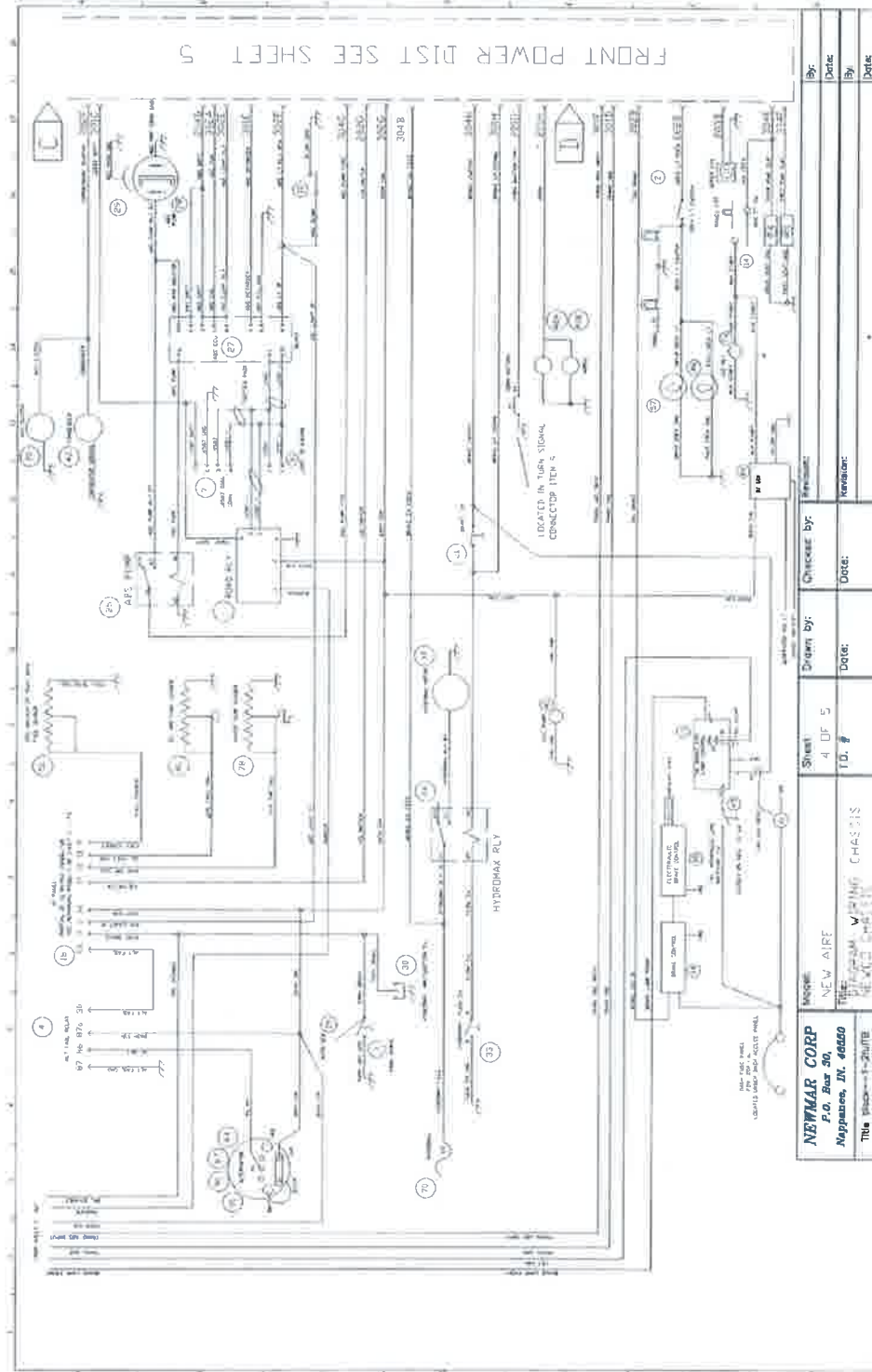
CHASSIS COMPONENT FINDER

100	SWITCH, DOCK LITS	F15	4 OF 5	2	CENTER DASH
101	SWITCH, HEADLIGHT	F15	3 OF 5	6	LEFT SIDE OF STEERING COLUMN
102	SWITCH, HI/LO BEAM	F13	3 OF 5	12	STEERING COLUMN
103	SWITCH, HORN	E13	4 OF 5	9	STEERING COLUMN
104	SWITCH, HYDROMAX FLOW	D5	4 OF 5	33	LEFT FRONT CORNER UNDERNEATH
105	SWITCH, HYDROMAX MALFUNCTION	D6	4 OF 5	30	LEFT FRONT CORNER UNDERNEATH
106	SWITCH, INC/DEC	D15	2 OF 5	125	DASH ACCESS PNL
107	SWITCH, ISSPRO SPEED	E3	3 OF 5	32	DASH ACCESS PNL
108	SWITCH, KEY	B15	3 OF 5	15	RIGHT SIDE OF STEERING COLUMN
109	SWITCH, LOW AIR	A12	3 OF 5	22	DRIVER SIDE FRONT OF GENERATOR
110	SWITCH, PAC BRAKE	D10	2 OF 5	135	LEFT SIDE OF STEERING COLUMN
111	SWITCH, PARK BRAKE	C5	4 OF 5	3	LEFT SIDE OF STEERING COLUMN
112	SWITCH, TURN SIGNAL	D15	3 OF 5	9	STEERING COLUMN
113	TAG BRAKE ELECTDRAULIC UNIT	F7	4 OF 5	95	RIGHT FRONT CORNER UNDERNEATH
114	TAG BRAKE CONTROL	F7	4 OF 5	94	DASH ACCESS PNL
115	TAG BRAKE LAMP MODULE	F7	4 OF 5	20	DASH ACCESS PNL
116	TAIL LIGHT INTERFACE	A7	3 OF 5	93	REAR BUMPER
117	THROTTLE PEDAL	E7	2 OF 5	110,112	RIGHT SIDE OF STEERING COLUMN
118	TOW PLUG	A5	3 OF 5	96	REAR BUMPER
119	TRAILER BRAKE CONTROLLER PIGTAIL	A3	3 OF 5	46	DASH ACCESS PNL
120	TRANSMISSION ECU	B5	1 OF 5	215,216	REAR SIDE ENGINE BOX WALL
121	VACUUM PUMP	D9	4 OF 5	41	RIGHT FRONT CORNER UNDERNEATH
122	VALVES, MOISTURE EJECTOR	E1	3 OF 5	63	BOTTOM AIR TANK
123	VALVES, PAC BRAKE	F1	3 OF 5	60	PASS SIDE REAR OF ENGINE
124	VALVES, TAG & DCDL	F3	3 OF 5	64,65,68	BETWEEN REAR AXLES
125	WIPER POWER CONNECTOR	F16	4 OF 5	11	DASH ACCESS PNL



NEWMAR CORP P.O. Box 50, Maysboro, GA 46550 Title block--1-21uTB	Model: NEW AIRE	Sheet 1 OF 1 I.D. #	Drawn by: Date:	Checked by: Date:	Revision: Revision:	By:	Date:
						By:	Date:
						By:	Date:
						By:	Date:





NEWMAR CORP
P.O. Box 30
Naperville, IL 60563

Model: NEW AIR 30
Chassis: 30-210110

Sheet: 4 OF 5
I.D. #

Drawn by: [blank]
Date: [blank]

Checked by: [blank]
Date: [blank]

By: [blank]
Date: [blank]

