

2008

**ESSEX DIESEL PUSHER**

**BY NEWMAR**





## Welcome, Friends!



Welcome to the Newmar family... and what a family it is. Born on Christian principles, and from the desire to build not the most, but the best, the legacy associated with the name Newmar is one of family pride and quality. We take humble pride in our history of innovation. We introduced the industry to the first "slide out" rooms, and continued our tradition of innovation with the first slide-out in a motorized RV, the "Flush Floor" slide-out, and the smooth "seamless" fiberglass body.

Your new Essex is more than just another recreational vehicle. It is the culmination of decades of RV design and building experience. It is at the forefront of current technology, built by the skilled hands and quality conscious eyes of craftsmen.

Here at Newmar, we recognize that a craftsman's final product is only as good as the materials they use, so we are selective about what we put into our coaches. We start with a foundation forged in the strength of steel and aluminum. We fill it with beautiful, durable hardwoods, and select name brand appliances and components, then build it on chassis's that are icons in the fire truck and RV industry because they stood the test of time. Then we hand finish our units with an artists gentle touch.

It is important to us that you not just to enjoy your new unit, but be proud of it, too. Your Essex has been built to the highest standards we have ever set and attained. That's why we back it with the best warranty in the industry. A heritage of quality and dependability make it easy for us to offer that kind of coverage.

The Essex is a special RV. It stands on the shoulders of the industry innovating giants that came before it, like the London Aire, Kountry Aire, and New Aire. Essex proudly carries the Newmar torch into the new century, as a new generation of RV'ing begins. We share your excitement at this moment, and with you look forward to the years and miles of adventure the RV lifestyle offers you in your new Essex. Whether camping at your favorite remote fishing hole, or tailgating at the big game with your friends, have fun in the knowledge that Newmar is with you 24 hours a day, 7 days a week.

Thank you again for your purchase of an Essex, and welcome to the Newmar family.

Newmar Corporation

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READ AND UNDERSTAND THE FOLLOWING INFORMATION BEFORE TAKING YOUR FIRST TRIP IN YOUR RV!	



## GENERAL INFORMATION

Welcome to the world of Essex... a legacy of luxury, a heritage of innovation...

Your Essex is a very special vehicle. Beyond an existence as just another RV, your Essex is a more than a home on wheels. It is a statement. It is an image.

It is a lifestyle.

The Essex is a proud addition to the Newmar line of luxury motor coaches, blending cutting edge technology with an old world eye for detail, and a commitment to unrelenting craftsmanship. The Newmar heritage is one of innovation and creativity. From its inception, the Essex was designed to raise the bar to a new level of convenience and luxury.

### Taking Delivery of your new Essex

The day you take delivery of your Essex is special time. It is when your dealer will walk you around the unit, familiarizing you with the different components and their operation. Because of the size and complexity of the Essex, it is a process that can seem overwhelming, even if you are an experienced RV'er.

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 check list 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.

## 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 the equipment, standard and/or optional, 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.

## The Newmar Warranty on your new Essex

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.

## Warranty Service Deadline

Warranty service required needs to be completed during the term of the warranty. Service work scheduled or performed after the expiration of the Newmar two (2) year, unlimited mile warranty **WILL NOT** be covered.

## Customer Relations

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

Newmar Corporation  
Warranty Department  
72185 C.R. 3  
P.O. Box 30  
Nappanee, IN 46550-0030



## Reporting Safety Defects

If you believe that your vehicle has a significant defect which could cause a crash or could cause injury or death, you should inform the National Highway Traffic Safety Administration (NHTSA) and Newmar Corporation.

To contact NHTSA, you may either call the Auto Safety Hotline toll free at 1-888-327-4236 (TTY #1-800-424-9153) or write to: NHTSA, 400 Seventh Street, S.W., Washington, DC 20590. NHTSA also has established a website where you can contact them:

<http://www.safecar.gov>

## Owners Guide & CD ROM Information

This guide, along with the accompanying CD ROM, 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 are also given for components that are options and may not appear on all vehicles. For more detailed information on components refer to the individual manufacturer's operating instructions contained in the Owner's Information Package.

The limited warranties issued by the chassis and component manufacturers require periodic service and maintenance. The owner's failure to provide this service and/or maintenance may result in the loss of warranty coverage. The owner should review the Newmar Corporation Limited Warranty and other manufacturers' limited warranties on all components applicable to this vehicle. To activate the warranties on the components within your Newmar recreational vehicle, be sure to file the appropriate registration card with the component manufacturer as described with the individual instruction booklet.

Newmar Corporation has compiled the most current information available at the time of publication. 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 Information 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 more clear.

### **Placards and Labels**

You will find a variety of placards and labels located throughout your new Essex. These are installed to aid in the operation of a component, or to warn of potential dangers while operating a specific appliance, accessory, or system. These will include warnings regarding the electrical system, Propane gas system, fueling the RV, and so on. It is important to read these placards and warnings to insure the safety and proper operation of the item.

An example such a label is given below; this label is affixed to your unit on or adjacent to your Propane tank:

**WARNING: DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY.** Overfilling the Propane gas container can result in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid Propane gas.

**NOTE: Reading, understanding, and heading all such labels and placards is critical to the safe, efficient use of your motorcoach.**



## Weight Information

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

**MOTORHOME WEIGHT INFORMATION**

Newmar Serial Number XXXXXX VIN # XXXXXXXXXXXXXXX

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.

<b>CARGO CARRYING CAPACITY (CCC) COMPUTATION</b>		
	<u>pounds (kilograms)</u>	
GVWR.....	XXXXX	(XXXX)
minus UVW.....	XXXXX	(XXXX)
minus fresh water of 85 gallons @ 8.3 lb/gal	XXX	(XXX)
minus LP-Gas weight of 32 gallons @ 4.2 lb/gal	XXX	(XX)
minus SCWR of 2 persons @ 154 lb / person	XXX	(XXX)
CCC for this motorhome*.....	XXX	(XX)

\*Dealer installed equipment and towed vehicle tongue weight will reduce CCC

WARNING: CONSULT OWNER MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES INCLUDING AUXILIARY BRAKE REQUIREMENTS FOR ANY TOWED TRAILER OR TOWED VEHICLE.

## 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.

**GCWR:** Gross Combination Weight Rating is the value specified by the manufacturer of the vehicle as the maximum allowable loaded weight of this motorhome and any 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 this motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, Propane gas, or dealer installed accessories.

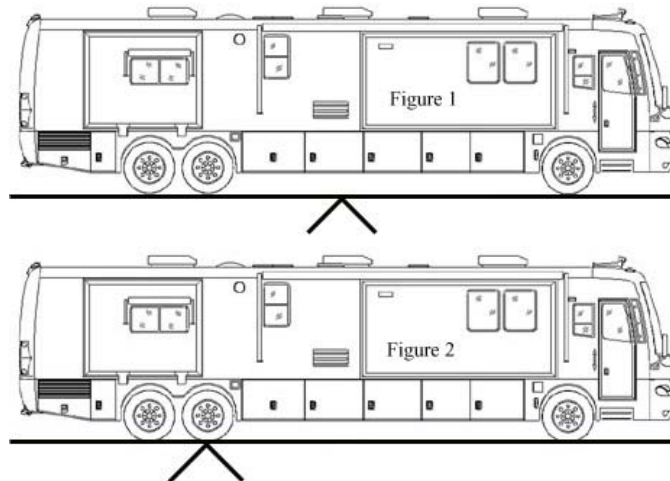
**CCC:** Cargo Carrying Capacity is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full Propane-Gas weight and SCWR.

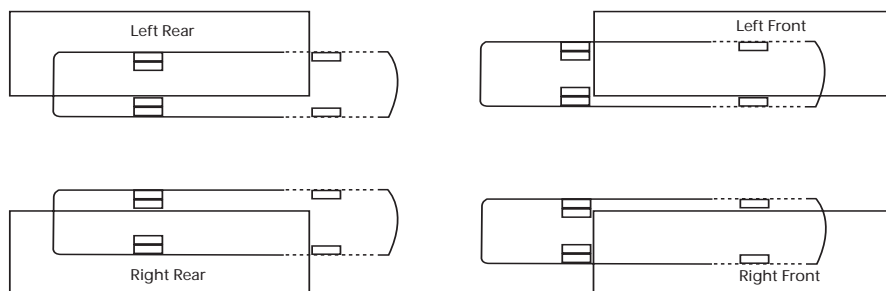
**GVW:** Gross Vehicle Weight is the weight of the unit with all items and supplies that are loaded into the unit at any point in time.

**SCWR:** Sleeping Capacity Weight Rating is the manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).

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

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.





**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. The recommended procedure to weigh a motorhome accurately is on individual corner scales. Since these are not always available, below is a diagram of how to weigh a motorhome on a typical truck scale. Note: Since only one corner can be weighed at a time, the remaining three corners need to be as close to the scale as possible without being on the scale and the unit needs to be as level as possible. Remember, wind and rain can cause inaccuracies of weights.

## GENERAL TIRE INFORMATION

### Tire Nomenclature

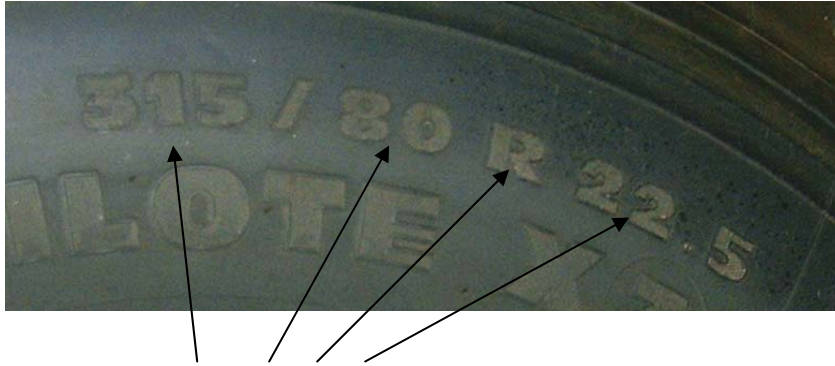
It is important to locate and read all the information located on the sidewall of your tires to insure proper use and long, safe life. The two primary areas of concern are the tire size information, and the operation / inflation information.

### Tire Inflation Information

The sidewall of the tire also contains an information block that contains more detailed construction information (number of plies, etc.), and inflation and carrying capacity information. It is critical that you become familiar with this information, and operate the vehicle within the capacity parameters outlined in the detailed tire inflation information. Failure to follow and monitor tire pressure guide lines closely can result in premature tire failure.

## Tire Size

The tire size is given in the following markings:



This tire size is 315 / 80 R 22.5. From this size, we can determine the physical dimensions of the tire, as well as its basic construction. The tire size breaks down like this:

The first number, “315”, is the section width of the tire in millimeters. Section width is the measurement of the tire from outside sidewall to outside sidewall.

The second number is the height of the sidewall, expressed as a percentage of the section width. In this case, the number is “80”, so the sidewall height is 80% of the section width of the tire.

The “R” in the tire size indicates that this tire is “radial” in construction.

The belts are wrapped around the tire in a radial design, from bead to bead.

The final number in the size designation is “22.5”, which is the rim size the tire was designed to fit. This tire fits a 22.5” diameter wheel.

The sidewall of the tire also contains other information that is important to know to insure proper use of the tire, as well as to maintain long life. Take the time to become familiar with the size, load rating, and pressure information noted on the sidewalls of the tires, and note that these readings can change depending on whether they are used in single tire or “dual” tire situations.

## IMPORTANT RV TIRE INFORMATION

READ AND UNDERSTAND THE FOLLOWING INFORMATION  
BEFORE TAKING YOUR FIRST TRIP IN YOUR RV!

### WARNING

To insure your tires are operating safely, regular inspection of your tires, and checking of tire pressures is absolutely mandatory. **FAILURE TO FOLLOW PROPER INFLATION GUIDELINES MAY RESULT IN TIRE FAILURE, WHICH, UNDER CERTAIN CIRCUMSTANCE CAN CAUSE LOSS OF VEHICLE CONTROL OR ACCIDENTS THAT MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, AND / OR DEATH.**

For safe operation and maximum weight carrying capacity, it is imperative that the tires be inflated to and maintained at the listed tire pressures on the Federal ID Tag that is affixed to the interior wall just behind the driver's seat in motorhomes, and to the lower front corner of the road side sidewall on fifth wheel trailers. Below is a sample of the Federal ID Tag you will find with your RV.

**IT IS PARAMOUNT TO THE SAFE OPERATION OF THE VEHICLE TO MAINTAIN PROPER TIRE PRESSURES. TIRE PRESSURES SHOULD BE CHECKED AND ADJUSTED BEFORE AND AFTER EACH TRIP, AND SHOULD ALWAYS BE CHECKED AND ADJUSTED WITH THE TIRES COLD. NEVER ADD OR RELEASE PRESSURE FROM THE TIRES WHEN THEY ARE HOT (AFTER HAVING DRIVEN A MILE OR MORE).**

For additional information on your tires, contact Newmar Corporation.

MANUFACTURED BY / FABRIQUE PAR:			DATE:		
GVWR/PWBV		KG (	LB)		
GAWR/PNBE		TIRES/PNEU		RIMS/JANTE	COLD INFL. PRESS./PRESS. DE GONFL. A FROID
FRONT/ AVANT	KG LB)				KPA SINGLE DUAL PSI/LPC) <input type="checkbox"/> <input type="checkbox"/>
INTERM/ INTERM	KG LB)				KPA SINGLE DUAL PSI/LPC) <input type="checkbox"/> <input type="checkbox"/>
REAR/ ARRIERE	KG LB)				KPA SINGLE DUAL PSI/LPC) <input type="checkbox"/> <input type="checkbox"/>
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.					
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.					
V.I.N./N.I.V.:		TYPE/TYPE:		FD-228	



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## DRIVING AND SAFETY INFORMATION

### WARNING

Prior to driving your vehicle, be sure you have read this entire owner's guide and 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 & Safety  
Information

### Before Driving Away

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, 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.
- Verify that the entrance step has retracted prior to engine ignition.

### 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. 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.

### Dash Instrumentation and Controls

The dash in your new Essex is designed to be ergonomically efficient as well as aesthetically pleasing. It features instrumentation that allows you to monitor the engine, chassis, and power train as you drive. Warning and status lights alert you to conditions that require your attention, and switches, buttons, and accessories are positioned at your fingertips. All dash gauges are “back-lit” for enhanced visibility during night driving. The gauges are arranged as follows:

#### Left Cluster:

**Voltage:** Displays DC voltage at the chassis battery terminals. Note that some variation in the readings on this gauge is normal. With the ignition key in the “run” position, but the engine shut off, it will read chassis battery voltage. If the engine is running, the voltage displayed reflects the DC voltage being supplied by the engine alternator as measured at the chassis batteries.

**Fuel:** Displays the approximate level of fuel left as a fraction of a tank (“Full”, “3/4”, “1/2”, “1/4”, and “Empty”). Note that accuracy of this gauge is greatly influenced by motion of the unit, or sloped terrain. The readings are an approximation of the remaining fuel in the tank.

**Front Air Tank:** Displays the air pressure in the front air tank. The normal operating range for this air system is 90 – 125 PSI. Air from the engine mounted compressor fills the tank when the engine is running. The air is used to inflate air suspension bags, and to operate the air brakes on your Essex, as well as any other air powered accessories.

**Rear Air Tank:** Displays the air pressure in the rear air tank. The normal operating range for this air system is 90 – 125 PSI. Air from the engine mounted compressor fills the tank when the engine is running. The air is used to inflate air suspension bags, and to operate the air brakes on your Essex, as well as any other air powered accessories.

### Center Cluster

**Speedometer:** Reads vehicle speed in miles per hour / kilometers per hour.

**Odometer:** Cumulative miles on your Essex are displayed on the screen located at the bottom of the speedometer. This electronic digital display allows for easy reading. The odometer also incorporates two separate “trip” odometers, which can be reset to “0” using the button at the bottom of the display. This feature is useful for reference mileages when measuring fuel economy or trip distances.

### Right Cluster

**Tachometer:** Displays engine RPM’s (Revolutions Per Minute) when running.

**Oil Pressure:** Displays engine oil pressure in PSI (Pounds per Square Inch). Oil pressure will vary widely with engine temperature and engine operating RPM’s.

**Temperature:** Displays engine operating temperature. Normal operating temperatures are 180 – 220 degrees, depending on how the coach is being used. Towing heavy loads, or operating in the mountains will cause the engine temperature to run higher.

### Jacks Down Warning Light

This light, located under the speedometer, illuminates when the ignition switch is on and the hydraulic leveling jacks are in the “down” position. This light, and the accompanying warning alarm, serve as a reminder to raise and store the jacks prior to departure. The light and alarm will continue until all of the jacks have returned to their “stored” position or unit air system has been replenished.

## Antennae Up Warning Light

This light will illuminate when the television antennae (NOT the DSS satellite dish) is in the extended position. It will turn off when the TV antennae is retracted completely into the “travel” position. There is no accompanying alarm with this warning light.

## Warning Lights and Signals

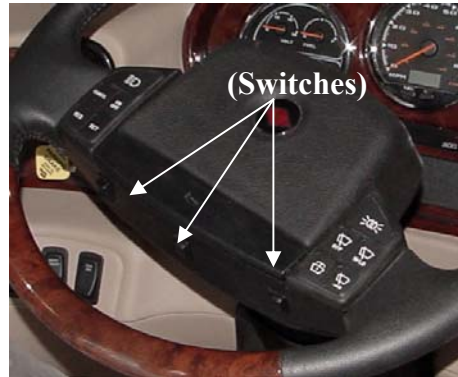
Indicator	Meaning		Action To Take
	Left Turn	Left turn signals are flashing.	
	Park Brake	The parking brake is applied.	
	Cruise Control	The cruise control is engaged.	
	High Beam	The high beams are on.	
	Auxiliary Brake	The auxiliary brake is applied.	
	Seat Belt Reminder	Buckle Up!	
	Low Fuel	Fuel level is below 1/8 tank.	
	Right Turn	Right turn signals are flashing.	
	Check Transmission	Unknown transmission problem has been detected.	Service the vehicle.
	Transmission Temperature	The transmission has overheated.	Pull over and stop engine as soon as it is safe.
	Anti-Skid Brake	Problem detected in ABS	Service the vehicle.
	Water In Fuel	The fuel/water separator is full.	Service the vehicle.
	Wait to Start	Wait to start engine.	Do not start engine while this telltale is on.
	Maintenance	Scheduled maintenance is due.	Service the vehicle.
	Check Engine	An unknown engine problem has been detected.	Service the vehicle as soon as possible
	Stop Engine	A potentially serious engine problem has been detected.	Pull over and stop the engine as soon as it is safe.

## Spartan Smart Wheel

(w/Power Pedal controls)

The Spartan “Smart Wheel” offers a touch pad switch panel that allows you to operate a number of different driver related functions without ever having to take your hands off of the steering wheel. It offers fingertip control of wipers, washers, headlamps.

On the bottom of the steering wheel switch pad are three rocker switches. These switches control the tilt and telescope position of the steering column, and the position of the brake and throttle pedals. The first switch (on the left) tilts the steering column up and down to allow for easy access to the drivers seat, while still allowing the driver



to position the wheel for comfort and an excellent view of the instruments. The center switch allows the driver to telescope the steering wheel position in or out, again to provide for greater comfort and an unimpaired view of the gauges.

The far right rocker switch moves the brake and throttle pedals under the dash. This allows for greater flexibility in seating position, as well as improved individual access to the pedals.

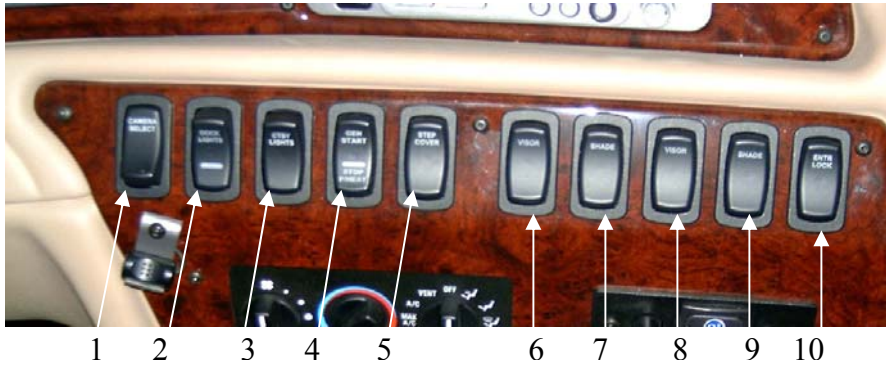
## Seat Memory

Your Essex is equipped with a “Seat Memory” package that allows you to set and store up three different combinations of seat, steering wheel, pedal, and exterior rear view mirror positions for up to three different drivers.

To program a driving position, position the seat, the pedals, steering wheel and exterior rear view mirrors so they are set for travel. Press and hold “Set”, then press and release either the #1, #2, or #3 button. The position of each of those components is now stored in the memory. Any time you turn the ignition on and press the number button chosen, the seat, pedals, steering wheel, and exterior rear view mirrors will return to this preset position.

## Dash Switches

To ease operation of the various accessories and systems used during travel, the “cockpit” area has been designed to put controls and switches within easy reach of the driver. The following is a description of the switches and their functions.



### Right side switch panel

- 1.** Camera Select (toggles between different rear / side vision cameras)
- 2.** Docking Lights (operates exterior docking lights to aid in parking after dark).
- 3.** Courtesy Lights (floor mounted pathway lighting).
- 4.** Generator Start / Stop (starts and stops generator).
- 5.** Step Cover (folds entrance steps to form a platform for pass side foot rest).
- 6.** Drivers Side Sun Visor (operates drivers side windshield sun visor).
- 7.** Drivers Side Sun Shade (operates drivers side window sun shade).
- 8.** Passengers Side Sun Visor (operates passengers side windshield sun visor).
- 9.** Passenger Side Sun Shade (operates passengers side window sun shade).
- 10.** Entrance Lock (locks and unlocks power lock on entrance door).



## Right Side Switches (above ignition switch)

- 1.** Air Horn (selects between air horn and electric horn).
- 2.** Overhead Fans (turns on the fans in the front overhead cabinet to circulate air across the windshield).
- 3.** Fan Speed (selects speed of front overhead fans).



1 2 3

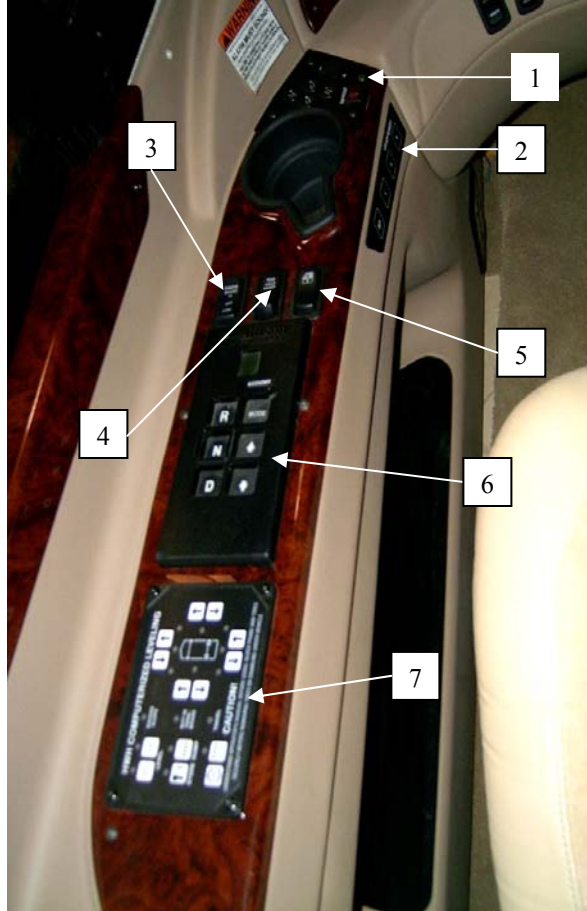
## Left Side Dash Switches

- 1.** Fog Lights (operates exterior front “fog” lights).
- 2.** Battery Boost (Momentarily connects the house batteries and chassis for additional cranking power).
- 3.** Aux (auxiliary) Air (operates the small electric air compressor used by the HWH Leveling System for air leveling of the coach).



## Drivers Side Console Switches

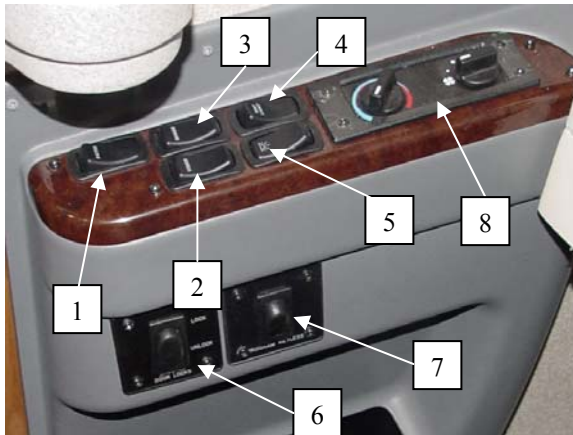
- 1.** Power Mirror Control Pad (adjusts exterior rear view mirror position. Also operates mirror heat for improved visibility in adverse conditions).
- 2.** Memory Seat Control Pad (allows programming of up to three different driving positions into a memory).



- 3.** Engine Brake Switch (operates engine brake; "Hi" and "Low" selectable).
- 4.** Tag Axle Dump (bleeds the air out of the tag axle suspension to place more weight on the drive axle tires for improved traction in slippery conditions).
- 5.** Drivers Power Window Switch (operates drivers side power window).
- 6.** Transmission Selector Pad (operates Allison transmission).
- 7.** HWH Leveling System Touch Pad (operates HWH leveling system).

## Passenger Side Console Switches

- 1.** Patio Light  
(operates exterior patio light).
- 2.** Power Visor  
(operates passenger side front sun visor).
- 3.** Power Shade  
(operates passenger side power sun shade).

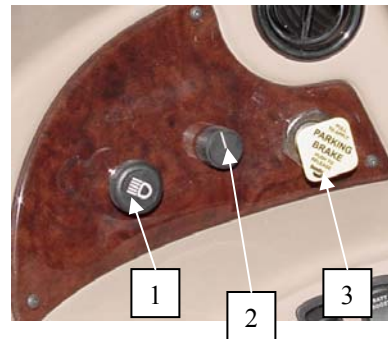


- 4.** Map Light (operates passenger side map light).
- 5.** Interior Lights (operates the four front overhead interior lights to illuminate the steps as you enter).
- 6.** Power Door Locks (power locking for the entrance and basement doors).
- 7.** Keyless Entry Programming (allows personalized programming of the keyless entry system code).
- 8.** Passenger Side HVAC Control Panel (allows passenger to tailor the dash HVAC to their comfort).

## Headlamps and Parking Brake

To the left of the instrument cluster is a small panel that houses the headlamp controls and the parking brake switch.

- 1.** The left switch turns the headlamps and parking / clearance lamps on and off. It also rotates to turn the drivers side map light off and on.
- 2.** The center switch controls the brightness of the dash instrumentation lighting.
- 3.** The right knob engages and disengages the parking brake.



## **Power Seat Operation**

The driver and passenger front seats are mounted on power pedestals that offers a wide range of adjustments. The center “joystick” switch moves the seat horizontally and vertically. The front rocker switch tilts the front of the seat up and down. The first rocker switch aft of the “joystick” switch controls the tilt of the rear of the seat base.

Additional switches control the recline angle of the seat back, and the inflatable “lumbar” support in the lower back region of the seat back.

A release lever allows the seats to rotate on the pedestal, allowing the seats to face into the living area.

## **Rear Vision System**

Your Essex is equipped with a standard Rear Vision system. This closed circuit television system features a camera mounted on the top of the rear cap that is connected to the Pioneer in-dash video screen. This system comes on automatically when you put the transmission in reverse to allow you to see behind your unit when backing. Additionally, it can be manually turned on in transit to allow you to monitor your towed vehicle, or for additional assistance in passing maneuvers.

## **Side View Cameras (optional)**

As an option for the rear vision system, your unit may be equipped with “side view” cameras. These cameras are tied into the rear vision system and are activated by the turn signals. When a turn signal is activated, the monitor will switch to display that side of the unit. If the rear vision monitor is turned on manually, you can toggle through the cameras by using the “source” button, allowing you to stay on any given camera that you chose.

## **Trip Tek Monitoring System**

Your Essex is equipped with the “Trip Tek” Monitoring system.

This system uses the rear vision monitor panel to display information regarding engine and powertrain use and maintenance, generator use and maintenance, and trip information.

By using the Trip Tek control panel (located above the in dash radio), you can scroll through the various menus on the rear vision monitor screen to select the information you seek, and to program and reset service interval reminders.

For detailed operating instructions, please refer to the Trip Tek operators guide supplied with your new Essex.

### **Pioneer In-Dash Stereo**

Your Essex features a Pioneer AM/FM/CD in-dash stereo. This stereo plays through separate speakers from the other audio – video equipment in your coach. This radio features up to 18 radio presets, a variety of tone controls, and a CD player. It is also XM satellite radio capable, and also controls the standard 6 CD changer.

To operate the stereo, press the “Source” button in the upper left hand corner of the radio face. Pressing the source button once turns the stereo on playing the last mode selected (AM, FM, CD, etc.). Use the “Source” button to alternate between music sources.

For detailed operating instructions on your Pioneer stereo, please refer to the manufacturer’s information provided with your unit. XM satellite radio is available by contacting the XM provider directly. A monthly fee is involved to subscribe.

### **CD Changer**

A six disc CD changer is standard in the Essex. It is designed to work with your factory mounted Pioneer in dash stereo. Use the “Source” button on the face of the Pioneer stereo to select the CD changer, then use the controls and display on the face of the stereo to select the disc and song you want to hear.

### **Pioneer Navigation System (optional)**

Your Essex may be equipped with the Pioneer GPS based Navigation system. This system uses a DVD ROM drive and GPS technology to guide you through maps and information for traveling assistance. It features voice prompts, and touch screen technology to make scrolling through the menus and getting information incredibly easy.

To begin operation, simply turn on the system and follow the simple commands that appear on the screen. Detailed manufacturers instructions are included with your Essex literature. Step by step instruction is also included in your Essex CD ROM.

### **Buddy Screen Pass. Side Nav. Monitor (optional)**

As an option for the Pioneer Navigation system, a second monitor for the navigation system is available for the passenger side. This monitor is located under the front overheard cabinet, just inside the entrance door. It is mounted on a swiveling, tilting head so positioning it for maximum comfort is possible.

### **DC Power Point Receptacles**

At the bottom of the center section of the dash are a pair of DC “Power Point” recepticals. These allow you to plug in a variety of 12 volt DC accessories, including cell phone battery chargers, camera battery chargers, and so on. These are fused at 20 amps.

### **Solar Panel Indicator**

Your Essex is equipped with a solar panel which charges the **chassis** batteries when exposed to sunlight. On the dash is a red LED charge indicator to show when the system is charging the batteries.

It is important to note that the system may not indicate a charge any time it is exposed to sunlight. The built in “regulator” will only allow the system to charge the chassis batteries when their voltage is low. The system will charge at the following rate:

<u>Battery Voltage</u>	<u>% of Battery Charge</u>
12.7 VDC	100%
12.4 VDC	75%
12.2 VDC	50%
12.0 VDC	25%
11.9 VDC	0%

For example, if the chassis batteries are above 12.7 VDC the solar panel indicator will not glow to indicate the system is charging.

### **Transmission Shift Selector**

The Allison Transmission control pad is located to the left of the driver on the switch panel. The shift selector allows you to shift the transmission into any one of six forward gears, or reverse. Additionally, it allows you to select an operating mode based on your particular driving style, or driving conditions.

When the transmission has reached normal operating temperature, (above 180 degrees) the transmission shift selector can be used to check the transmission fluid level. Press the up and down arrows simultaneously, and the display will either say “Trans OK”, or it will display a number. The number displayed is the amount of quarts that need to be added to the transmission.

## Safety Precautions

### 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 and/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 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.

## PROPANE GAS & FUEL

### WARNING

- Propane gas containers, gasoline or other flammable liquids shall not be placed or stored inside the vehicle because fire or explosion may result. Propane gas containers are equipped with safety valves that relieve excessive pressure by discharging gas into the atmosphere.
- While refilling the fuel or Propane tank, the engine must be off, all pilot lights must be extinguished, and appliances turned off. The vehicle should be as level as possible, and the service valve should be turned off. Smoking is also prohibited at this time.
- Exhaust gases contain carbon monoxide (an odorless, colorless, and poisonous gas).
- These gases are produced by burned gasoline, diesel, or Propane 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.
- An open flame is never to be used to test for Propane gas leaks.
- All protective covers and caps must be replaced after filling the Propane system.
- Once the valve is closed, securely latch the Propane door.
- Propane gas and natural gas are not interchangeable. Never connect natural gas to the Propane gas system.
- The use of equipment such as wood and charcoal grills and stoves inside this recreational vehicle may cause fires or asphyxiation.

### Propane Gas System General Information

A warning label has been placed near the Propane gas container. This label reads:

**WARNING: DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY.** Overfilling the Propane gas container can result in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid Propane gas.

The Propane gas system components in your unit have been approved for use in camping vehicles by a nationally recognized testing laboratory. Propane gas is a clean-burning dependable fuel when properly handled. The Propane gas tank



mounted on your unit contains liquid propane gas under high pressure. The liquid gas vaporizes as the fuel is used and passes through the tank valve to a regulator that automatically reduces the pressure. The low-pressure gas is then distributed to the appliances through the pipe manifold system. Appliance lighting problems are commonly caused by an improperly adjusted gas regulator. Never attempt to reset the regulator yourself. Have an authorized service technician make any necessary adjustments. We recommend that you have the Propane gas system checked by an authorized service technician at least once a year and after every extended trip. Although the manufacturer and dealer carefully test for leakage, travel vibrations could loosen fittings. Leaks can be easily found by applying leak detector solution at the connections. If leak detector solution is not available, a soapy water solution made with dish soap can be used. Tightening the fitting usually stops any leaks. If this does not work, shut off the main gas valve at the tank and immediately consult an authorized service technician for repairs. If a leak is suspected, the identifying odor smells similar to rotten eggs (sulfur). Never test for a leak by lighting a match or having an open flame where you suspect leaking gas.

**WARNING**

Shut off the main gas valve at the tank when the camping vehicle is not in use. Also, shut off the valve when refueling to avoid potential danger from pilot lights igniting fuel fumes. Some appliances, such as the refrigerator, have DSI (direct spark ignition) boards, so it is important that you turn the appliances off when the Propane gas is off. The ignition in the appliances will continue to spark even if there is no Propane gas available.

**Propane Regulator**

The regulator acts as the heart for the Propane gas system. The Propane gas in the tank is under high pressure. The regulator reduces the pressure of this gas so that it is safe to use with the various appliances in your unit. If corrosion is noticed, contact a qualified Propane gas service technician. Do not adjust the regulator. It is factory preset. Adjustments are to be made by a qualified Propane service technician using specialized equipment.

Propane gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with

a protective cover. Make sure that the regulator vent faces downward and that the cover is kept in place to minimize the vent blockage that could result in excessive gas pressure causing fire or explosion.

### Propane Distribution Lines

The primary manifold is a black steel pipe running the length of your unit. Most secondary lines leading to gas appliances are made of copper tubing with flare fittings. If any of the gas lines rupture, do not attempt to splice them. Always run a new line. We recommend gas distribution work be performed by an authorized service technician. The main valve at the Propane tank must be closed when removing or servicing any gas appliance. This will prevent dangerous gas leakage that could result in an explosion and possibly serious injury.

If a leak is suspected, have the systems inspected and repaired by a qualified service technician.

### Precautions & Recommendations

- Inspect the Propane fill valve for foreign materials before refueling.
- Shut the pilot lights off prior to refueling Propane gas tanks.
- Never check for gas leaks with an open flame (match, etc.).
- Gas lines should be visually inspected periodically.
- Have the gas system inspected yearly and before and after extended trips.
- The gas system should be inspected and repaired by qualified technicians only.

#### **WARNING**

The Propane system in your recreational vehicle is designed for liquefied petroleum gas only. Never attempt to connect natural gas or butane gas in this system.

### 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.

### IMPORTANT

NEVER spray any type of aerosol or cleaner directly onto or into the Propane, CO, and Smoke detectors. Spraying any type of material into the opening on any of these detectors can render them useless, and would not be covered by the manufacturers warranty.

## Propane Detector

Propane gas is an extremely flammable substance. The Propane detector in your coach is located in the main living area close to the floor. It is wired to the 12 volt "house" electrical system in your unit. On the face of the detector are operating instructions and a test button. The Propane detector should be tested before every trip, and any time the unit is pulled out of storage.

In the event the detector alarms while in use, immediately turn off all potential sources of ignition (furnace, water heater, refrigerator, stove / range, etc.), and close the Propane valve to shut off the flow of Propane gas. Open the windows

and doors to facilitate ventilation of the unit, and evacuate the unit until the Propane gas has dissipated. Have the Propane system checked for leaks by a qualified RV technician.

### **CO Detector**

Carbon Monoxide is a colorless, odorless gas that is manufactured during the burning of fossil fuels. The CO detector is located on the ceiling of your unit. It is operated with a 9 volt DC battery, and alarms any time carbon monoxide levels beyond the normal range are detected. It should be tested before every trip, and any time the coach has been in storage. If the alarms sounds, open windows and vents to allow any carbon monoxide that has built up to dissipate, and evacuate the vehicle until the alarm has stopped. The CO detector can be cleaned by vacuuming the openings in the side of the case.

### **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 you 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 and the red "EXIT" label. To open the egress window, lift the handle 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.

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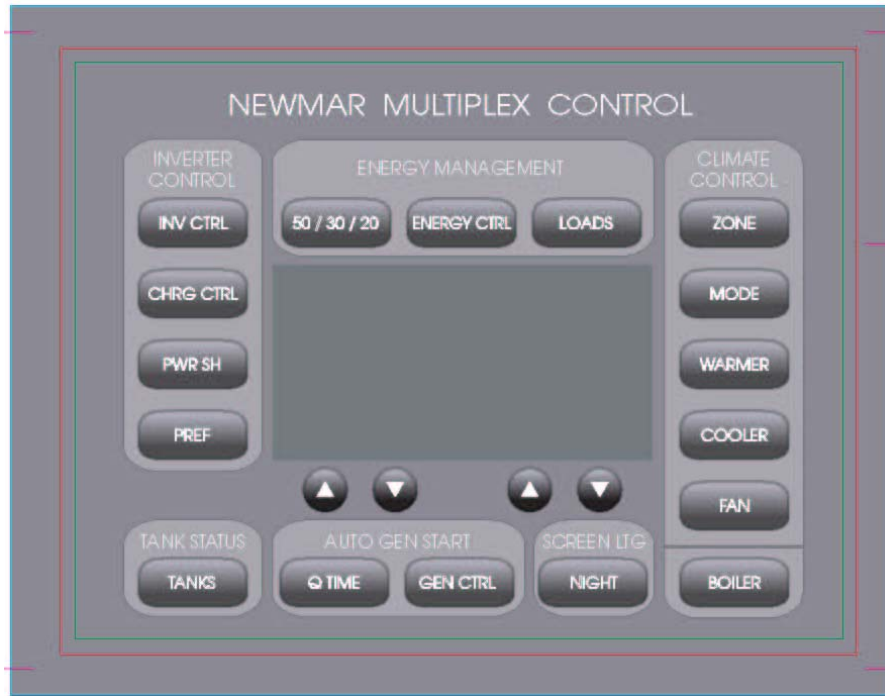
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## TOUCH SCREEN MULTIPLEX

Your Essex has been equipped with a Touch Screen Multiplex system that combines the operation of a number of systems into one convenient, easy to operate message and control center. This display features the ability to move from one system to the next while maintaining settings on all other controlled systems and equipment.



From this display you will control the following functions:

- **HVAC** (all functions of normal thermostat, including temperature programming, zone selection, source selection, and fan speed).
- **Inverter** (all functions of invertors operation, including inverting, charging, and battery maintenance).
- **Energy Management System** (all functions of Energy Management System, including power sharing, load shedding, and incoming amperage selection).

- **Auto Genset Start** (controls all automatic start and stop parameters for the generator)
- **Holding Tank Monitor Panel** (gives accurate readings of fluid levels in black, gray, fresh, and Propane tanks. A separate small panel is also provided in the basement water compartment for monitoring tank levels while draining or filling the tanks).

Select the system you want to operate, and use the buttons around the LCD display to move through the functions and establish the desired settings.

## HEATING AND AIR CONDITIONING

### Air Conditioning

The air conditioners 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 conditioners circuit breaker must be in the ON position to work.

To assist the air conditioners in cooling the coach, park in the shade and keep the drapes or blinds closed. Set the thermostat to the desired 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 conditioners circuit breaker. The circuit breaker protects your air conditioner from damage and is necessary during low voltage conditions. The tripped breaker is not a fault in your electrical system.

The cool air from the air conditioners is ducted throughout the coach through ceiling air ducts. The Touch Screen controls all functions of the air conditioners and the furnace. Simply select the desired temperature. The blower will cycle automatically, or you may choose low, medium, or high fan settings. Remember all three air conditioners must be in the same mode. Please consult the air conditioners manufacturer’s owner’s manual for further assistance.

**Step One:** Press MODE to select function. (Cool\*, furnace, etc.).

**Step Two:** Press FAN to select Auto, high, med., or low speed.

**Step Three:** Press WARMER or COOLER to select temperature.



**Step Four:** If operating more than one zone, press ZONE and repeat steps 2-4 for each additional zone.

\*Expect a 2-3 minute delay for compressor to start.

**Shutdown:** If there is a 12 volt power interruption for any reason, the system will resume operation on the default settings when power returns. If 120VAC power is interrupted, but DC operation has not been interrupted, the unit will resume operation at the last setting.

## Heat Pump Mode

The standard air conditioners on the Essex are Dometic “Heat Pumps”. A heat pump uses a special valve that reverses the flow of Freon in the system to change the air conditioner to a heater. This system is effective at heating your unit down to approximately 30 degrees (f), and uses the same air duct system as the air conditioning system.

To operate the system in “Heat Pump” mode, turn the CCC thermostat on, and use the “Mode” button to select “Heat Pump” in the zones you want heat in. Set the temperature to your comfort, and the heat pumps will engage and distribute heat throughout the unit. The “Heat Pumps” operate in the same zones as the air conditioners.

## Heating

For your comfort, your new Essex is equipped with the Oasis hydronic heating system. This system uses a “boiler” and a pump to heat and recirculate hot fluid through a series of convectors placed strategically throughout your unit. Fans located on the convectors provide circulation of the warmed air for more even, efficient heating.

The Oasis system uses two different sources for heat. The first, and most efficient, is the diesel burner. This uses diesel fuel from the motor homes fuel tank to burn and create heat. The second heat source is an electric heating element. It is important to note the difference in the two systems.

The output of the diesel burner is 50,000 BTU’s. This is the primary heat source for the Oasis system. The electric heating element has a 5000 BTU output, and should be used only to help maintain the temperature once the diesel burner has brought the system up to proper operating heat levels. From a cold start, the 5000 watt electrical heating element will not operate the system alone.

For heating, your unit is divided into three “zones” on the Touch Screen Multiplex. The “Furnace” mode will appear in all four zones, but only three are active. They are as follows:

**Zone 1:** Dash and Kitchen Convector: These convectors are located under the dash and kitchen cabinets, and control heat in the dash, living room, and kitchen areas. Note that the dash mounted convector is the only one in your Essex that has a two speed fan. The switch controlling the fan speed is located in the front overhead cabinet adjacent to the diesel boiler switch.

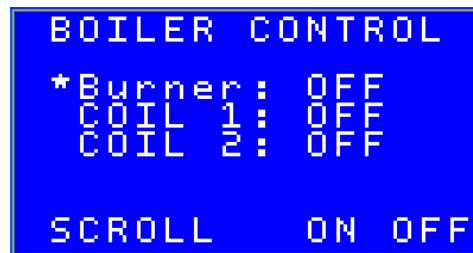
**Zone 2:** No Furnace Operation: There are no “Furnace” functions on this zone.

**Zone 3:** Bathroom Convector: These convectors are located in the bathroom cabinetry and stool room. Please note that the fan switch for the stool room (marked “HEAT”) must be in the “ON” position to get heat in the stool room. It should also be noted that for Stool Room heat, a “rear” zone (bathroom or bedroom areas) must be chosen on the CCC thermostat.

**Zone 4:** Bedroom Convector: These convectors are located throughout the cabinetry and walls of the rear bedroom area.

### Operating the Oasis System

To activate the system, select your heat source, either diesel or electric, using the “Boiler” screen on the e-plex system.



Once you have selected your heat source (diesel or electric), and the boiler is operational, use the Touch Screen Multiplex to select “Furnace”

in the zones you want to heat. Remember, as described above, Zone 2 will display a “Furnace” function, but the thermostat controls no functions in Zone 2 when in the “Furnace” mode.

#### IMPORTANT

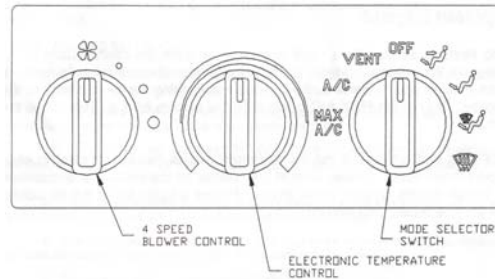
The Oasis “diesel burner” heat source provides approximately 50,000 BTU’s of heat, and is designed to start up and operate the system to it’s full capacity. The electrical heating element provides approximately 5000 BTU’s of heat. .

The system will turn convector fans off and on according to the temperature settings in all but two locations. In those locations, the fan control is separate for independent operation. The first location is at the dash. The convector fan under the dash is operated by a switch in the front overhead compartment. It has settings for on, off, and speed selections.

The second convector fan that is controlled independently is in the “stool room” in the bathroom area. It is controlled by the wall switch labeled “Heat”, and allows the occupant to tailor the room temperature to their comfort separately from the rest of the bathroom.

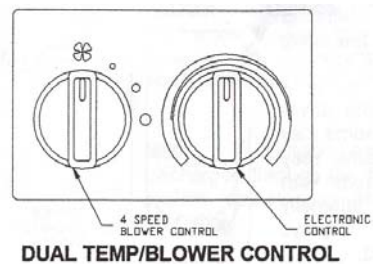
### Dual Zone HVAC Dash HVAC System

For maximum driver and passenger comfort, the Essex features a “dual zone” dash HVAC system that allows driver and passenger to adjust their individual areas to their own comfort level.



The Main Control Panel enables the driver to control the volume (speed) and temperature of the air for the driver's side of the unit, and the air discharge from the system for both occupants.

The Passenger Control Panel enables the passenger to the temperature and volume (speed) of the air being discharged to the passenger side of the vehicle.



# APPLIANCES AND ACCESSORIES

## Generator

### WARNING

All internal combustion engines give off carbon monoxide as a by product of their exhaust. Carbon monoxide is a colorless, odorless gas that is lethal.

Symptoms of carbon monoxide poisoning are:

Dizziness	Headache
Nausea	Weakness or sleepiness
Vomiting	Inability to think coherently

IF YOU EXPERIENCE ANY OF THESE SYMPTOMS, GET TO FRESH AIR IMMEDIATELY. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION RIGHT AWAY. Shut down the genset and do not operate it again until it has been inspected and repaired. ALWAYS MAKE SURE THE CARBON MONOXIDE DETECTOR IN YOUR UNIT IS OPERATING.

Your unit is equipped with a Power Technology generator as standard equipment. An Onan generator may have been installed as an option. Both generators function in much the same manner; please refer to the operating manual that was supplied with your particular unit for detailed directions on your particular genset.

Before starting your genset for the first time each day, and subsequently after each 8 hour cycle of running, the generator manufacturers recommend you perform the following “quick checks” to make sure it is ready to be used.

1. Make sure the CO detectors in your unit are working.
2. Check for signs of fuel or exhaust leaks.
3. Make sure there is adequate clearance around the genset for proper ventilation, and to make sure sloping ground or other terrestrial interference has not occurred. Tall grass or other items that come in contact with the genset may interfere with ventilation or be combustible and cause a fire.
4. Check the oil and coolant levels; inspect for leaks.
5. Check the battery connections to make sure they are tight and clear of corrosion.
6. Inspect genset compartment for road debris or damage that might affect genset performance or safety.

7. Turn off major appliances (such as air conditioners, TV's, and other electronics that may excessively load the genset or may be sensitive to initial voltage surges as the genset stabilizes it's voltage).

The generator can be started from the rocker switch on the dash, from the remote start switch on the generator itself, or from a third switch located by the bed in the bedroom. To start the genset, rock the switch to the "start" position. Depending on the ambient temperatures, the generator may "pre-heat" prior to cranking. This pre-heat condition is noted by flashing the light on the generator start switch until the cycle is complete (up to 15 seconds). Once it has pre heated sufficiently, the starter will engage and the engine will start. Release the switch once the genset starts.

#### IMPORTANT

Excessive cranking can damage the starter motor. Do not crank the generator more than 30 seconds at a time, and allow at least 2 minutes before trying again if the attempt to start fails.

To stop the generator, press the rocker switch to the "stop" side.

#### Auto Genset Start

Your generator can be programmed to start and stop automatically under certain parameters through the AGS (Auto Genset Start) system, which is controlled by the Touch Screen Multiplex system. Operating instructions are included in Chapter 7 of this guide, as well as in the AGS System Operators Manual.

#### WARNING

It is CRITICAL that the AGS system be turned off any time the generator is going to be serviced. Failure to deactivate the AGS system may result in damage, injury, or death if the genset should start unexpectedly.

#### Dishwasher (optional)

Your Essex may be equipped with an optional "Dish Drawer" dishwasher. This appliance is mounted in the kitchen cabinetry below the range, and features a wood paneled front to blend in with the décor.

The dishwasher operates on 110 volts AC. For detailed directions on loading dishes, adding soap and cleaning agents, and total operation, refer to the manufacturers directions and video. As with any appliance, maintenance is the key to keeping your dishwasher in top working order. Detailed instructions for cleaning and maintenance are included in the manufacturers owners manual and accompanying video.

#### **IMPORTANT**

It is critical that the dishwasher drawer be locked into place any time the unit is in transit. If it is not, it can extend suddenly and without warning, potentially damaging the dishwasher, its contents, the cabinetry, and anyone standing near it. Before traveling, lock the dishwasher drawer in the closed position, and turn the breaker off to the appliance in the 110 breaker panel to insure the lock does not release until desired. The lock will release when power is restored.

### **Washer / Dryer (optional)**

Your Essex may be equipped with an optional combination washer / dryer. Depending on your floorplan, your coach may be equipped with separate, stackable washer and dryer units. The washer / dryer will be located in a cabinet either in the bathroom or bedroom of your unit.

For detailed instruction on operating the washer / dryer, refer to the manufacturers information that is supplied in your literature bag. This literature provides detailed direction on operation, care, and maintenance of your new appliance.

### **Norcold 17 Cubic Foot Refrigerator**

The standard refrigerator in the Essex is the Dometic “Side-Wise” side-by-side. The unique design allows for additional freezer storage space that is not normally found in a side by side refrigerator.

The control panel for the refrigerator is located inside the right hand door, at the top of the cabinet. The two window display allows you to set the refrigerator cabinet temperatures to the desired levels, then allows you to monitor them with the digital read out.

### **Norcold Side by Side Refrigerator (optional)**

The Norcold Side by Side Refrigerator w/ Water Dispenser and Ice Maker built in is an optional refrigerator in the Essex. This refrigerator offers the convenience of water and access on the freezer door.

The control panel for the refrigerator is located on the front of the appliance between the right side freezer and refrigerator doors. It features a digital display that allows you to select the incoming power source (AC current or Propane gas), and allows thermostatic control of the operating temperature. If your unit is equipped with the “All Electric” option, the accompanying Norcold refrigerator will only offer AC current as the power source.

For detailed operating instructions, please refer to the Norcold Operators Manual that was supplied in the literature bag of your Essex.

### **Norcold Freezer (optional)**

As a factory installed option, Newmar offers a basement mounted Norcold freezer. This freezer operates on 12 volt DC current, or 110 AC current as available. The side mounted thermostat can be used to adjust the freezer cabinet to the desired temperature. Latches secure the lid for a tight seal, and for traveling. For ease of access, the freezer is mounted on a slide tray.

### **Princess Recessed Cook Top**

Your Essex features a Princess two burner Propane cook top as standard equipment. It features electronic spark ignition. To use the cook top, simply press down and turn the burner control to the desired setting, and the electronic ignition will spark to create a flame. The burner controls will vary the flame to your cooking requirements. Complete operating directions are included with the users manual in the Literature Bag provided with your coach.

### **Princess Electric Cook Top (optional)**

If your Essex is equipped with the “All Electric” option, it will feature the Princess Electric Cook Top in lieu of the standard Propane cook top. Complete operating directions are included with the users manual in the Literature Bag provided with your coach.

To operate the electric range, press and turn a burner control. The associated burner will heat proportionally to the range the burner is turned.

## GE Microwave / Convection Oven

Standard in your Essex is a GE Profile Microwave / Convection oven. It boasts a number of standard features that will make cooking quick and convenient.

To set the clock on the GE Profile Microwave Convection oven, press the “Clock” button on the control panel. Using the rotary knob in the center of the control panel, rotate it first to set the correct hour. Once the correct hour is displayed, press the knob to lock your selection in. Repeat the procedure to set the correct minutes, and again press the knob in to lock the minutes into the display. Using the same knob, select AM or PM on the display, and press the knob again to lock the setting in. If the time displayed is correct, press the knob one final time to initiate operation of the clock.

Refer to the GE Profile Microwave / Convection Oven Operators Manual for advanced cooking procedures and additional features of your oven.

## GE Advantium Microwave / Convection Oven (optional)

The GE “Advantium” microwave / convection oven is an available option in your new Essex. Using GE’s “SpeedCooking” technology, it boasts amazingly fast food preparation times. It uses a combination of lights, microwaves, and convection heat to cook entire meals in a fraction of the time it takes in a conventional oven, even browning meats as the cooking process progresses.

For detailed operating and programming directions please refer to the GE Advantium Microwave / Convection Oven Operators Guide, or the CD ROM that was included with your Owners Packet

## Hydraulic Leveling Jacks

### WARNING

It is recommended that the leveling and stabilizing procedure is complete before operating any room extension. Note: The slide out can be operated without utilizing the leveling system, but it is recommended to have the unit as level as possible.

Your Essex is equipped with a combination of air and hydraulic leveling jacks. There are four hydraulic jacks, and they always operate in pairs: front, right side, left side, and rear. Before extending, the engine must be off, the ignition



switch must be in the “ACC” position, and the transmission must be in park. The parking brake needs to be set and the tires blocked securely.

#### **IMPORTANT**

It is recommended that you read the detailed operating directions in the “HWH Operators Guide” prior to operating the leveling systems on your new Essex). The Operators Guide was provided in the literature bags with your unit at the time of delivery.

#### **WARNING**

Be sure the ground on which you are parked will support the weight of your unit. Often material that seems “safe” to level on will not support the weight when pressed on at the leveling jack points. Use caution when leveling on hot asphalt, sand, and grass as the weight of the unit may cause the jacks to sink into the ground. Pads may need to be placed under the jacks to spread the weight over a larger area. ALWAYS look under your unit prior to leveling to make sure the jacks are clear of debris and other foreign materials that may interfere with leveling.

### **“Air” Leveling**

The “Air” leveling system is designed to be used for minor, temporary leveling of the unit (when overnight camping in a parking lot, for example) for basic comfort and convenience. Please note that while this will bring the unit to a “relatively” level stance while on slightly sloped surfaces, it does not deploy the hydraulic leveling jacks to raise the unit significantly or stabilize the unit on the ground. As a result, you may still experience some movement of the coach when walking through it.

### **“Hydraulic” Leveling**

The hydraulic portion of the leveling system uses four hydraulic jacks to level the unit. Because the weight of the unit is on the jacks, and they are in physical contact with the ground, the unit is much more stable and does not shake or move when walking inside it. Additionally, the hydraulic system has a greater range of leveling, allowing it to provide greater leveling capability should you encounter camp sites with substantial slope.

1. Make sure the motorhome is securely parked, and the set the parking brake.

2. With the ignition key in the “ACC” position, press the “LEVEL” button. The light will come on and glow steadily.
3. Once you are certain the leveling area beneath the unit is clear of obstructions, press the “LEVEL” button a second time to begin the automatic hydraulic leveling process. The light will begin flashing and the leveling cycle will begin. The system will dump the air out of the air bags and deploy the jacks to level the unit.
4. To retract the jacks, start the engine and press the “STORE” button. Allow the system to completely raise the jacks and turn itself off.

#### **CAUTION**

Do not lift the wheels off the ground when leveling. The unit can roll forward or backward when tires are lifted off the ground. If the “Excess Slope” light is on, the system is sensing that the site is too sloped to allow the leveling jacks to bring the unit to a comfortable state of level. Great care must be taken when trying to level in a sloped site to make sure a tire (or tires) is not lifted off the ground. Also, the leveling jacks and support system should be cycled once a month or whenever the vehicle is used to keep the system in operating condition.

#### **IMPORTANT**

It is important to allow the HWH leveling system to run the complete cycle and turn itself off when operating in the “store” mode. The system will completely retract the jacks and turn itself off. If the system is turned off prior to the automatic shut off, there is the potential that the jacks have not fully retracted. Also, be sure to visually inspect the jacks prior to departure to insure that they have fully retracted and the underside of your unit is ready for travel.

### **Security System (optional)**

Your Essex may be equipped with an optional security system. This system uses a variety of sensors and switches to guard your unit and it’s contents

When armed, the system protects the entry door, the battery compartment, and the front generator area. There is also an impact sensor under-dash that will feel an impact in the front cab area. There are (2) motion sensors, one in the kitchen, and one in the bedroom. These sensors can be defeated if you want to arm your system while the coach is occupied. The switch is located on a labeled plate in the cab area, along with the valet switch. Consult your manual

for all features of the valet switch. To arm the system, press the button w/ the lock symbol on it. You will hear one siren chirp, and the entry door will lock (if equipped). To disarm the system, press the button w/ the un-lock symbol. You should hear two siren chirps. If you hear more than two, your system was set off in your absence. The system also includes a pager that alerts you up to 2 miles away if the alarm is engaged. You can also remote page via the pager buttons on the dash. Any technical questions can be directed to Nagy FleetNet at 800/ 232/ 4479.

### **Keyless Entry**

For your convenience, your Essex has a keyless entry system installed. It is operated by the standard key fob remote control, or by the optional key pad at the entrance door. This system allows you to access the entry door and basement doors by simply pushing the button on the key fob, or if so equipped, entering your personal code on the optional keypad. If equipped with the optional keypad, the system is operated and programmed as follows:

#### **Unlock Entrance Door:**

Enter 3 to 8 digit personal code. (entrance door will unlock)

#### **Lock Entrance Door:**

Enter lock code 559. (entrance door will lock)

#### **Unlock Baggage Doors:**

Enter 3 to 8 digit personal code, within 5 seconds press 7/8 key. (entrance door will unlock then baggage doors will unlock after pressing 7/8 key)

#### **Lock Baggage Doors:**

Enter lock code 559. (entrance and baggage doors will lock)

#### **Change 3 to 8 digit Personal Code:**

1. Press and release the keyless entry programming switch. (Four rapid beeps will sound)
2. Enter 1119 on the keypad. (Three rapid beeps will sound)
3. Within 5 seconds enter new 3 to 8 digit personal code.
4. Wait 5 seconds and listen for two rapid beeps. (Programming is finished)

All systems are shipped from the factory with a master personal code of 13579. The keypad has 5 keys. Each key represents 2 digits. For example the first key can be used as either or both the numeral 1 and the numeral 2.

**NOTE:** Your 3 to 8 digit personal code cannot start with numerals 5 or 6.

**FORGOTTEN PASSWORD:** If you forget your password, unlock the door using your key to gain access to the program switch and program in a new password.

**CABINETS, FURNITURE & INTERIOR  
FEATURES**

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Cabinets, Furniture  
& Interior Features



## CABINETS

The cabinets in this unit are constructed on site at the Newmar production facility. Hardwood raised panel cabinet doors are standard throughout the unit. Brass or brushed nickel polished door and drawer hardware give the interior an added touch of elegance. A variety of finishes are available for the hardwood cabinetry. All of the finishes are as durable as they are beautiful.

For all their durability, however, the nature of hard woods is that they can (and frequently do) change color, or darken when exposed to sunlight. Because of this, it is important that the window shades be down during long periods of storage. Changing “shades” of color, or discoloration from exposure to sunlight is not a warrantable repair as it is the nature of the hardwood products used in your Essex.

Storage is an important factor to all RV owners. Keeping this in mind, the cabinetry is structured to provide as much storage as possible. Your unit may include features such as adjustable pull out pantry boxes in the kitchen or the silverware drawer may have a molded silverware divider tray for added storage. In the bedroom, the bed platform lifts to provide an additional, convenient storage area. A strap is provided to help raise the bed. Once the bed platform is lifted, it is held open by pressurized struts to allow hands-free access.

A countertop with a color coordinated edge is installed in the kitchen. To clean, 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.



On most floor plans, the “drawer” directly in front of the kitchen and lavatory sink does not pull out, but rather flips down. This provides a storage tray for dish cloths, scouring pads, washcloths, etc.

Metal drawer guides may be equipped on all of the drawers in your unit. These 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.

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**

### **Kitchen / Dinette Area**

A standard feature in the kitchen area is the hidden leaf dinette table. This table allows you to add more room to your table top when desired. Two fixed chairs and two folding chairs accompany this table. The chair seats are designed with a coordinating upholstery fabric to match your décor.

Depending on the floorplan of your unit, a built-in “booth” style dinette may be an option.

### **Living Room Furniture**

Covered in coordinating fabrics and accented with pillows, the sofa will fold flat to provide additional sleeping space. To fold the sofa out to the sleeping position, lift and pull on the front of the sofa seat cushion. The seat cushions will swing out and the seat back will slide down to form the sleeping surface.

Depending on the floorplan and options, a variety of living room furniture is available in the Essex. Options may include a free standing leather/vinyl recliner, a leather/vinyl push back recliner with an ottoman, a leather/vinyl swivel rocker recliner, or a leather/vinyl “L”-lounge.

The driver and passenger seats in the Essex are covered in leather, and feature six-way power position adjustment, lumbar support, and a passenger footrest. The base moves the chairs forward and backward, as well as up, down, and forward and reverse tilt. The seats also have a three point seat belt and swivel and recline features. When the unit is not in motion, they can be swiveled to



face the living room of the unit. To turn the chairs, first extend the slide out room. Tilt the steering wheel up and toward the dash. Reposition the seat to provide enough clearance for the steering wheel. Once this is done, the chairs will swivel without interference. The power lumbar control switch is located on the left-hand side in front of the power base controls. Pushing the switch forward will inflate the support while pushing back will deflate it.

### **Bedroom Area**

A “king size” bed is standard in your Essex. A decor coordinating quilted bedspread with a reverse sham and accent pillow(s) may be included as part of this unit’s standard bedroom package. For best results, it is recommended that the bedspread be DRY CLEANED ONLY.

For your convenience, lights have been added in the closets and wardrobes.

## **INTERIOR FEATURES**

### **Bedspread**

A decor matching Duvet with coordinated pillow shams and an accent pillows are part of the standard package for this unit. The recommended cleaning instructions for this spread are DRY CLEANED ONLY. The materials that make up the spread may have been treated, and dry cleaning will preserve this treatment.

### **Flooring**

The floor covering throughout the living room and bedroom of the unit is nylon tufted cut loop 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. The flooring in the kitchen / bathroom areas are polished porcelain tiles. For everyday cleaning, simply vacuum to remove loose dirt and debris. Mop occasionally, using a minimal amount of water. For more thorough cleaning, mop with a mixture of soap-free household cleaner and water (vinegar and ammonia both work well). DO NOT SATURATE THE FLOOR WITH WATER; this could damage the flooring. Abrasive cleansers and scouring pads can scratch and damage the surface also.

## Ceiling

The ceiling in this unit is covered with a padded vinyl ceiling headliner. It is cleaned by wiping gently with a soft cloth and a mild detergent. **DO NOT** saturate the material, and wipe it dry when finished cleaning with a soft, dry cloth.

## Window Treatment

The window treatment throughout this unit, except in the kitchen, is pleated day/night window shades and lambrequins. 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, though under certain light conditions, it can cast shadows and silhouettes. If any curtains are installed in this unit, cleaning instructions are DRY CLEAN ONLY. Water-based products are not recommended for cleaning fabrics. Water-based products may cause excessive shrinkage or fading.

## Safe

Located under the bed base is a built in fire resistant “safe box / file cabinet”. This is accessed by raising the bed base / mattress platform. The key for the lock is included with your unit at the time of delivery.

Chapter **5**

**SLIDE OUT FEATURES**

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## SLIDE OUT FEATURES

### WARNING

**Read the following slide out room instructions before activating the switch.**

Do not allow children to operate the slide-out.

Do not allow any person to place their arms, legs, body or head between any pinch point of the lock arms, slide-out fascia, interior walls, exterior walls, objects, or floor as serious injury or death could result.

Any adjustments, or repairs, must be made only by "NEWMAR" qualified personnel.

Always check the interior and exterior of the coach for objects, or persons, that are in the path of the slide-out when extending or retracting the room.

Always check the roof to be sure any objects, or debris, are removed before retracting the room.

### CAUTION

It is recommended that the leveling jacks be extended and the unit level before operating the slide out. Note: This slide out can be operated without utilizing the leveling system, but is recommended to have the unit as level as possible.

Your unit is equipped with at least one power slide out room. It is important that you read and understand **ALL** directions, both in this Owners Guide, and on **ALL** the labels affixed inside your unit **PRIOR** to operating your slide out room(s).

Your unit will contain labels with very specific operating and safety information. There are a number of precautions that **MUST** be observed every time the rooms will either be extended or retracted. For your personal safety, and to prevent potential damage to the slide out mechanism and room, it is paramount that these directions be followed completely. Slide out operation has changed for all RV's after 2006, and it is important that you understand the operation procedure completely and observe all safety precautions to insure safe, proper operation.

All Slide Out labels contain the following warning:

**WARNING**

**Do not allow children to operate the slide-out.**  
**Do not allow any person to place their arms, legs, body or head between any pinch point of the lock arms, slide-out fascia, interior walls, exterior walls, objects, or floor as serious injury or death could result.**  
**Any adjustments, or repairs, must be made only by “NEWMAR” qualified personnel.**  
**Always check the interior and exterior of the coach for objects, or persons, that are in the path of the slide-out when extending or retracting the room.**  
**Always check the roof to be sure any objects, or debris, are removed before retracting the room.**

Slide Out Features

## General Instructions

### IMPORTANT

The slide out room should be inspected for alignment every six (6) months. If alignment is necessary, have the room adjusted.

### IMPORTANT

The slide out room can be stopped at any time by releasing the slide out switch. If the slide out room stops before reaching the full “OUT” or “IN” position, the slide out controller may need adjustment. To adjust the slide out controller, turn the adjustment screw clockwise to increase the power and counter-clockwise to decrease the power. Move the adjustment screw in small increments. Try moving the slide out room again. Use caution. There is a potential for component or structural damage if the screw is adjusted too high. This screw does not adjust the slide out room speed. It sets the amount of power required to move the room against the mechanical stops.

## Operating the Slide Out Room

Your unit is equipped with Power Locking Arms for the slide out rooms. Designed specifically for this application, these mechanisms automatically “lock” the slide out rooms to the sidewalls of the RV when the room is fully

retracted, securing the room in place and providing a positive seal. The operation of the locking mechanism is totally automatic, and begins when you press the button to extend or retract the slide out room.

#### **WARNING**

Before extending the slide out, make certain that there is a minimum of five (5) feet of clear space on the slide out side of the unit. Prior to extending the room, be sure to unlock the slide out locking arms. Make sure there are no obstructions either inside or outside the unit that may interfere with the slide out extension. Tree branches, bushes or telephone poles can cause extensive damage to the exterior of the unit.

To extend the room, press and hold the slide out button. The voice modulator will activate and say, “Your lock arms are unlocking. Please be certain all seats, chairs, and other obstacles clear of the slide out area”. The power lock arms will retract into their housings, and the room will begin to extend approximately 10 seconds after the voice begins. It will continue to run until it reaches the end of its travel, or until you release the slide out switch.

To retract the room, press the slide out button as described above, holding it for the duration of room travel. The room will retract, and at the end of its travel the slide out motor will stop, and the Power Locking Arms will deploy, securing the room to the sidewall of the unit. Please note that you must hold the slide out button down during this entire cycle.

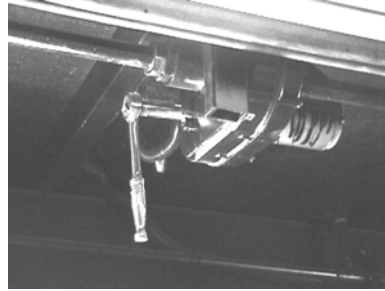
The power locks require a minimum of 9 volts DC to operate. In the event of a loss of power, or if the voltage dips below the minimum requirements, the locks will not extend or retract automatically. For proper operation of the room and locks battery voltage must be maintained above the minimum requirements. Also please note that there is a safety “lock out” system incorporated in the slide out electronics that prevents the room from operating when the ignition key is “on”. The automatic locking arms require no maintenance, and should be serviced as necessary only by a qualified technician.

## MANUAL EXTENSION AND RETRACTION

### Shaft end-mounted motors

If the motor is mounted on the ends of the slide out shaft, use the following directions:

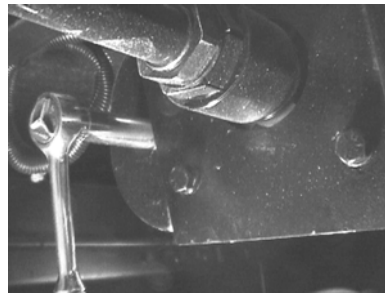
1. Access must be gained to the TRANS-TORQUE bushing coupling at the end of the slide out gear motor.
2. Using a 1/2" drive – 11/2" open end wrench and a 1/2" drive ratchet wrench, loosen the 1 1/2" nut. This will require approximately 1 1/2 turns. The nut is a standard right hand thread. After the initial release, the nut will turn for a partial turn, and then will release again as you turn the wrench. This second release is required to loosen the TRANS-TORQUE bushing from the shaft.



### Shaft center-mounted motors

If the unit is equipped with the K-900 slide out motor which is mounted near the center of the slide out room, use the following directions:

1. Access must be gained to the slide out motor located in the center of the slide out room.
2. The manual extension or retraction requires only a 5/8" socket and ratchet wrench. By placing the socket on the 5/8" hex nut located on the gear box of the K-900 motor, the slide out can be moved in either direction by turning the hex nut.
3. If the slide out does not move by using the hex nut, the room can also be extended or retracted by using the procedure described for the shaft end-mounted motors. If the room is moved using this method, the correct torque on the 1 1/2" trans-torque nut is 145 foot pounds maximum.



Slide Out Features



### **IMPORTANT**

The TRANS-TORQUE bushing must be re-tightened to re-couple the slide out gear motor before moving the coach. This will hold the slide out room in place. The correct torque on the 1 1/2" TRANS-TORQUE bushing is 110 foot pounds maximum. The correct torque on the 1 1/2" TRANS-TORQUE bushing of the K-900 motor (center shaft motor) is 145 foot pounds maximum.

Slide outs with either the center or end mounted motors can be moved by pushing the room the full length of its travel in either direction. This method will require the assistance of at least two people.

Chapter **6**

## **EXTERIOR FEATURES**

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## EXTERIOR FEATURES

### Hitch

Installed on your Essex is a class five, 15,000 pound car towing hitch. 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.

### Exterior Sides

The sides of this unit are constructed of gel-coated fiberglass. To add to this feature, the end caps are also 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.

Lighted storage compartments are located on the exterior sides of your unit. These compartments provide additional space for your belongings while you are traveling.

### Security Lights

Standard on this unit are exterior security lights. One is installed on each side of the coach. These lights help to light the side of the unit for added protection. The lights are activated by rocker switches located in the front overhead cabinet, labeled “Security Lights”.

### Electric Steps

This unit may be equipped with electric double entrance door steps. If so, the switch to operate these steps may be located in an overhead cabinet above the entrance door. When the power switch for the steps is in the on position, simply open the door and the steps will open. Detailed operation for the electrical entrance door steps is as follows:

1. Turn the step power switch on.
2. Close the door. The step should retract and lock into the up position.
3. Open the door. The step should extend and lock into the down position.
4. Turn the step power switch off. The step should remain in the extended position when the door is closed. Turning off the power with the step retracted will hold the step in a retracted position as well.

5. With the step extended, turn the step power switch off and close the entrance door. Turn the vehicle ignition on. The ignition override system will go into effect, and the step will automatically retract.

#### CAUTION

If the door is opened and closed without allowing the step to fully extend and lock in the 'DOWN' position, the step will retract and lock in the 'UP' position. When the door is reopened, the step will not extend. The power switch must be turned on for the step to extend. This feature is only operative the first time that door is opened after the vehicle ignition is turned off. When the ignition is on, the step will always activate with the door movement, regardless of the step power switch position.

#### CAUTION

If the vehicle is driven with the step in the extended position, there is the possibility of causing major damage to both the step and the vehicle.

6. Turn the vehicle ignition off and open the door. The step will extend and lock in the down position.

### Mirrors

This vehicle is equipped with convex remote controlled defrosting exterior rear view mirrors. Always adjust the mirrors for maximum rear visibility prior to driving. Make sure the seat is positioned for proper vehicle control.

These mirrors are adjusted by using the multiple directional switch located on the drivers side arm rest area forward of the cup holder. Select the mirror to be adjusted by pointing the arrow in the direction of that mirror. Move the control in the direction of movement desired to obtain the best view. The adjustment control moves the top half of both mirrors. The bottom half of the mirror is convex and is adjusted manually. These mirrors also contain heating elements to defog or de-ice the mirror glass during cold weather operation. The ON/OFF switch for this feature is located by the adjustment control. The convex exterior chrome mirrors with remote control and defrost are optional on this unit.



## IMPORTANT

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

## Windows

The windows installed in this unit may be the radius torque style double pane tinted safety glass. These windows are also referred to as jalousie windows. They open with the simple turn of a crank. A power window is available on the driver's side as an option.

Sun shades may be standard on the driver and passenger side windows.

In the bedroom of the unit, one window will be marked "EXIT." This 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.



## Vents

A 12 volt vent may be installed in the kitchen. This vent is equipped with a rain sensor on the roof hood. Anytime the vent is open and it senses rain, it will automatically close. The vent is controlled by the wall switch.

Do not leave the fan in active mode while the unit is in storage or unattended for long periods of time. High winds or other unusual conditions or obstructions may prevent the vent from closing resulting in leakage, which could cause serious damage.

The vent installed in the bathroom is also powered by 12 volt electricity. This vent is identical similar to the one installed in the kitchen, and provides positive power ventilation to quickly clear the air in the bathroom area of your Essex.

For improved lighting and headroom, a skylight is installed in the bathroom over the shower. The opening provides additional light during daylight hours, and the glass is tinted to provide privacy and reduce glare.

## Doors

The front entrance door is equipped with a dead bolt lock for added security and a power flush stepwell cover. When the door is opened fully, the “posi-lock” feature will automatically hold the door open. To close the door from the open position, either the inside or outside handle must be released for the door to move. For your safety, a lighted, acrylic assist handle has been installed at the entrance door of the unit.

## AWNINGS

### IMPORTANT

It is important prior to extending your awnings that you inspect the areas beside and around your unit where the awning will extend to insure proper clearance.

### Side Awning

A power side patio awning is standard on your Essex. Extension and retraction is controlled by a switch located adjacent to the entry door, either on the wall or in a side overhead cabinet. To operate, follow these instructions:

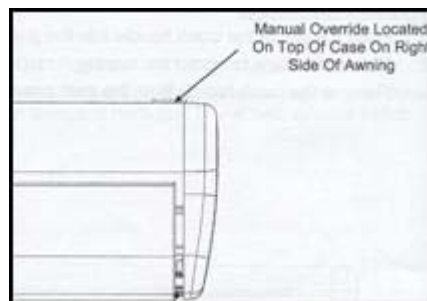
### Extending and Retracting

Turn the power “ON” to the awning. Press the “Extend” button on the awning switch panel and hold it until the awning has fully extended. To retract the awning, press the “Retract” button on the panel. Be sure to allow the awning to fully extend or retract when operating it. The mechanism is designed for best support at full extension, and fastens securely in place for travel at full retraction.

### Manual Retraction

In the event that electricity is not available in your unit, the power awning can be retracted manually.

On top of the awning on the right hand side (when facing the coach), there is a “Manual Override” that you can employ to retract the awning (see illustration).



## IMPORTANT

If you have a wind sensor mounted in this location, you will need to remove the Phillips head screw attaching the wind sensor, and set the wind sensor aside.

1. Remove the Phillips head screw that is screwed into the well nut that is assisting in holding on the end cap.
2. Grasp rubber well nut that the Phillips head screw is screwed into. Pull the well nut out of the hole.
3. Take the provided 7mm Allen wrench and put it into a 3/8" battery operated drill.
4. Place the Allen wrench down in the hole where the well nut was removed. Insert the Allen wrench into the Allen Head screw that is down inside the case (note: you will have to do this by feel as you cannot see the Allen Head screw once the wrench is inserted into the hole).
5. To close the awning, operate the drill in the "forward" direction. To open the awning, operate it in the reverse direction.

### "Oasis" Entry Door Awning

The "Oasis" entry door awning is a power operated awning. To extend the awning, press the "Extend" button on the switch plate. To retract it, press the "Retract" button. Please note that both buttons must be held down as the awning travels in or out. It will not extend or retract automatically.

### Window Awnings

Also standard on this unit are the matching window awnings. They are operated as all the power awnings on your unit are. Use the appropriate switches to extend or retract the awnings as desired, and always check for clearance on the exterior of the unit to be certain nothing will interfere with their deployment.



## **ELECTRICAL FEATURES**

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## GENERAL INFORMATION

There are two electrical systems in your coach. They are the 12 volt DC system and the 110 volt AC system. Most standard appliances require 110 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 charge circuit in the inverter, or the engine alternator while in transit. The power for the 110 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 110 volt power. It will transform 12 volt "DC" (Direct Current) electricity from the batteries into 110 volt AC ("Alternating Current") power for basic appliances and accessories.

### CAUTION

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

### WARNING

Use of "Adapter" cords with the RV shore power cord.

All Newmar units are manufactured with either a 30 or 50 amp electrical breaker box and electrical system. A unit with a shore power cord that has 3 prongs on it has 30 amp service; if the shore power cord has 4 prongs, it has 50 amp service.

To provide the correct amperage into the RV, and to assure the operation is as designed, it is important that they be plugged into the correct type of receptacle.

NEWMAR CORPORATION DOES NOT RECOMMEND USE OF "ADAPTER", "CHEATER", OR "DOG BONE" STYLE CONNECTORS THAT WILL MODIFY THE EXISTING SHORE POWER CORD TO A DIFFERENT STYLE OF OUTLET. USE OF THIS TYPE OF ADAPTER WILL GREATLY REDUCE THE AMOUNT OF AVAILABLE CURRENT IN THE UNIT, AS WELL AS CREATE THE POTENTIAL FOR ELECTRICAL FAILURE AND / OR FIRE. NEWMAR CORPORATION CANNOT ASSUME LIABILITY FOR FAILURES OCCURRING TO THE RV, ITS ELECTRICAL SYSTEM, OR ANY OF ITS COMPONENTS FROM THE USE OF ANY ELECTRICAL ADAPTER.

## 110 VOLT AC SYSTEM

The 110 volt AC system in your unit is designed to provide safe power for operating AC powered appliances and accessories in your unit. It is wired as a 50 amp, single phase system. Incoming power is supplied to your unit from one of three sources:

### Shore Power Cord

The “shore power” cord supplies electricity to the coach via the connection at the campground post.

### Generator

The generator supplies AC current to your coach when running. Your generator is hard wired into the “Automatic Transfer Switch”, which routes power into the breaker box and beyond to the accessories it powers.

### Inverter

The inverter is designed to invert DC power from the house batteries into AC to operate the applicable appliances and accessories. The inverter also has a charge circuit that will recharge the house batteries when AC is present from the shore power cord or generator.

### Incoming AC Power

The incoming power from the generator or shore power cord is routed to the main breaker panel. The source is selected by way of an “Automatic Transfer Switch”. When 110 VAC is present on the incoming legs, the Automatic Transfer Switch will select that as the power source, and will switch automatically to it.

#### IMPORTANT

If power is supplied to the system by both the genset and shore power cord, the automatic transfer switch will select the generator input by default. By prioritizing the generator circuit, power will always be available as long as the generator will run, regardless whether there is access to shore power. If the unit is plugged into a shore power outlet at a campground, and the generator is started, the automatic transfer switch will default to the generator circuit.

To connect the unit to 110 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 110 volt circuits and outlets when the main breaker is turned on.

#### **IMPORTANT**

It is important to inspect the shore power cord before and after each use. If the cord or plug shows any signs of damage, either from abrasion or heat, or if the pins are loose, or the insulation is damaged or pulled back at all, it should be inspected by a qualified technician for potential replacement. NEVER use a shore power cord that has exposed wires or signs of heat damage (melting insulation or cover, misaligned pins, etc.).

### **110 VAC Breaker Boxes**

#### **Main Breaker Box**

The 110 volt and 12 volt breaker boxes are generally located in the bathroom cabinetry. 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.

#### **Inverter “Sub-panel” Breaker Box**

The circuits that the inverter supplies power to are independently protected in a smaller “sub” panel located adjacent to the main breaker box. This panel is powered by the inverter. When the unit is plugged into shore power or the generator is running, the current passes through the inverter to supply power to these circuits. When there is no external AC power source, the inverter powers these circuits with the house batteries. Note that every appliance and accessories in your unit is not on the Inverter “Sub” Breaker box. Only those appliances in the Inverter “Sub” Box will be powered by the inverter.

## Generator

The generator in your unit is located between the front frame rails, and is mounted on a hydraulic cradle that will extend or retract the generator at the touch of a button. It is wired into the “Automatic Transfer Switch”, and will power all the 110 volt AC circuits in your Essex. The generator can be started from the dash switch, or remotely started at the generator itself.

Located on the generator remote start panel (at the generator) are two main breakers for the two output legs of the generator wiring. Please note that on start up, there is a momentary delay in the “Automatic Transfer Switch” engaging to pass the electricity on from the genset.

The generator in your new Essex runs on the same diesel fuel as your main engine. The diesel fuel is drawn through a separate supply tube that is positioned in the tank in a manner that will not allow the generator to draw fuel and run if the tank level dips below the  $\frac{1}{4}$  level.

Please refer to the generator manufacturers operating guide for specific information on maintaining your new genset. Regular oil changes and other maintenance performed at the prescribed intervals will greatly extend the life of your generator.

## Inverter

Your Essex is equipped with a 2800 Watt “Pure Sine Wave” inverter. An inverter changes DC power from the house batteries into AC current to operate most of your appliances. When 110 VAC is present from the generator or shore power, internal switching in the inverter passes the electricity through to the appliances it controls, and turns on a charge circuit to recharge the batteries. The inverter is controlled by the remote panel located in the front overhead cabinet.

The ME inverter / charger has two modes of operation: “Inverter” mode (providing power to the appliances from the house batteries), and “AC” mode (running from shore power or if your genset is running). When your inverter is in the “AC” mode, it passes power directly to your appliances, as well as recharges the batteries using a three stage battery charger (“Bulk”, “Absorption”, and “Float”). This approach to battery charging provides rapid and complete charging cycles without placing undue stress on the batteries. Inverter operation is completely automatic.

The Inverter, Auto Gen-Start System, and all controlled through the Touch Screen Multiplex System described in Chapter 2. The Touch Screen system is designed to immitate the controls provided by the Inverter manufacturer, and perform essentially the same functions as the remote control panel they describe in their literature.

#### **IMPORTANT**

Inverters draw power from the “house” batteries to provide current to most of the appliances and accessories in your unit without having to plug into shore power or run your generator. Because they use DC power from the batteries to do that, energy consumption from those batteries is high, and increases significantly as more appliances are added to the load. To extend battery life, minimize the number of appliances operating at any given time. All AC operated appliances have a label attached to tell how much power they consume. Be sure allow sufficient time for recovery / recharging between battery use cycles.

#### **Information provided on Multiplex Touch Screen**

##### **PWR**

OFF – No AC power from inverter, shore, or genset at the inverters output terminals.

ON – AC power is available from inverter, shore power, or genset at the output terminals.

##### **FAULT**

OFF – Normal operation

ON – Inverter has shut down from:

“Over Temperature” condition

“Low Battery Voltage” (LBCO)

“AC Overload” (loads exceeded inverters capacity)

##### **CHG**

OFF – No shore power or genset AC power available.

ON – Bulk, Absorb, Float, Equalize, or Battery Full Charge Mode

Slow Blink – Charger “Standby” (turned off with input AC current available).

Charger “Back off” (charge rate reduced due to overheating to stabilize charger temperature).

Low Input Voltage (input AC voltage below 85 VAC; charger disables to allow input voltage to stabilize).

## **INV**

OFF – Inverter off.

ON – Inverter on and supplying AC current to output terminals.

Slow Blink – “Search Mode”: AC load is below the “Search Watts” setting.

## **Inverter Modes of Operation**

### **Search Mode**

With “search” mode enabled, the inverter pulses the AC output looking for an electrical appliance (typically 5 – 100 watts, depending the setting you’ve selected). Whenever there is no appliance, the inverter goes into a “search” mode (sleep) to minimize energy consumption. During this time, the green LED light on the remote panel flashes (slow) to indicate “search” mode.

When an appliance in your unit is turned on, the inverter recognizes the need for power, and automatically starts the inverter.

### **Inverter Mode**

Whenever the AC power from the shore power cord or the generator is no longer sensed, the inverter automatically switches to battery power, with no interruption to your appliances. The inverter’s green LED flashes once every two seconds (medium flash) to indicate it is operating on battery power and is providing AC to your coach.

### **A/C Shore Power Mode**

Whenever incoming “AC shore power” is sensed, the inverter automatically transfers to the shore power line with only minimal interruption to your appliances.

### **Bulk Charge Mode**

When the inverter is running on nominal AC input (shore power / genset), it charges the batteries. The inverter’s green LED stays ON (solid) to indicate the first stage of charging. During bulk charging, the inverter supplies the maximum amount of current possible to the batteries. As the battery voltage rises to a set value (typically around 14.1VDC for GEL, 14.3 VDC for AGM, and 14.6 VDC for liquid lead acid), the charger will then switch to the next charging mode.



### **Absorption Charge Mode**

As the inverter continues to run on nominal AC input (shore power / genset), and the batteries have been successfully “bulk” charged, the inverter will enter the second stage of charging. The inverter’s green LED will flash once every second (fast flash) to indicate absorption charging for 1 – 3 hours, depending on the battery bank selected (see separate ME “Remote” manual for selection information). The charger then switches to it’s final mode.

### **Float Charge Mode**

As AC input (shore power / genset) continues, the inverter’s green LED flashes once every eight (8) seconds (slow flash) to indicate the third and final state of charge. The batteries are held at the “float charge” voltage (13.6 VDC GEL, 13.1 VDC for AGM, and 13.4 VDC for liquid lead acid) as long as AC is present at the inverter’s input. Float charging reduces battery gassing, minimizes watering requirements (for flooded batteries) and makes sure the batteries are maintained at optimum capacity.

### **Battery Saver Mode**

This mode is designed to keep batteries fully charged over long periods (storage) without drying them out. When the charger is in the “float” mode for over 4 hours with no DC loads running, the charger will turn off. If the battery voltage dips below 12.5 VDC, the charger will automatically initiate the “Float” charge mode to return them to full charge.

## **Inverter Fault / Alarm Conditions**

### **Fault / Alarm Conditions**

The inverter monitors the incoming AC power (shore power / genset), the batteries, and itself. Whenever a condition occurs that is outside the normal operating parameters, the inverter will take the necessary steps to protect your appliances, batteries, and itself from damage.

### **Low Battery**

Whenever the battery voltage reaches a low level (programmable from 9.0 VDC to 11.0 VDC), the inverter will initiate “Low Battery Cut Off” (LBCO), which automatically shuts the inverter down, along with all connected loads, to protect the batteries from over discharge damage. The green LED on the remote panel turns off, and the red “Fault” LED turns on to indicate the fault condition.

## High Battery

As the inverter is charging, it constantly monitors the batteries. In the event the battery voltage approaches too high a level, it automatically turns off the battery charger to prevent damage to the batteries. The green LED on the remote panel turns off, and the red “Fault” LED turn on to indicate the fault condition. The shut off threshold is approximately 15.5 VDC.

### IMPORTANT

High battery voltage may be caused by excessive voltage from the alternator, solar panels, or another external charge source. Be sure to correct the cause of the overcharging condition to prevent damage to the batteries and electronic equipment in your Essex. The inverter must be manually restarted after this fault.

## Overload

During inverter and AC shore power / genset operation, the inverter monitors both AC and DC circuits. In the event of a short circuit, or an overload condition, the inverter will shut down. The green LED on the remote panel turns off, and the red “Fault” LED turn on to indicate the fault condition.

## Over Temperature

During inverter operation, if the inverter becomes overheated, it will shut down to protect itself from damage. The green LED on the remote panel turns off, and the red “Fault” LED turn on to indicate the fault condition.

## Inverter Switch

This is used to switch the inverter function on or off. The screen will indicate “Inverter On” and “Inverter Off” status.

## Charger Switch

This is used to manually turn the charger function on or off. The screen will indicate “Charge” status.

## Shore Button

This button is used to set the DC charging amperage based on the incoming AC amperage. Selections for charge amperage levels are 5, 10, 15, 20, 30, and 50 amps.

## AGS

This is turns the “Auto Generator Start” system on and off. Selection options are “OFF”, “ENABLE”, and “TEST”.

## Meters Button

This function is display only, and shows DC volts, DC amps, AC volts, (future) and AC amps (future).

## Set Up Button

This configures the inverter / charger modes. This would include the following adjustable modes and parameters:

- **Search Mode** (set “search” watt level to bring inverter out of “sleep” mode).
- **LBCO** (Sets Low Battery Cut Out voltage).
- **Battery Size** (Sets approximate battery bank capacity).
- **Battery Charge Rate** (Sets maximum charge rate for batteries during the three stages of battery recharging).
- **Battery Type** (Used to select battery type for charge profiles).
- **Contrast** (used to adjust the contrast of the LCD display screen for improved viewing in different types of light).
- **AC Dropout Voltage** (Used to set low voltage threshold for transfer from shore power to batteries).
- **Tech** (Display only for future development of the inverter system).

## AGS System

The AGS system (Auto Generator Start) is designed to, when activated, start and operate the genset in your Essex under certain circumstances, and within certain programmable parameters. Using data you input, it can be set to start and run the air conditioners when interior temperatures get too high, or start the genset to run when battery voltage dips below a certain level. The primary programming for this system is done through the Magnum inverter remote, but certain parameters are defined at the AGS Control Module.

### **WARNING**

Set the AGS to “AutoGenSt OFF” before performing any service work to the generator or coach electrical systems. Damage, injury, and death may result from unexpected or inadvertent starting of the generator.

### **IMPORTANT**

It is recommended that the “AutoGenSt OFF” system be left off while your unit is stored for extended periods, or if you will be away from the unit for extended periods. This setting is also recommended any time the coach is plugged into shore power.

Using the Multiplex Touch Screen controls, you can program the AutoGenSt as follows:

#### **AutoGenSt Cntrl**

Used to turn AGS system on and off, and to enable the “quiet time” feature.

#### **AutoGenSt OFF**

Disables the “Auto Generator Start” function.

#### **AutoGenSt Enable**

Enables the AGS system to automatically start and stop the generator based on the coaches interior temperature or low battery voltage conditions. Desired temperature and voltage thresholds are programmed into the system using the inverter remote panel.

#### **AutoGenSt Test**

Starts and runs the generator for 30 seconds, fully testing the AGS system in the process.

#### **AutoGenSt w / Quiet Time**

When this selection is made, the “Set Current Time” menu appears, prompting you to set the current time (for reference). Set the correct “Quiet Time” hours on the AGS controller, located adjacent to the 12 volt fuse panel the bathroom.

## IMPORTANT

For detailed instructions on programming the AGS system, please refer to the “ME AGS Auto Gen Start Network System with Inverter and Remote for Coach Generators” manual that was provided in your Literature Bag.

### Solar Panel Prep

Your unit has been pre-wired for installation of solar panels on the roof. To access them, find the metal plate located on the roof labeled “Solar Panel” or Solar Prep”. Remove the cover to expose the red and white wires.

The two wires are routed from the junction box on the roof to the basement of your unit, terminating in the compartment where the shore power cord is stored.

## 12 VOLT DC SYSTEM

### General Information

There are two separate 12 volt DC electrical systems on your Essex; one for the “chassis” portion, and the other for the “house” portion.

The “chassis” electrical system uses DC voltage to operate chassis related electrical accessories and lights, such as the headlamps, dash instrumentation, engine starting and management circuitry, and so on. This system includes a set of chassis batteries, and is charged in transit by the alternator. The chassis batteries have a disconnect switch located in the rear engine compartment.

The “house” electrical system uses DC voltage to operate all the house related DC lights and accessories, such as the interior lighting, ceiling vents and fans, slide outs, the water pump, and so on. The house electrical system also supplies the power (through the house batteries) for the inverter to operate. When 110 AC current is present, the inverter has a charge circuit that engages to charge the house batteries.

Though separate in operation, the two DC electrical systems are tied together through a battery isolator circuit. This circuitry is designed to keep the systems separated under most operating circumstances, but still allows them to be tied together under certain conditions. This is accomplished through a component called the Bi-Directional Isolator Relay Delay (BIRD). This component allows

the two separate battery systems to be tied together for charging purposes or for “boosting” purposes if one set of batteries is low.

In transit, the alternator on the engine is the power source for charging batteries. The function of the “BIRD” allows the chassis batteries to be recharged off of the power coming from the alternator. Once the chassis batteries have been recharged (approximately 13.3 VDC), the “BIRD” will turn on circuitry that will then allow the house batteries to be charged in transit by the alternator. This allows both sets of batteries to charge while the coach is in transit.

When the RV is parked (with the engine off), and is connected to 110 VAC power (either generator or shore power), the “charge circuitry” in the inverter will engage, and will charge the house batteries. Once the house batteries have reached full charge (approximately 13.3 VDC), the “BIRD” will again engage circuitry that connects the two sets of batteries together, allowing the charge circuit in the inverter to charge the chassis batteries as well. This “Bi-Directional” operation works to keep both sets of batteries charged to capacity, regardless of whether it is in transit, or parked with incoming AC current.

## **12 volt DC Circuit Protection**

### **House Circuits**

The “house” fuse panel is located in a cabinet in the bathroom. This panel contains fuses for most of the Newmar installed 12 volt DC accessories, including interior lighting, vents and fans, and so on. The fuse panel uses conventional “spade” type automotive DC fuses. Fuse amperage is labeled on the end of the fuse for easy viewing and replacement.

## IMPORTANT

NEVER replace a fuse with a higher amp capacity fuse than was originally installed. This compromises the circuit protection by allowing more amperage to flow through than the circuit was designed for, and could lead to failure of the component being operated, overheating of the wiring, or fire. Always use the same amperage fuse when replacement is necessary.

The “dash” fuse panel is located in the left front exterior compartment. This panel contains relays and fuses that protect Newmar installed dash accessories, including dash lights, blower fan, auxiliary accessory ports, and more. This panel uses standard “spade” type automotive fuses. The relays on this circuit board are not replaceable; they are permanently mounted to the circuit board and should be inspected only by a qualified technician prior to having any work done to them.

### Chassis Circuit Protection

The chassis 12 volt DC circuit protection is located in two primary areas on your Essex. First, the front electrical panel, with fuses and relays, is located in the LF basement compartment, along with the Newmar dash fuse panel. This panel consists of fuses and relays that control engine start up and operating functions. It is recommended that these circuits be serviced ONLY by a trained Spartan chassis technician.

The first basement compartment aft of the right rear tires houses the chassis diagnostic center. This service area contains diagnostic ports, relays, and circuit protection for the engine and transmission. This compartment should be serviced ONLY by a trained Spartan chassis technician.

### Batteries

As previously mentioned, your Essex has two different sets of batteries. One set of batteries operates the Newmar installed “house” lights and accessories, and the other set starts the engine and operates the “chassis” electrical systems. Though similar in function, they are distinctly different battery types and arrangements.

Replacement batteries should be the same as was replaced. Any time one battery in a set of batteries is to be replaced, it is important to have all the batteries in the system tested to assure all are okay. If one defective battery

is replaced, while leaving another weak or defective battery, lowered performance, or ultimately damaging the new or good batteries can be the result.

#### **IMPORTANT**

Charging batteries give off gasses as the fluids inside “boil”. Because of this, it is critical to check the battery fluid levels regularly, particularly after extended periods of heavy use. Be sure to top off any battery that is showing signs of depleted fluid levels.

### **House Batteries**

The standard battery arrangement in the Essex is a set of four (4) BCI “group size” GC-2 6 volt DC batteries, delivering a 450 amp hour reserve. If your Essex is the “all electric” model, there will be eight (8) of the same batteries, significantly increasing the available reserve. Douglas batteries for operation of the chassis electrical systems. The Essex comes with two (2) “group size” 37 - 12 VDC batteries with 960 cranking amps.

### **The All Electric Essex**

If your Essex is equipped with the “All Electric” option, it is designed to operate solely on electricity, and will have no Propane gas tank or Propane fired appliances. Additional changes will include a larger bank of batteries (as previously mentioned), an electric range, and an electric refrigerator.

Note that because this unit does not have Propane, the refrigerator needs 110 AC current all the time to operate. Because of that, the refrigerator circuit is on the inverter. This is ONLY the case in the “all electric” Essex. In all other Essex models, where Propane gas is available, the refrigerators operate on Propane gas as well as electricity, so the need for inverter power to the refer is not necessary.



## **PLUMBING & BATH FEATURES**

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# FRESH WATER SYSTEM

## IMPORTANT

Ease of operation was the key element in the design of the water compartment and plumbing in your unit. It is very important that you read and understand all the operating instructions for the plumbing system prior to using your unit. Failure to connect and operate the system correctly can result in damage that is not covered by the Newmar limited warranty.

## IMPORTANT

The fresh water system in your Essex is designed to operate at a maximum of 60 PSI. Water pressure levels above that can damage the fresh water plumbing in your unit. If your travels take you to a destination where water pressure is above 60 psi, you must install a pressure regulator to reduce the incoming pressure, or fill the fresh water tank and use the internal water pump to supply water to your unit.

## Kitchen Sink

The kitchen sink installed in your unit is a double-bowl design equipped with two sink covers to provide additional counter space when not in use. Cleaning care consists of washing with mild detergents and a soft cloth. Avoid using “S.O.S.” type cleaning pads because they may scratch the surface. The faucet in the kitchen is a single-handle faucet with a pullout spout.

## Bath Sink, Shower & Accessories

Use care when cleaning the bathroom sink to prevent scratching the surface. The bathroom accessories include two towel bars and a tissue holder. The faucet in the bathroom consists of a metal body with a brass finish. The shower installed is a combination fiberglass tub/shower with a glass shower door. The white tub faucet with shower head, hose and bracket coordinate with the sink faucet. An optional assist handle may be installed in the tub/shower.

## Multiplex Touch Screen Monitor Panel

The Multiplex Touch Screen Monitor Panel allows you to check the approximate levels in the fresh, gray, and black water holding tanks, as well as the battery condition and Propane gas level (on units with the “All Electric” option, the monitor panel will not have an Propane gas reading).

There are additional Touch Screen Monitor Panels located in the bathroom and in the basement water compartment. These additional screens are designed just to give readings for all the holding tanks in the unit. No other functions (inverter, genset, HVAC, etc.) controlled by the main Multiplex Touch Screen are accessible by the auxiliary Multiplex Touch Screen Monitor Panels.

### **Water Pump Operation**

Your Essex has a fully self contained fresh water system with a fresh water storage tank, and a “demand” style 12 volt DC electric water pump. This pump is designed to build pressure in the fresh water plumbing in your coach, operating only when there is a demand for water on the system. When any water pump switch is turned on, the water pump will come and build pressure in the system, and will shut off as soon as the system is correctly pressurized. When a faucet is opened, the pump will turn on and operate as necessary to maintain the preset pressure in the system.

### **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. The switches to this pump may be located in the bathroom, on the monitor 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.
- 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.

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.

## Exterior Water Compartment

The heart of the plumbing in your Essex is the exterior water compartment. All plumbing functions can be controlled from this location. Additionally, the connection points for city water, sewer rinse, and holding tank draining are all located in this compartment.

For your convenience, several items have been placed in this compartment to help keep you and your plumbing compartment clean. Located in this compartment are a towel holder, a liquid soap dispenser, an exterior shower with flex hose, and an exterior water spigot where a conventional "garden" style hose can be connected.

## City Water Connection / Hose Reel

The city water connection is made with the white hose on the red reel in the left side of the water compartment. In conjunction with the "Fresh Water Fill Valve", this water source is used for a number of purposes, including pressurizing the plumbing in your unit, and filling the fresh water demand tank. The reel contains 35' of water hose.

The hose reel deploys manually by simply pulling the hose outward from the compartment. Once the desired length of hose has been reached, a tug on the hose will lock the reel in place. Spring tension on the hose reel provides power for retraction; pulling against the hose reel will release the latching mechanism and allow the hose to retract.

### CAUTION

DO NOT release the fresh water hose during the retraction process. Spring tension on the hose reel can cause the hose to retract very quickly, and can cause physical harm or injury to you and damage to your coach.

## Fill Valve Operation

The rotating "Fill Valve" located in the center of the water compartment is used to pressurize the fresh water system in your unit, as well as to fill the fresh water demand tank. When the unit is connected to city water, the "Fill Valve" is used to pressurize the fresh water plumbing in your unit, or fill the fresh water tank, or both. The panel is clearly labeled; simply rotate the "Fill

Valve” to the appropriate position to perform the desired function. You can monitor the fresh water tank via the small “Multiplex” display unit located in the basement water compartment.

### **Domestic Hot Water**

The hot water in your unit is heated by the Oasis hydronic heating system. Turning the 110 heating element on will usually provide sufficient hot water for most household chores. To operate an appliance that uses water, or to assure plenty of hot water for showering, turn on the Hydro-Hot boiler in the front overhead cabinet. Both heat sources can be used at the same time.

### **Water Filtration System**

Your Essex was manufactured with a fresh water filtration system. This system uses extruded carbon filter cartridges to remove sediment and certain impurities from the incoming water supply. The filter assembly is located in the basement water compartment.

To replace the filter cartridge, turn off the water supply to the RV (at the city water connection). Unscrew the filter canister by rotating it clockwise. Replacement filter cartridges are available through your Authorized Newmar Dealer; have them order part number 03738.

Insert the new filter cartridge, positioning it so the opening in the bottom of the filter seats on the molded ring at the bottom of the canister. Reattach the canister to the filter housing by rotating the canister in a counter clockwise direction. When replacing the filter, make certain the rubber “O-Ring” seal is properly positioned in its groove in the cartridge housing. An improperly seated or missing seal will cause leakage around the perimeter of the filter housing. Use caution not to over tighten the canister when attaching it back to the housing.

#### **IMPORTANT**

DO NOT ALLOW WATER TO FREEZE IN THE WATER FILTER CANISTER. Freezing will crack and permanently damage the filter housing and associated plumbing. ALWAYS REMOVE THE FILTER CARTRIDGE PRIOR TO WINTERIZATION.

## Water Distribution Manifold

Located in the upper left hand corner of the exterior water compartment is the water distribution manifold. The primary hot and cold water lines for the unit feed to this distribution center, and through a series of valves, supply water to the multiple plumbing systems in the unit.

In addition to offering greater organization and more balanced flow to the fresh water system in your unit, this distribution manifold offers the flexibility to allow you to shut off sections of the system while still using others. The blue knobs at the top are cold water supply valves; the red ones at the bottom are hot water supply valves. A tool is supplied with which you can open and close the valves as or if necessary.

## 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 standard toilet in your unit is a china stool. The toilet operates with water from either the fresh water tank with the water pump on or the city water supply. Before using the stool, add water to the bottom of the tank. Refer to the “BLACK WATER TANK” instructions in this chapter. The stool flushes waste directly into the black water holding tank. The stool uses high velocity water injection to produce a swirl effect in the bowl. The greatest problem that causes stool solids to build up in the holding tank is lack of liquids. When using your stool, it is wise to fill the stool 3/4 full of water. This will help to wash the solids away from directly below the stool and to ensure complete dumping of the holding tank. To add water to the stool bowl, press the button for “power fill” until the desired water level is reached. To flush the stool,

push down on the lever until the water swirls. A small amount of water should remain in the bowl.

The stool should be cleaned regularly for maximum sanitation and operational efficiency. Clean the toilet bowl with a mild bathroom cleaner. do not use chlorine or caustic chemicals, such as laundry bleach or drain opening types, as they will damage the seals in the toilet and dump valves.

Refer to the toilet manufacturer's owner's manual in your Owner's 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 directly beneath the toilet. 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.

#### **CAUTION**

Use only approved RV odor controlling chemicals in the holding tanks. Products containing ammonia and petroleum will damage the ABS plastic holding tanks and seals.



## Gray Water Holding Tank

The gray water holding tank is located in the underbelly of the unit. 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 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 3/4 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 few gallons of water and a holding tank deodorant (such as Thetford 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, please keep other travelers in mind by practicing 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.

<b>CAUTION</b>
The gray tank valve must be in the open position when operating the optional washing machine.

### **Sewage Tank Rinse**

To aid in maintenance and cleaning, the sewage tank on your Essex is equipped with a “Sewage Tank Rinse”. This system uses a specially designed spray head permanently located in the sewage tank that cleans the inside of the tank when a water supply is connected.

## IMPORTANT

Always drain the sewage tank PRIOR to rinsing. NEVER rinse a sewage tank that is full. The sewage drain MUST be open while rinsing the sewage tank, and the drain hose MUST be positioned to drain into an approved sewage dump station. Failure to open the valve will cause the sewage tank to fill with water, and can cause damage to your plumbing and interior.

The Sewage Tank Rinse should have its own dedicated water supply hose. **NEVER** use a hose that will be used for drinking or other uses. Attach the hose to the external water supply, then to the Sewage Tank Rinse connection. Attach the sewer drain hose to the outlet, and place the open end in an approved sewer “Dump Station”. Open the sewer drain gate valve. Turn on the external water supply to rinse the tank. Allow the water to rinse the tank for a minimum of 3 – 5 minutes to insure it is clean.

## Winterization

It is critical to winterize the plumbing in your unit any time it is going to be either stored in temperatures below freezing, or used only on a limited basis in cold weather. Winterization is simply the removal of all of the water from the plumbing system. It also includes adding a potable antifreeze to at least portions of the systems (P-Traps) to help prevent freeze damage.

Located in the upper right hand corner of the basement water compartment is a label identifying the steps used to winterize the fresh water system in your Essex. The label reads as follows:

Drain Fresh Water Tank and Hose Reel  
Close “Low Point” Hot and Cold Water Valves  
Close Top “A” Valve On This Panel  
Open Valve “B” Below It  
Insert Hose into Container of Potable Antifreeze  
Turn On Water Pump  
Open All Faucets  
Flush Toilet  
Open All Drains

## **WARNING**

USE ONLY A POTABLE "RV" ANTIFREEZE IN THE FRESH WATER SYSTEM OF YOUR ESSEX. AUTOMOTIVE ANTIFREEZE CONTAINS ETHYL GLYCOL, WHICH CAN BE HARMFUL OR FATAL IF INGESTED.

This basic procedure allows you to drain as much of the water out of the system as possible, then adds safe antifreeze to the lines, faucets, p-traps, and tanks. It is important to remember to open all the fresh water drain valves (for the hot and cold water lines, the hose reel, and the fresh water tank) prior to pumping potable antifreeze through the system. Always remember to turn the water pump off when winterization is complete.

The following is the detailed procedure for winterizing your Essex:

- 1.** Remove Filters and bypass the water lines on them (under cabinetry inside unit and in basement water compartment).
- 2.** Open all "Fresh Water" related drains (hot and cold low points and fresh water tank). Drain as much water as possible; close all drain valves.
- 3.** Set "Fill Valve" to "City Water / Auto Tank Fill" position (pointing up).
- 4.** Attach compressed air fitting to "City Water Hose" (Reel). Set air pressure to 40 psi. Apply 40 psi air pressure to this setting for at least 30 seconds. (This forces water out of any lines and pockets that may not get antifreeze in a later step).
- 5.** Go to exterior refrigerator service panel, and access the water valve / solenoid. Remove supply line and flex line to ice maker. Drain both lines until no more water comes out. The air pressure in the lines will force the existing water in this line out. Reattach water lines and close water supply valve to the refrigerator.
- 6.** Switch "Fill Valve" to the "Manual Fill" position (to force any water out of the additional lines and valves between the tank and water pump). Apply 40 psi of air pressure to this valve position for at least 30 seconds.
- 7.** Turn off air pressure and remove air hose from "City Water" connection. Switch "Fill Valve" to "City Supply / Manual Override" for the rest of the winterization procedure.
- 8.** In the exterior Water Compartment. Engage "Winterization" valves by closing the top "A" valve, and opening the "B" valve below it. Put the end of the clear "winterization" hose in a container of RV "Potable" Antifreeze. Turn on the water pump.

**NOTE: APPROXIMATELY 5 – 7 GALLONS OF POTABLE RV ANTIFREEZE ARE REQUIRED TO WINTERIZE AN ESSEX.**

9. Start with the farthest faucet from the water compartment (usually the kitchen sink faucet). Open every valve (don't forget drinking water dispensers and both hot and cold sides of the faucet) and run until RV antifreeze flows freely from each. Close that faucet and move to the next faucet until all have been winterized. DO NOT forget the interior and exterior showers, and the toilet.
10. Winterize appliances as necessary:
  - A. Winterize the dish washer (if so equipped) by running the appliance through a partial "rinse" cycle. Potable antifreeze will run into the wash drawer (where the dishes are), allowing antifreeze to the fill and drain areas of the appliance. It is important to run the entire rinse cycle so that the fill valves and drain valves and lines receive antifreeze. Note that this appliance only has a single "hot" water connection.
  - B. Winterize the Washer / Drier (stackables or single unit) by running a complete rinse cycle in both hot and cold settings. Once the washer has drained the antifreeze, turn the appliance off, lift the lid, and add approximately one gallon of RV antifreeze to the wash tub.
  - C. Ice maker was winterized during the initial steps of the procedure.

### 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 1/4 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. 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.

#### **IMPORTANT**

Make sure the chlorine bleach solution is thoroughly and completely purged from the plumbing before using the fresh water system. Also, never use alternative cleansers; only potable materials may be used in your fresh water plumbing system.

## **AUDIO, VIDEO & OTHER ELECTRONICS**

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## AUDIO / VIDEO FEATURES

### IMPORTANT

Some of the components mentioned in this section are optional and may not have been installed in your unit.

### IMPORTANT

This section is designed to give clear operating directions on the many entertainment and convenience electronic components in your new Essex as Newmar has installed them. It does not, however, give detailed instructions pertaining to every option and feature of the components described herein. For complete operating directions for each component, please refer to the manufacturers information located in the literature bags that were provided with your unit.

### The Harmony Universal Remote

To simplify operation of the various electronic components in your Essex, we have employed “Harmony” universal remote. This remote will operate the following components:

- Pioneer Surround Sound Stereo Component
- Pioneer DVD Player
- Sony LCD Television(s)
- Video Selector Box (for switching, NOT for power)
- Exterior Entertainment Center TV

These components can all be controlled either individually, or through the use of “macros”, can be used to operate a number of electronic accessories together as a package. For example, if you want to watch a DVD movie in a home theater “surround sound” mode, one touch of the macro button turns all the applicable components on and sets the system for operation in that mode.

### Watch TV

To watch TV on the front or mid body TV’s, press the **WATCH TV** button at the top of the remote.

**Watch a DVD movie**

- To watch a DVD movie and use the TV to control your volume, press the MORE ACTIVITIES button at the top right of the remote. Use the NEXT button to navigate through the screens until you come upon the WATCH A DVD function. Press the button that corresponds with this activity. This will activate all components needed to watch a DVD.

**Watch a DVD movie w/ Home Theater**

- Press the WATCH A MOVIE button at the top left of the remote. This will activate all components needed to watch a DVD movie while using the home theater receiver as your audio source.

**Watch a VCR tape**

- Press the MORE ACTIVITIES button at the top right of the remote. Use the NEXT button to navigate through the screens until you come upon the PLAY VCR function. Press the button that corresponds with this activity. This will activate all components needed to watch a VCR tape.

**Listen to CD**

- Press the LISTEN TO MUSIC button on the top of the remote. This will activate all components necessary to listen to your CD's.

**Listen to Radio**

- Press the MORE ACTIVITIES button at the top right of the remote. Use the NEXT button to navigate through the screens until you come upon the LISTEN TO RADIO function. Press the button that corresponds with this activity. This will activate all components needed to listen to a CD.

If you have any problems, or if something is not functioning correctly, please press the HELP button. This will walk you through the steps necessary to make your entertainment system function properly. For more information on operating this remote please refer to the owner's manual or go to [www.harmonyremote.com](http://www.harmonyremote.com)

**Video Selector / Switch Box**

The Video Switch Box in your unit is used to control the video signal flow throughout the coach. It allows you the opportunity to view satellite, DVD, VHS, or on-air video programs on any or all of the televisions in your Essex.

Operation of the Video Switch Box is automated through the Harmony Universal Remote. Video source selection is automatic when the remote calls for a particular system to operate. For example, when you want to watch a DVD in the living room of your unit, selecting “Watch A DVD” function on the remote will automatically choose the DVD player as the video source for the TV in the living room.

#### **IMPORTANT**

The Harmony Universal Remote will control all of the functions of the Video selector Box except turning the power on or off.

Manual video source selection can also be accomplished by using the video source selection buttons on the face of the box.

### **Sony LCD TV**

Your new Essex has been equipped with at least one Sony LCD television. It can be operated either independently, or as part of a system when using the Harmony remote. When operating the TV independently, it can be manipulated through either the controls on the TV, or with the Sony supplied remote control.

To operate the TV independently of the system, press the power button on the front, or use the remote to power the TV up. Once the TV has been turned on, use the input selector on the TV, and the video switch box to choose the desired programming.

The Sony LCD TV(s) in your unit are HD (High Definition) compatible, meaning they are capable of displaying the resolution and clarity of High Definition broadcasts and video sources. To play these programs in HD, you will need an HD Decoder (available through a number of electronics stores and video service providers). Additional wiring may be required for HD programming to be decoded and played.

### **Bedroom TV**

In the bedroom you will find an LCD TV. This TV offers HD (High Definition) compatible, meaning it is capable of displaying the resolution and clarity of High Definition broadcasts and video sources. To play these programs in HD, you will need an HD Decoder (available through a number of

electronics stores and video service providers). Additional wiring may be required for HD programming to be decoded and played.

Please refer to the Manufacturers Owners Guide that accompanied your unit for detailed instructions on operating the many features and functions of your new 9TV.

### **Pioneer Surround Sound Theater System**

The Pioneer “Surround Sound” Home Theater has been incorporated into your Essex to bring the movie experience “to life”. Located throughout your unit are five speakers and a subwoofer to deliver the dynamic, crystal clear digital sound previously only available in theaters.

The Pioneer Surround Sound Receiver features a Progressive Scan DVD player for detailed imagery and advanced picture quality. This appliance can be operated manually, or as part of the “Harmony” remote control system.

### **Pioneer In-Dash Stereo**

Please review the information provided in Chapter 2.

### **Exterior Entertainment Center**

For your convenience and pleasure, an Exterior Entertainment Center is an available option on the Essex. This entertainment center features a LCD flat screen television mounted on a pivoting bracket for ease of viewing, and an AM/FM/CD stereo and speakers to provide outside music when desired.

The LCD television is mounted on a swivel bracket that allows you to swing the TV out and away from the basement compartment, and to swivel it to allow for better viewing angles. To release the television from its retainers, grasp the sides of the TV firmly at the supplied “cut outs” and pull it directly toward you. It will release and swing freely to the desired viewing position. To store the TV for travel, swing it back into the opening, taking care to align the retaining brackets on the back of the TV with the catches mounted on the bracket wall. Press the television firmly into place until the catches have snapped into place and the TV is flush in the opening.

The external stereo can be used to listen to AM and FM broadcasts, and to play CD’s. It has the same functions and features as your in-dash stereo.

The LCD TV in the exterior entertainment center can be played through the exterior stereo. Press the “source” button on the stereo until the audio program from the TV is heard.

#### **IMPORTANT**

The electronics used in the Exterior Entertainment Center are not designed for use in wet weather. The TV should be stored securely in the “travel” position and the basement door closed during rain or other adverse weather conditions. Caution should also be exercised when washing the exterior of your Essex to make sure high pressure water does not enter the compartment. Spraying high pressure water at the seal between the doors can cause leaks, and potentially damage the electronics housed in this compartment.

### **Power Lift Antennae**

Your unit is equipped with a Winegard television antenna that features a power lift mechanism to raise and lower the antennae mast. To operate the system, locate the switch panel in the passenger side front overhead cabinet.

When using the antennae, raise and lower it to full extension. Once the antenna is fully extended, it can be rotated to the position that provides optimum signal reception. In rural or fringe areas where reception may be poor or weak, the antennae head has a signal amplifier built in. To turn this amplifier on, use the “Antennae Booster” button on the video selector box.

### **Bose Wave Radio**

Mounted in the bedroom of your Essex is a Bose “Wave” radio. It offers functions as an alarm clock and an AM/FM/CD stereo. The audio programming from the bedroom TV can also be heard through the “AUX” input of the Bose Wave Radio. The unit is controlled via a small remote control provided with your unit.

### **KVH TracVision In-Motion Satellite System**

Optional on Essex is the KVH “TracVision R6” in motion satellite antennae. This system employs a state of the art actively stabilized antennae system. Once the satellite is acquired, the antennae gyro constantly monitors vehicle motion and position to keep the dish pointed at the satellite at all times.

When your unit is parked, once you have acquired the satellite of choice, you can turn the TracVision system off. This will help conserve

power. If you decide to watch programming on another satellite, you will need to turn the TracVision system back on to search out and lock onto the next desired satellite.

#### **IMPORTANT**

When the unit has come to a stop, and remains motionless for one minute, the KVH TracVision system goes into a "Sleep" mode, turning off the conical scan and positioning motors. Unlike turning the power off, when the KVH TracVision is in the "Sleep" mode, it is still drawing power. It is important to turn the system off when the unit is parked for camping. With the power to the KVH TracVision system off, the system will not draw power and you will be able to continue watching programming on the selected satellite.

## Chapter 10

# 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 exterior of your new recreational vehicle is made of aluminum and fiberglass. The “full paint” coverage is a Sherwin Williams automotive exterior finish, painted in a “cover coat – clear coat” configuration. Frequent washings and thorough cleanings are required to prevent damage to the vehicle finish after exposure due to damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material. Damage caused by exposure to these items is not covered by your warranty agreement. 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. 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. Do not use strong soaps or detergents for washing the vehicle. Always use a mild soap in warm water, a commercially prepared product for automotive finishes or your local car wash. Be careful when using a pressure-type washer to avoid loosening any exterior decals or sealants, etc. 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.

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## 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, vents, slide out trim and external seams should 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. It is recommended that a Newmar Authorized Service Center perform these inspections, and reseal when necessary.

## Proper Sealants for Application

### Proper Sealants for Application

<b>Plas-T-Cote .....</b>	<b>Metal or fiberglass roof</b>
<b>Surebond #SB-140 .....</b>	<b>Rubber laminated to metal roof and all skylights.</b>
<b>Carlisle #502-LSW .....</b>	<b>Rubber roof over wood Base</b>
<b>Self Leveling Sealant</b>	
<b>Silicone Sealant .....</b>	<b>To cover butyl and other sealants; not to be used as the main sealant</b>
<b>Parbond .....</b>	<b>To seal across tops of windows, etc. on exterior where silicone is not used</b>

## Fiberglass Roof

### WARNING

Use caution when working on top of your vehicle. The wet roof surface is extremely slippery.

Your Essex is equipped with a one piece fiberglass roof. Regular cleaning and maintenance is essential to insuring a long, trouble free life. Before cleaning, it is important that you inspect the sealants and gaskets used to seal components to the roof structure to be certain there is no leakage during the cleaning process. Any cracks or voids in the sealants and seals **MUST** be repaired prior to spraying the roof with water.

The surface of the fiberglass roof has a gelcoat finish that is very similar to the paint on the exterior of your unit. This provides a bright, durable finish that is easy to maintain. Around the perimeter of the roof is a textured area designed to provide better traction while walking on the roof. **Great care should be taken when walking on a roof that is wet, as the surface can be extremely slippery.**

Clean the roof with a mild detergent and soft brush, such as you would use to wash the exterior of your unit. Stubborn stains, like tree sap or bird droppings, may require additional scrubbing. Do not use harsh chemicals, or any caustic or acid based solutions for cleaning. Standard household cleaners diluted in water and applied with a soft bristle brush provide the best cleaning action. Rinse with clear water, taking care not to spray directly into roof vents, air conditioners, the refrigerator chimney, or and other roof mounted accessories.

## 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.

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**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.

### Alloy Wheels

Your Essex is equipped with Accuride Aluminum "Alloy" Wheels. With proper cleaning and maintenance, they will provide a lifetime of durability and beauty.

Accuride recommends the following for maintaining your new alloy wheels:

- 1.** Rinse the wheel with high pressure water to remove any debris, grit, or dirt particles. High pressure water is recommended.
- 2.** Use a 100% cotton cloth dipped in a mild soap (dish soap or an automotive autowash soap) to help remove stuck on road dirt and grease.
- 3.** Thoroughly rinse any remaining soap residue from the wheel.
- 4.** Dry the wheel thoroughly with a 100% cotton cloth.

#### IMPORTANT

To insure damage does not occur to your alloy wheels while cleaning, the following list must be adhered to:

- 1) DO NOT scrub the wheels before rinsing off loose particles with high pressure water; rubbing debris against the surface of the wheel will scratch it.
- 1) DO NOT use synthetic cleaning pads; synthetic cleaning pads can result in streaking on the surface of the wheel.
- 2) DO NOT use wire brushes to remove dirt or grime from the wheel surfaces.
- 3) DO NOT use strong detergents, acidic or alkaline cleaners to clean your alloy wheels. These solutions can attack the finish on the surface of the wheel, causing damage or dull spots in the finish.
- 4) DO NOT use strong solvents to remove grease or grime from the surface of the wheel. Damage to the wheel surface finish might occur.
- 5) DO NOT allow soap solutions to dry on the surface of the wheel; be sure to rinse and thoroughly them after cleaning.
- 6) DO NOT use polishes or waxes on an Accu-shield aluminum wheel. The finish will maintain it's bright, shiny surface for years to come without the need for special polishes.

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Maintenance

## IMPORTANT RV TIRE INFORMATION

**READ AND UNDERSTAND THE FOLLOWING INFORMATION  
BEFORE TAKING YOUR FIRST TRIP IN YOUR RV!**

### WARNING

Routine maintenance on your RV is important, but it cannot be overstated just how critical proper tire maintenance is to the safety, operation, and durability of your new unit. To insure your tires are operating safely, regular inspection of your tires, and checking of tire pressures is absolutely mandatory. **FAILURE TO FOLLOW PROPER INFLATION GUIDELINES MAY RESULT IN TIRE FAILURE, WHICH, UNDER CERTAIN CIRCUMSTANCE CAN CAUSE LOSS OF VEHICLE CONTROL OR ACCIDENTS THAT MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, AND / OR DEATH.** For safe operation and maximum weight carrying capacity, it is imperative that the tires be inflated to and maintained at the listed tire pressures on the Federal ID Tag that is affixed to the interior wall just behind the driver's seat in motorhomes, and to the lower front corner of the road side sidewall on fifth wheel trailers. Below is a sample of the Federal ID Tag you will find with your RV. **IT IS PARAMOUNT TO THE SAFE OPERATION OF THE VEHICLE TO MAINTAIN PROPER TIRE PRESSURES. TIRE PRESSURES SHOULD BE CHECKED AND ADJUSTED BEFORE AND AFTER EACH TRIP, AND SHOULD ALWAYS BE CHECKED AND ADJUSTED WITH THE TIRES COLD. NEVER ADD OR RELEASE PRESSURE FROM THE TIRES WHEN THEY ARE HOT (AFTER HAVING DRIVEN A MILE OR MORE).**

**For additional information on your tires, contact the Newmar Corporation.**

MANUFACTURED BY / FABRIQUE PAR:		DATE:	
GVWR/PWBV KG (LB)			
GAWR/PWBE KG (LB)		TIRES/PNEU	
FRONT/AVANT KG (LB)		RIMS/JANTE	
INTERM/INTERM KG (LB)		COLD INFL. PRESS./PRESS. DE GONFL. A FROID	
REAR/ARRIERE KG (LB)		KPA SINGLE DUAL	
		PSI/LPC <input type="checkbox"/> <input type="checkbox"/>	
		KPA SINGLE DUAL	
		PSI/LPC <input type="checkbox"/> <input type="checkbox"/>	
		KPA SINGLE DUAL	
		PSI/LPC <input type="checkbox"/> <input type="checkbox"/>	
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.			
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.			
V.I.N./N.I.V.:		TYPE/TYPE:	
		FD-228	

## INTERIOR CARE

### WARNING

Urea-formaldehyde is used in the productions 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 materials appearance and shorten its life. Remember to empty or replace vacuum bags before they become half full. In carpet areas that receive the most sunlight, close the curtains frequently to prevent fading. And act quickly when anything is spilled or dropped on the carpet.

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

### Fabrics

The fabrics used in this motorhome for the bedspread, draperies, headboard and valances contain fire-retardant additives that may be damaged by use of improper cleaning products. 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. For best results, the fabrics in this unit should be cleaned by a professional carpet and upholstery cleaner.

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.

#### **WARNING**

When cleaning the upholstery and fabric in the unit, do not use lacquer thinner, nail polish remover, laundry soaps or bleach. Never use carbon tetrachloride or gasoline for cleaning purposes. These items may cause damage to the materials being cleaned, and most are highly flammable.

### **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 on the walls. Do not use solvents of any kind. Solvents may damage the surface.

### **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 listed below to clean the dash, as they will soften the plastic.



## Woodwork

The wood cabinetry should be cared for with furniture polish to sustain the natural beauty and luster of the wood. This will also keep your cabinetry looking new, and prevent the wood from drying. Use of area rugs and floor mats by the entrance door is recommended to trap dirt. To clean the flooring, begin by vacuuming the floor to remove loose dust and dirt. Then, damp mop the floor using one gallon of clean, warm water with a non-abrasive, soap-free cleaner. The mop should be damp, not dripping. Do not use soap-based cleaners, scouring powders, steel wool, abrasive cleaners, wax or polish on the floor. To remove stubborn spots like shoe polish, oil, tar, markers, scuffs, etc., use a household solvent, acetone or nail polish remover, then wipe with a damp cloth. To remove chocolate, grease, juice or wine, use warm water and a non-abrasive cleaner. To remove candle wax or chewing gum, carefully scrape off when the material has hardened. For further tips, please see the manufacturer's information sheet in your Owner's Information Packet.

## Counter Tops

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. Also avoid cutting directly on the surface and avoid using harsh chemicals on the counter top. Wipe the counter top with a damp cloth to remove water spots. For most dirt and stains, wipe with a damp cloth and use soapy water or ammonia-based cleaners.

## Accessories

Your Essex is equipped with either brass or brushed nickel light fixtures, bath accessories and faucets. They are 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.

## Detectors

The CO and Propane detectors (if equipped) are self-contained and DO 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 of the detectors, 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. A small dehumidifier is also very effective in removing moisture from the air.

### IMPORTANT

- 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

### IMPORTANT

Always follow the chassis maintenance guidelines found in the chassis manufacturer owner's manual.

All routine maintenance is the responsibility of the owner and is not covered by the Newmar Limited Warranty. 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.

### **IMPORTANT**

Cosmetic adjustments and alignments must be performed within the first three (3) months from date of original purchase for warranty consideration. Thereafter, these items are considered routine maintenance.

### **Monthly**

- Check battery water level.

### **Every Three (3) Months**

- Clean range hood exhaust fan filter and blades.
- Check gas lines for leaks with soap solution or leak detector.
- Test smoke alarm, carbon monoxide detector and Propane gas 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 tub and 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**

- Inspect the slide out for proper seal. If realignment is necessary, please contact an Authorized Newmar Service Center.
- Inspect the exterior rubber slide out seals and apply a UV inhibitor, such as 303 Protectant.
- Rotate tires as recommended by the tire manufacturer.
- Check all gas appliances for proper operation.
- Have the Propane system inspected by a qualified technician.
- Lubricate the moveable parts on the entrance step.

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Maintenance**

## **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.

## **COLD WEATHER USE**

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.