



RV OPERATION & TROUBLESHOOTING

INTRODUCTION

Thank you for choosing thl for your motorhome vacation.

We provide this manual as a guide and it describes the operation of the motorhome equipment in general. Due to differences between similar equipment and motorhome models as well as changes from year to year, we cannot precisely describe every motorhome or its equipment individually. The systems and their operation are very similar if not the same. Please read the following information thoroughly.

Your personal walk-through may have been overwhelming or just too much information in a short time. Please take a few minutes and read this manual carefully. Familiarize yourself with the vehicle. This will ensure that you get the best use of the motorhome.

We at thl are committed to make your vacation as fun and trouble-free as possible. In the event of unanswered questions or a malfunction please call our Help Desk* during business hours (California / Pacific Time) for further assistance.

* thl is not liable for any air time, data, roaming or other charges related to phone calls or electronic messages to/from our Help Desk

This document is the property of thl and is for informational purposes only

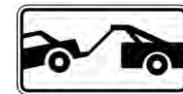
thl reserves the right to change the documentation at any time without prior notice. thl does not assume any liability for the accuracy of any instructions or specifications contained herein. The document is not intended to describe the specific function of any appliance or item within a particular motorhome. Please assure yourself of the contents and the operation of each item in your motorhome before you leave our rental location. Our employees are able to give you specific instructions. Please ask if you have any questions.

This document is not to be duplicated in any way without written consent by thl.

Collision or Break-down



Flat tire, keys locked in or lost, out of fuel, engine or transmission problems, which prevent you from driving



Should you experience any kind of emergency that requires immediate professional medical, fire or police assistance, please call the nationwide emergency number **911** from any nearby telephone. Should you be involved in a vehicular collision, call the local police/sheriff/park ranger and inform us no later than the next business day to maintain insurance coverage – see page 14 for more details. Should your motorhome no longer be drivable, call us at the numbers on the key tag or rental agreement.

An emergency is when the motorhome cannot be driven anymore
Please call the numbers on your key tag

24 hours a day – 7 days a week

All other calls 8:00 a.m. – 5:00 p.m. Monday – Friday (Pacific Time)

800/855/866/877 & 888 phone numbers are toll-free* which can be called from any landline phone!

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DRIVING SAFETY

Be aware that you are driving a much larger and heavier vehicle than a car. This will cause the vehicle to react differently from what you may be used to. Failure to follow this safety information may result in an accident, injury or death. **Obey all local, state and federal traffic laws.** Plan your route in advance and know the vehicles dimensions and limitations!

Refueling (Gasoline and Propane)



Refueling of gasoline and propane **releases highly flammable fumes.** It is therefore mandatory to **TURN OFF** any spark emitting appliances (engine, refrigerator, water heater, furnace, etc.) before fueling. Turn off the engine and the battery disconnect switch by the entry door.

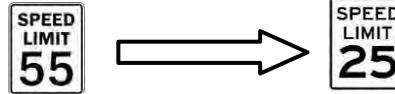
Turn it back ON after fueling.



Side winds



SLOW DOWN!

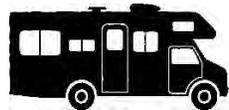


Use caution or stop if necessary when traveling in high wind conditions. Do not ignore wind warnings on the radio or by traffic officers. When trucks park along the road – stop as well.

Overtaking or crossing large vehicles can also cause sideways air pressure and requires extra caution and attention!



Following distance



5

4

Distance in seconds:

3

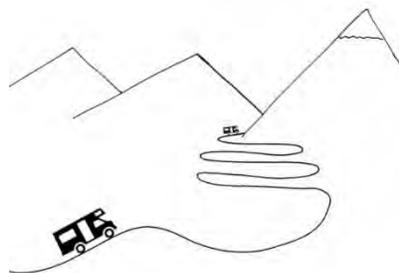
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1



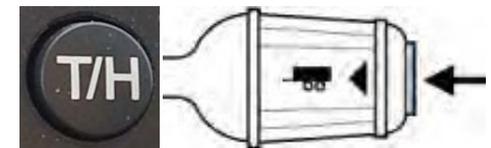
The braking distance is much greater than for a car. **Keep a greater distance to the vehicle in front of you!** If you follow a truck, keep extra distance to reduce risk of damage to the windshield by stones thrown up.

Mountain driving



When driving in the mountains engage the transmissions tow/ haul mode (separate button). This setting will provide improved pulling power for uphill and engine braking with transmission downshifts for downhill driving. To prevent brake overheating engage the tow/haul mode any time extra braking is required. Higher engine speed and noise are normal in tow/haul mode.

Adjust your speed according to current road and traffic conditions!



Driving at night



If you are driving at night, be aware that in many rural areas (especially in the wide-open areas of the western states) wildlife and in some areas, livestock can be encountered on the roads. **Adjust your speed accordingly.**



Seat belts



All passengers in the motorhome need to be buckled up. Children - typically up to age 6 or 60 pounds – need to be in a child or booster seat. Consult state regulations – see our website for further details.

DO NOT get up, cook, shower, use bathroom, walk around or lie on any bed in the motorhome while the vehicle is in motion!

The safety of yourself and your loved ones is very important.

GPS – Navigation System

NEVER operate any GPS device while driving – it is unsafe and dangerous! Do NOT handle a GPS while the vehicle transmission is in gear – stop and park before operating a GPS. Install and use a GPS device in such a manner that does not cause accidents, personal injury or property damage.

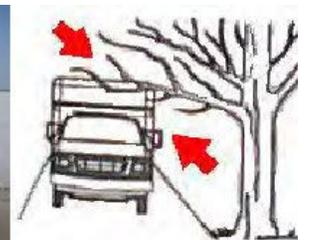


Overhead obstacles



Watch for low overpasses, low-hanging trees, roof edges and road signs. If needed, have a passenger step outside and guide you past the obstacle. Required vertical clearance for Class C is 12 feet (3.65m) and for Class A is 13 feet (3.95m).

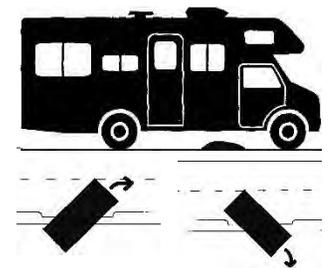
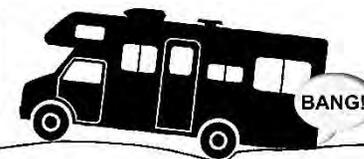
Entering parking structures is **PROHIBITED!**



Driveway entrances and rough road surface

Enter and exit driveways **SLOW** and at an angle – the rear of the motorhome could hit the ground. Drive slowly over ramps, humps, bumps, rough ground and other obstacles of any kind.

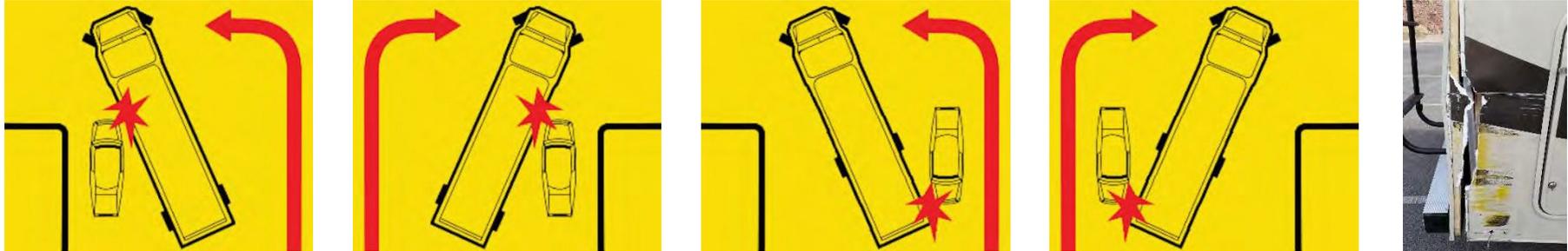
CAUTION - Cabinets could open and objects fall out!



Maneuvering & parking

Due to the vehicle length, turns need to be executed with extra caution. Turning too soon or too tight may lead to a collision with obstacles.

Check your mirrors and drive slow during maneuvering.



The rear of the motorhome swings out wide and clips corners when making turns. Allow for extra room when making turns and parking. Ensure the rear wheels also clear any obstacles.

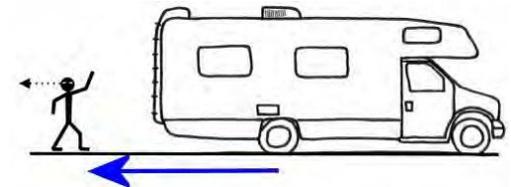
Park in an area with a lot of free space and use more than one parking spot if possible, to ensure other cars do not park too close. You are responsible to pay for all parking spaces used! Parking structures are **PROHIBITED!**

When maneuvering on a campground or parking lot **ALWAYS get help from a passenger** → do not rely on mirrors or backup cameras only! Have someone outside of the motorhome checking for overhead- & side-clearance and obstacles.



Backing up (Reversing)

ALWAYS get help from a passenger while backing up → do not rely on mirrors or backup cameras only! Have someone outside of the motorhome checking for overhead- & side-clearance and obstacles. Even if the motorhome is equipped with a rearview camera - there remain blind spots!



Damages caused by backing up are gross negligent and NOT covered by the insurance!

Tunnels and narrow roads

Drive slowly in tunnels and on narrow mountain roads. Many roads in National and State Parks have been built long before motorhomes were common vehicles. If you slow down when roads narrow, you are more likely able to avoid a mirror-to-mirror or other collisions.

Mobile phone use while driving



It is not just **unsafe** to use a cell phone while behind the wheel, but in most states it is **illegal!** If you have to make a call – pull over or have a passenger make the call.



Loose items

Secure any loose items or equipment before you drive off. In case of an accident or emergency stop, such a loose item could cause severe injury.

Break-in and theft



Motorhomes can be a target of thieves. Keep all doors locked while the vehicle is in motion. Do not leave valuables like cameras, computers, etc. laying out where they can be seen. To prevent somebody from hiding in the vehicle, lock all windows and doors; open all curtains and remove the privacy curtain when leaving the motorhome. This helps the police/security personnel to spot suspicious activities.

Should you have fallen victim to a theft or break-in, call the police and get a police report for your insurance.



Emergency exits

Emergency exits are clearly marked. Special window exits are not to be opened - except in emergencies.

Hot surfaces

Exhaust ports of furnace, water heater and generator are extremely hot when in use. Do not touch!

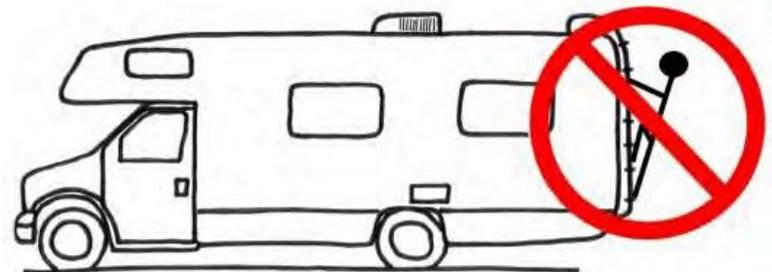
Slippery when wet

Entry steps and floors can be slippery when wet. Watch your step! Showers are very slippery when wet and not for use while vehicle is in motion.



Risk of falling

- The cab-over bunk bed is above the cockpit and one could fall out of bed. **ALWAYS use the safety net when small children sleep in the cab-over bunk**
- Watch your step when exiting the vehicle. If the motorhome is equipped with an entry step and it is retracted you could fall and get hurt. Electric step: wait until the step is fully extended before you step outside
- **For safety reasons, renters is not allowed access the roof area!**



Traffic Rules

There are some unique traffic rules in North America, not commonly encountered elsewhere. Road signs are often spelled out.

Emergency vehicles

If an emergency vehicle on duty is approaching from either direction with its siren and warning lights on, **you are required to pull over to the right side of the road and stop** until the emergency vehicle has passed.



Traffic stop



If a police car is following you with its flashing lights on, you have to pull over in a safe place as soon as possible and stop. Do NOT exit the vehicle and keep your hands visible for the officer.
Follow the officer's instructions and answer all questions.
If you are issued a traffic ticket, call On Road Care for further instructions.

School bus

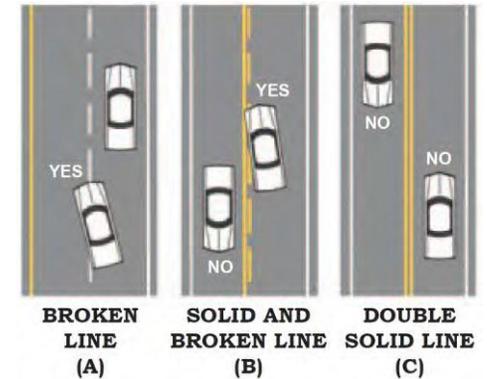
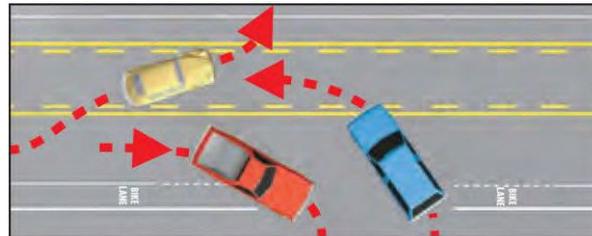
If you encounter a stopped school bus with its red lights blinking **you are required to stop fully until the lights are turned off.** You have to stop from either direction if there is no raised center divider between the traffic lanes.



Traffic lanes

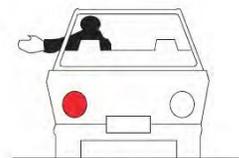
Passing: Only on a broken line on your side of the road. Only pass if there is no oncoming traffic. **The motorhome is heavier, longer and slower than a car and needs more room and time to pass another vehicle.**

Turning: If there is a center lane, you may use it to make a left-hand turn. You may also use the center lane when entering traffic.



Hand signals

Should the turn or brake lights fail, you are required to signal your intentions by hand.



**LEFT
TURN**



**RIGHT
TURN**



**STOPPING
or SLOWING
ABRUPTLY**

These traffic rules are by no means complete and all traffic laws are applicable.

MOTORHOME SAFETY EQUIPMENT

PROPANE & CARBON MONOXIDE DETECTOR

For your safety, a propane & carbon monoxide detector is installed in each motorhome often near the kitchen or the dinette area - just above the floor.

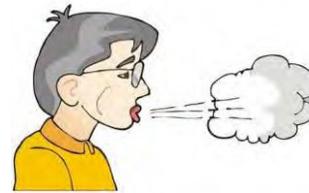
- ▶ Carbon Monoxide is an odorless gas often caused by burning (like cooking or camp fires).
- ▶ Propane is very flammable, heavier than air and smells like rotten eggs. It is used for heating, cooking and refrigeration.

Indicator Lights - the alarm has indicator lights to tell you it is working and what type of alert is active:

- ▶ Green (blinking or steady) usually indicates the alarm is ON and in normal operation.
- ▶ Blinking red & green lights = Error – have it checked before you stop for the night!
- ▶ Red light (steady or blinking) = Danger - high propane or carbon monoxide levels. Proceed immediately with the steps out lined below:

Alert Chirps (beeps) - the alarm alerts you with high pitch loud chirp sounds:

- ▶ 4 chirps (beeps) = CO alarm
- ▶ 6 chirps (beeps) = Propane alarm
- ▶ Steady chirp = Propane alarm



Certain cleaning solvents, aerosol sprays, dust and camp fire fumes can also trigger the alarm. Blowing into the sensor can help to clear it out.

In case of the alarm going off:

1. Turn off all open flames – **do NOT touch electrical switches (potential sparks!)**
2. Exit the vehicle immediately and close the battery disconnect switch at the entry door
3. Turn off the main valve on the propane tank
4. Wait several minutes before re-entering the vehicle
5. Open windows and the entry door - allow the propane/carbon monoxide to fully dissipate
6. Ensure the stove and oven burner valves are closed; turn off the water heater, the furnace, refrigerator and generator
7. Reset the alarm by pushing the test/mute button – blow into the opening
8. Turn the main valve on the propane tank back on – if you smell propane again – turn it back off and call our Help Desk
9. If you do not smell propane and the alarm does not go off anymore, the source of the leak may have been a temporarily open valve at the cook top



TROUBLESHOOTER		
CO detector alarm going off	CO in coach	Open all windows - turn off engine and/or generator
CO detector "chirping"/60 sec.	Low coach battery voltage	Recharge coach battery by starting engine
Propane detector alarm going off	Possible propane leak in system	See steps above
	Cleaners or fumes activating alarm	Press mute/test button, blow into the alarm and air out motorhome thoroughly
Propane detector "chirping"/60-90 sec.	Low coach battery voltage	Recharge coach battery by starting engine
Foul egg smell in and/or around motorhome	Possible propane leak	- See above steps - Have the gas system checked and leak repaired before using again - Call Help Desk
	After recent refilling of propane tank: Vapor valve not fully closed	Close Vapor valve on propane tank completely

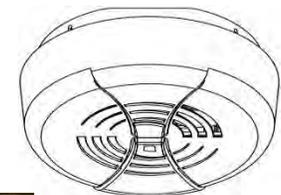
SMOKE DETECTOR & FIRE EXTINGUISHER

Every motorhome is equipped with a fire extinguisher near the entry door. The smoke alarm is mounted to the ceiling, usually near the kitchen. The alarm sounds off a very shrill beep if it detects smoke – indicating a potential fire. Sometimes, cooking will also make the alarm to sound – please make sure you only cook with an open window and the range hood / roof vent fan running.

If the alarm sounds, proceed with the following steps immediately:

1. Turn off any propane appliance – cook top, furnace, etc.
2. Extinguish any visible flames, using the fire extinguisher
3. If the fire cannot be extinguished, exit the vehicle immediately.
Turn off the battery disconnect switch and close the main valve on the propane tank
4. Get help – call the fire department if 9-1-1!
5. Once everybody is safe and the fire has been extinguished, call our Help Desk for further assistance

If there was no fire, open a few windows and get fresh air thru the motorhome. To reset the alarm, push the test button until it beeps. A regular low pitch beep about every 60 – 90 seconds indicates low battery voltage.



TROUBLESHOOTING		
Smoke alarm going off	Smoke & fumes while cooking	Turn on range hood/roof vent fan and open some windows. Push mute/test button on alarm
	Fire in motorhome	Close main propane valve. Call 911 and use fire extinguisher
Smoke detector "chirping"; 60-90 sec.	Battery voltage low	Replace battery

COLLISION with 3RD PARTY (Accident)

An accident is a vehicular collision in traffic and/or with property resulting in injury and/or damage to others and/or their property. Collisions without harm and/or damage to others and /or their property are designated as damage (see next section).

1. Get to safety if situation is dangerous
2. Make sure everybody is okay – administer first aid
3. Call the local police and have an officer take a report. **In case of injuries dial 911 (ambulance, police or fire department).** Request the officer's name, ID-, case number, phone number and how to get a copy of his report. If the police refuse to come or take a report; get the name, ID number and local phone number of the officer answering your call



For minor accidents or on private property, the police usually do not take a report. Proceed with step 4 below

4. Take pictures of the accident scene and the involved vehicles – if possible before moving the vehicles. If the vehicles were moved take pictures of the accident area as well
5. Exchange all information with the other party and fill in the collision report form. It is necessary to provide the information from the other party – name, address, phone number, insurance information – if the other person refuses, call the police. A police report alone is not enough!



If other driver/property owner is not present, leave a note with your name, your vehicle & phone number on it on the vehicle/property.

The collision report form, registration and insurance information are located in the pouch in the glove box on the passenger side

6. We must be contacted no later than the next business day at our On Road Care (phone number and e-mail on the key tag)
7. E-mail the accident report (high resolution pictures) or fax it from the next campground

The insurance company has the right to decline coverage if accidents are not reported on time or if no collision report can be provided.

Please arrive before 09:30 a.m. on your return day to process the formalities



Single Party Collision (Damage)

In case the motorhome got damaged without harm to people and/or damage to property of others, please report the damage to the Help Desk (info on key tag) or and to get assistance in having the vehicle repaired - if needed.

Please arrive before 09:30 a.m. on your return day



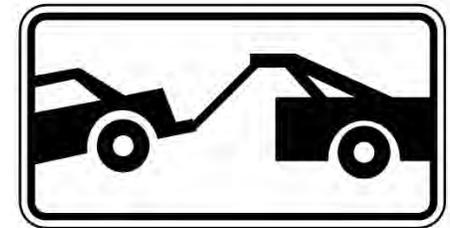
FLAT TIRE



Do NOT drive with a flat tire! Even if there is a second tire on the same side, driving with a flat tire will overload the other tire and is dangerous. In case you have a flat tire please call our Help Desk for assistance. Please have the following information available: a) miles, b) which tire and c) the exact street address. We will arrange for professional help to install the spare tire. Repair or replacement cost of the flat tire is your responsibility within the insurance deductible. For safety, insurance & liability reasons there are no tools in the vehicle.

BREAKDOWN

Should the vehicle break down – not drivable anymore – call our Help Desk. Please have the following information available: a) miles, b) problem description, c) number of passengers and d) the exact street address. Unauthorized towing will not be reimbursed.



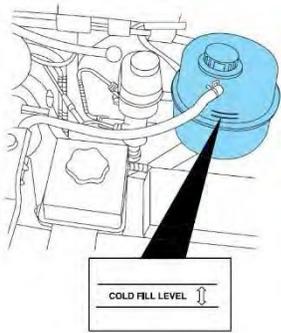
MAINTENANCE

You as renter are responsible for the maintenance of the rental vehicle during the rental period. Check the engine oil and coolant levels every two days. A motor oil change is required every 5,000 miles you drive. Maintenance expenses in excess of \$100.00 will be reimbursed with prior approval by thl and with receipt only. Oil changes can be done at any nationwide lube centers such as Jiffy Lube/Quick Lube/EZ-Lube or similar. You are **not** required to have the oil changed by a Ford or motorhome dealership; those are usually overpriced.

Motor oil is best checked with a cold engine on level ground. The oil level has to be between the MIN and MAX mark. NEVER fill more than ½ quart/liter at one time! Recheck after 2 minutes after adding oil and before filling more.



Inspect the oil level in the generator **every 8 hours of usage**. Damages due to lack of maintenance are the renter's responsibility. Use regular motor oil if needed.

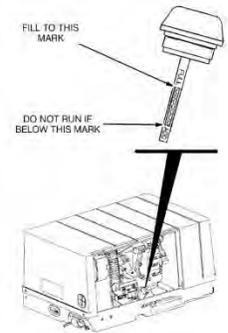


Coolant level



Oil grade

Generator oil level
(same as engine oil)



The engine coolant has to be inspected regularly when the engine is cold and if needed, add drinking water only.

Have the tire pressure checked weekly. Pressure information is found on the blue Ford label near the driver seat – usually on the door frame.

REPAIRS



If there is a defect and you are close to an El Monte RV/ Road Bear RV facility, please call ahead for an appointment. Our staff is best qualified and equipped to get the problem resolved quickly.

We do NOT offer repairs off-site (on campgrounds, etc.).

Any on-the-road repairs that are **more than US\$ 50.00** require prior authorization by On Road Care. For authorization call our Help Desk. Non-authorized repairs will NOT be reimbursed.

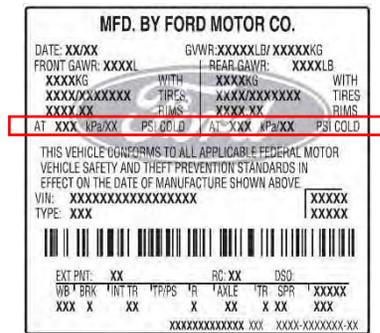
Mobile repair service is generally not authorized if vehicle is drivable.

If you need a repair, have the repair shop a) diagnose the problem and prepare a repair estimate, b) have the repair shop contact our Help Desk for repair authorization & payment, c) record the vehicle number, VIN, current mileage & appliance serial# (if applicable).

Please show the back side of your document folder to the repair shop with these instructions.

Repairs will be paid directly by thl to the repair facility – you are required to return any defective parts. To get reimbursed for repairs, receipts and defective parts need to be returned. Non-authorized repairs and repairs without a receipt will NOT be reimbursed.

Most repair shops have regular business hours and are usually closed on weekends and holidays. Some are closed during the winter season.



AUTOMOTIVE EQUIPMENT (FORD)

FUEL REQUIREMENT



The motorhome requires minimum 87 octane grade **unleaded gasoline**.
If 87 octane fuel is not available use the next higher grade.

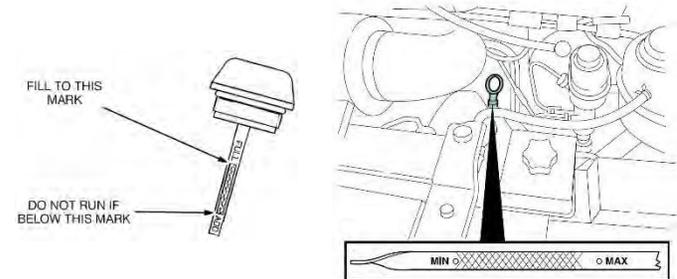
Maximum 5% Ethanol blend (E5)!



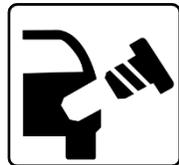
MOTOR OIL



The motor oil grade is indicated on the filler cap in the engine compartment. Vehicles oil level needs to be inspected every 500 driven miles and the generator oil level every 8 hours of generator operation. NEVER fill more than ½ quart/liter at one time! Always wait 2 minutes after adding oil and before filling more.

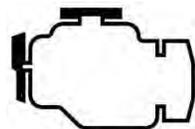


GAS CAP LIGHT



If the gas cap light turns on; open and close the gas cap and you can drive on. The computer will need a few days (variations of driving cycles) before turning the light off.

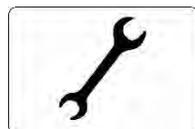
CHECK ENGINE LIGHT



If the check engine light turns on and there are no changes in engine performance (such as lack of power, extra engine noise or vibrations) you can drive on. The computer will need a few days (driving cycles) before turning the light off.
If you notice any change in performance, noise, vibrations or otherwise – call the Help Desk.

If the light is **flashing (blinking)** stop as soon as possible in a safe place to prevent engine damage and call the Help Desk.

WRENCH LIGHT



If the wrench light turns on and there are no changes in vehicle operation (such as loss of power, extra noise or vibrations) you can drive on. If you notice any change in performance, noise, vibrations or otherwise – call the Help Desk.

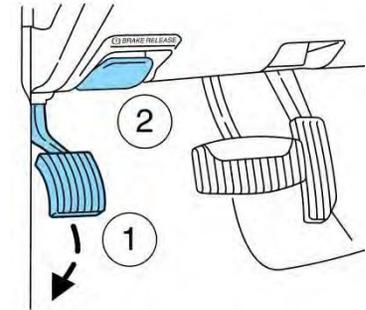
If the light is **flashing (blinking)** stop as soon as possible in a safe place to prevent engine damage and call the Help Desk.



PARKING BRAKE

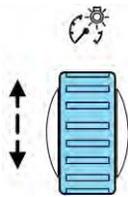
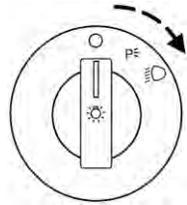
Stop the vehicle fully and apply the parking brake (1) before shifting the transmission into 'Park'.
To release the parking brake, pull the marked handle (2).

Some vehicle models have a hand operated parking brake



LIGHTS

Headlight & parking light control switch is located to the left of the steering wheel

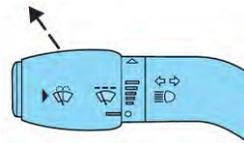
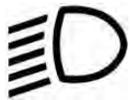


Instrument panel (dashboard) illumination – turn wheel up or down or push appropriate buttons to adjust

Some reading (dome) lights: ON → rotate wheel all the way up and/or push on the lamp; OFF → rotate wheel down and/or push on lamp. Some vehicle models have a switch on the lamp itself or next to it

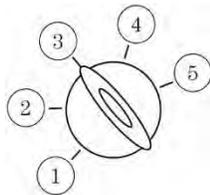


For high beam push the turn signal lever forward

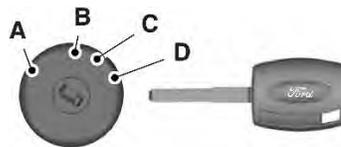


IGNITION LOCK

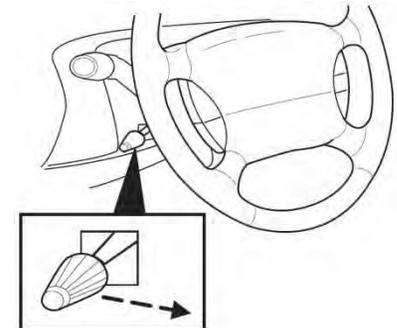
Turn the key clockwise to start the engine



- 1/B – Radio/Accessory position
- 2/A – **Remove key position**
- 3/A – OFF position
- 4/C – Ignition ON position
- 5/D – START position



Ford Transit



Ford E-Series & Class A

TROUBLESHOOTING

Cannot remove ignition key	Gear not in Park position	Put gear in Park position
	Key not in correct position	Turn key to the remove position

TRANSMISSION



Gearshift: Depress brake pedal  to shift out of 'Park'. Gear lever: pull towards you and down to engage transmission. Use 'D' for regular and uphill driving. NEVER start from a complete stop in 1st, 2nd, 3rd or 4th gear – the transmission will not automatically shift! For very steep declines and in extreme cases, at speeds below 20 mph (30 km/h) only, shift down

to 3rd/4th gear if needed. A simple rule of thumb: if you have to use the brakes a lot, activate the tow/haul mode or shift down!
 Ford Transit: **do not drive in M (Manual) mode** – transmission will not shift automatically – overheating and damage possible!

TROUBLESHOOTING		
Cannot get shifter out of park	Ignition off	Start engine
	Brake-shift interlock feature on	Depress brake pedal with right foot
		Replace fuse

MOUNTAIN DRIVING

Tow/Haul—normally OFF. Tow/Haul ON → use this position when driving in the mountains. This will provide improved pulling power for uphill and engine braking with transmission downshifts for downhill driving. To prevent brake overheating engage the tow/haul mode any time extra braking is required. Higher engine speed and noise are normal in tow/haul mode. If you have to use the brakes for long periods of time you need to activate the tow/haul mode. On level roads turn off the tow/haul mode to improve driving comfort and fuel mileage.



Adjust your speed according to road and traffic conditions!

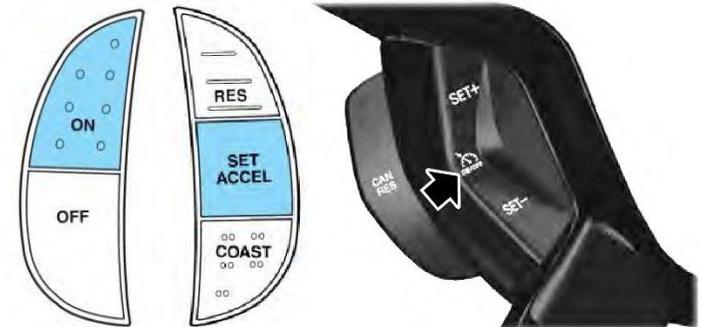
TROUBLESHOOTING		
Tow/Haul light on	Transmission set to towing mode	Push tow/haul button lever to turn off
Tow/Haul light blinking	Transmission malfunction	Stop as soon as possible in a safe place and call our Help Desk

CRUISE CONTROL

Cruise control operates above 35mph / 56km/h only

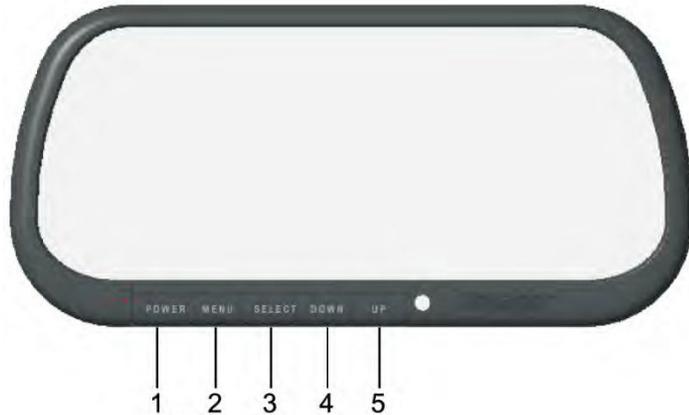
- To activate the cruise control, tap the ON button
- To set a desired speed press the SET+/ACCEL button and take the right foot off the accelerator
- To increase the speed, hold the SET+/ACCEL button until the desired speed is reached
- To reduce the speed, hold the SET-/COAST button until the desired speed is reached
- To get back to the last set speed after stepping on the brake, tap the RES button
- To cancel the current settings, tap the CAN button (if equipped)
- To turn off the cruise control, tap the OFF button

The cruise control disengages when the brakes are applied, but remains activated



REAR VIEW MONITOR (Ford Transit)

Ford Transit vehicles are equipped with a rear-view monitor in place of a rear-view mirror.



1. POWER - Press once to turn on; press again to turn off
2. MENU - Press once to turn to the On-Screen Display
- When in MENU returns to previous menu level
3. SELECT - To switch between input modes (cameras)
- When in MENU to choose highlighted function/option
4. DOWN (▼) - To adjust brightness, contrast, color, volume or sleep timer
- When in MENU to select options
5. UP (▲) - To adjust brightness, contrast, color, volume or sleep timer
- When in MENU to select options

Press SELECT to save any changes made.

SIDE VIEW MIRRORS

Ford Transit & Class A vehicles have electrical mirrors which can be adjusted remotely by a switch near the steering wheel.

On Ford E-Series vehicles, the side view mirrors are manually adjustable. Tilt the head forward or back to adjust the viewing angle up or down. Rotate the head to adjust the viewing angle closer to or farther from the vehicle. If needed, retighten the set screw.



Screw cover



Set screw



Allen (hex) key: size 3/16"

If the mirror head is loose and for some reason cannot be secured with the proper tool, secure it in place with tape – available at almost any store.

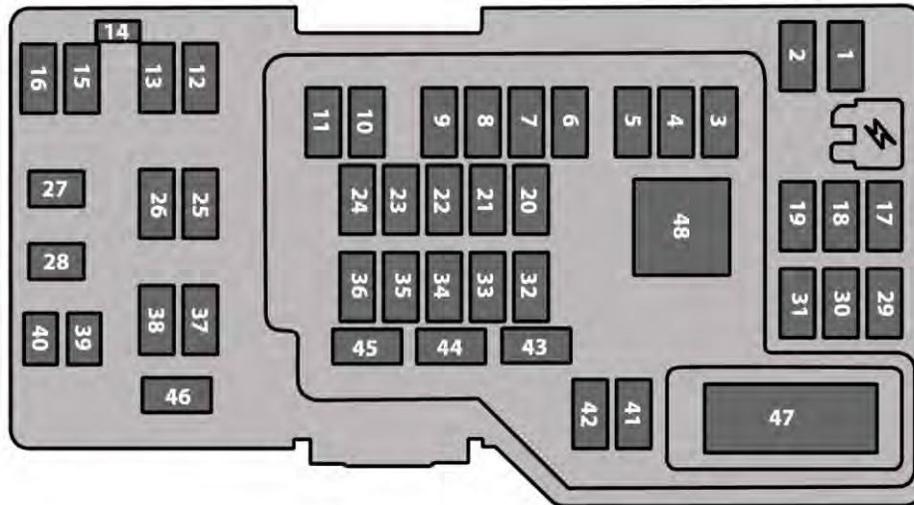


FUSES AND RELAYS

Each vehicle has fuses and relays related to the operation of the vehicle – unrelated to the systems in the living (house) area.

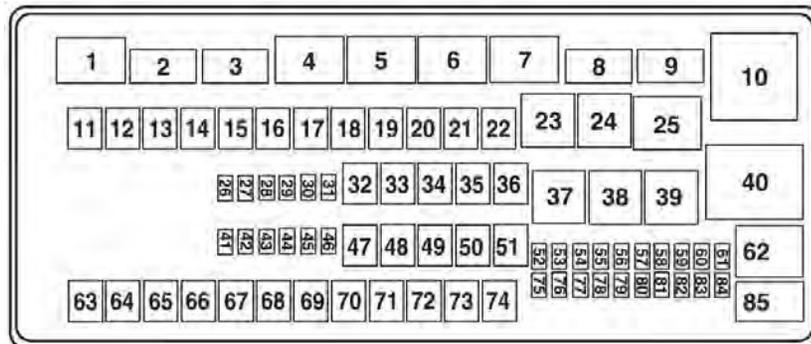
FORD – E-Series (E350/E450) model:

1. Underneath the dash board (near parking brake):



- | | |
|---------------------------|--------------------------------|
| 1. – 4. Spares | 26. Instrument cluster |
| 5. Brake interlock | 27. Ignition switch feed |
| 6. Turn & stop lights | 28. Audio mute |
| 7. Low beam – left | 29. Instrument cluster |
| 8. Low beam – right | 30. – 31. Not used |
| 9. Dome lights | 32. Restraint system |
| 10. Switch illumination | 33. – 34. Spare |
| 11. – 12. Not used | 35. Run/start |
| 13. Mirrors | 36. Anti-theft system |
| 14. – 16. Spares | 37. Air conditioner |
| 17. Door locks | 38. Not used |
| 18. – 19. Spares | 39. Radio |
| 20. Diagnostics connector | 40. Not used |
| 21. Spare | 41. Radio, switch illumination |
| 22. Parking lights | 42. – 44. Spare |
| 23. High beam | 45. Windshield washer |
| 24. Horn | 46. – 47. Spares |
| 25. Demand lighting | 48. Relay |

2. Engine compartment (driver side):

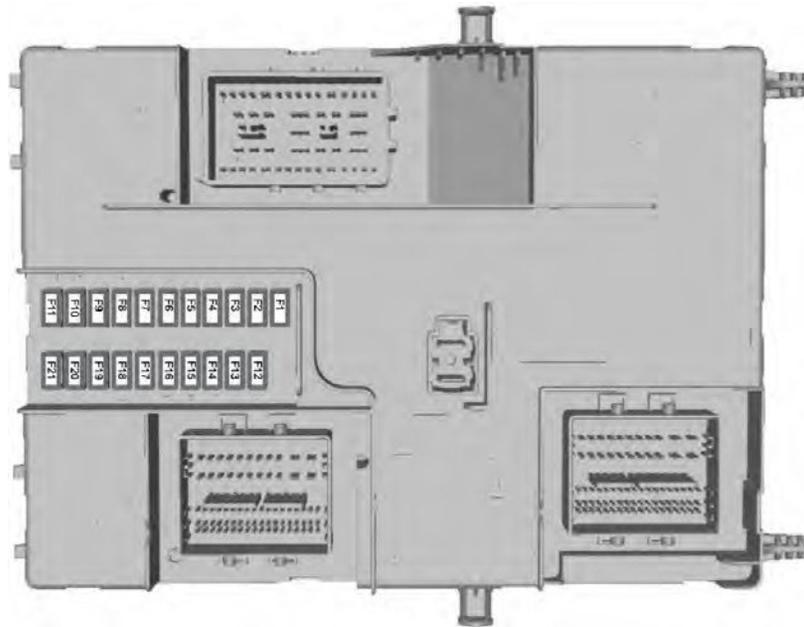


- | | | |
|------------------------|------------------------------|-----------------------------------|
| 1. – 10. Relays | 37. – 40. Relays | 65. Power point #2 (glove box) |
| 11. Empty/Spare | 41. – 42. Spares | 66. Power point #3 |
| 12. Run/Start* | 43. Fuel pump | 67. Power point #1 (dash board) |
| 13. Starter | 44. – 45. Spare | 68. Spare |
| 14. Run/Start | 46. PCM | 69. Not used |
| 15. Chassis battery | 47. ABS coil | 70. Spare |
| 16. – 22. Spare | 48. Trailer turn/stop lights | 71. Not used |
| 23. – 25. Relays | 49. Wiper motor | 72. Cigarette lighter/power point |
| 26. – 27. Empty | 50. – 51. Spare | 73. Not used |
| 28. Back up lights | 52. Run/start coil | 74. Power seats |
| 29. Compressor clutch | 53. ABS | 75. – 77. PCM |
| 30. Brake light switch | 54. Fuel pump | 78. Ignition coil |
| 31. Spare | 55. – 56. Not used | 79. Transmission |
| 32. Blower | 57. – 58. Trailer lights | 80. Spare |
| 33. ABS pump | 59. – 61. Not used | 81. – 82. Not used |
| 34. Spare | 62. Trailer battery | 83. Fuel pump diode |
| 35. PCM | 63. Spare | 84. Not used |
| 36. Ignition lock | 64. Not used | 85. Relay |

*) Battery solenoid for coach battery

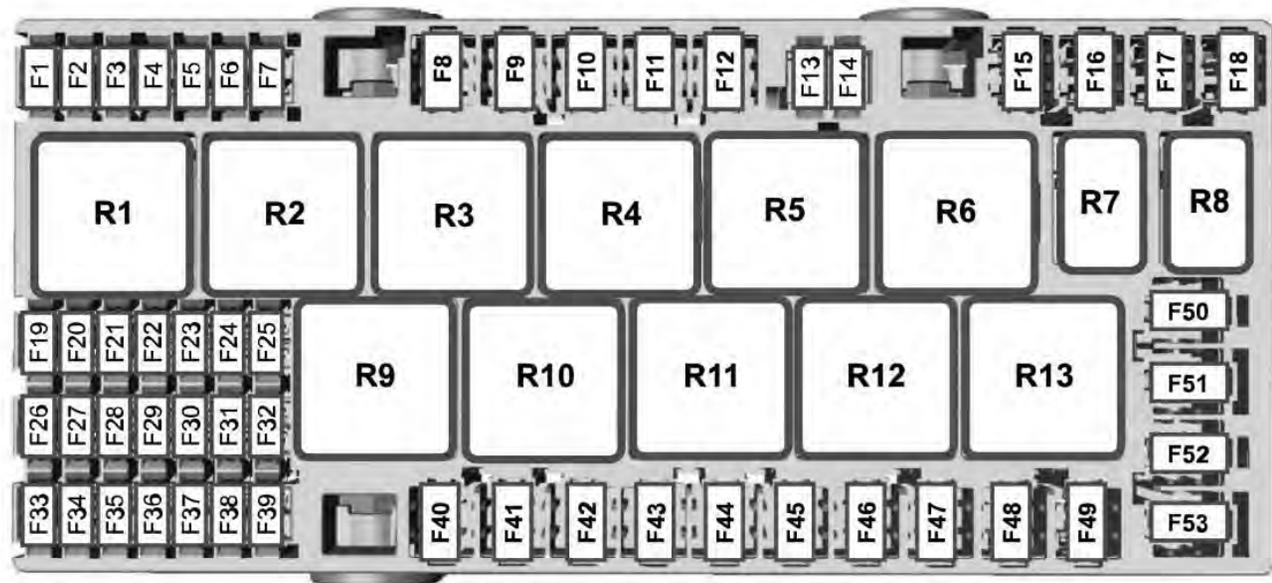
FORD – Transit model:

Body Control Module



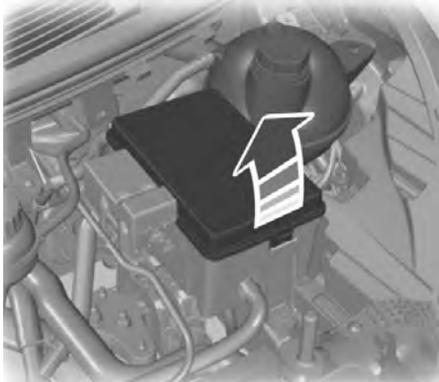
- | | |
|----------------------|--|
| F1. Power locks | F13. OBD |
| F2. Power locks | F14. Turn signal |
| F3. Ignition switch | F15. Exterior lights |
| F4. Brake interlock | F16. Radio |
| F5. Not used | F17. Instrumentcluster |
| F6. Wiper washer | F18. Headlamp & steering wheel module & brake light switch |
| F7. Exterior mirror | F19. Control/Display module |
| F8. Not used | F20. Anti-theft |
| F9. RH Headlight | F21. Spare |
| F10. LH Headlight | |
| F11. Exterior lights | |
| F12. Not used | |

Passenger Compartment

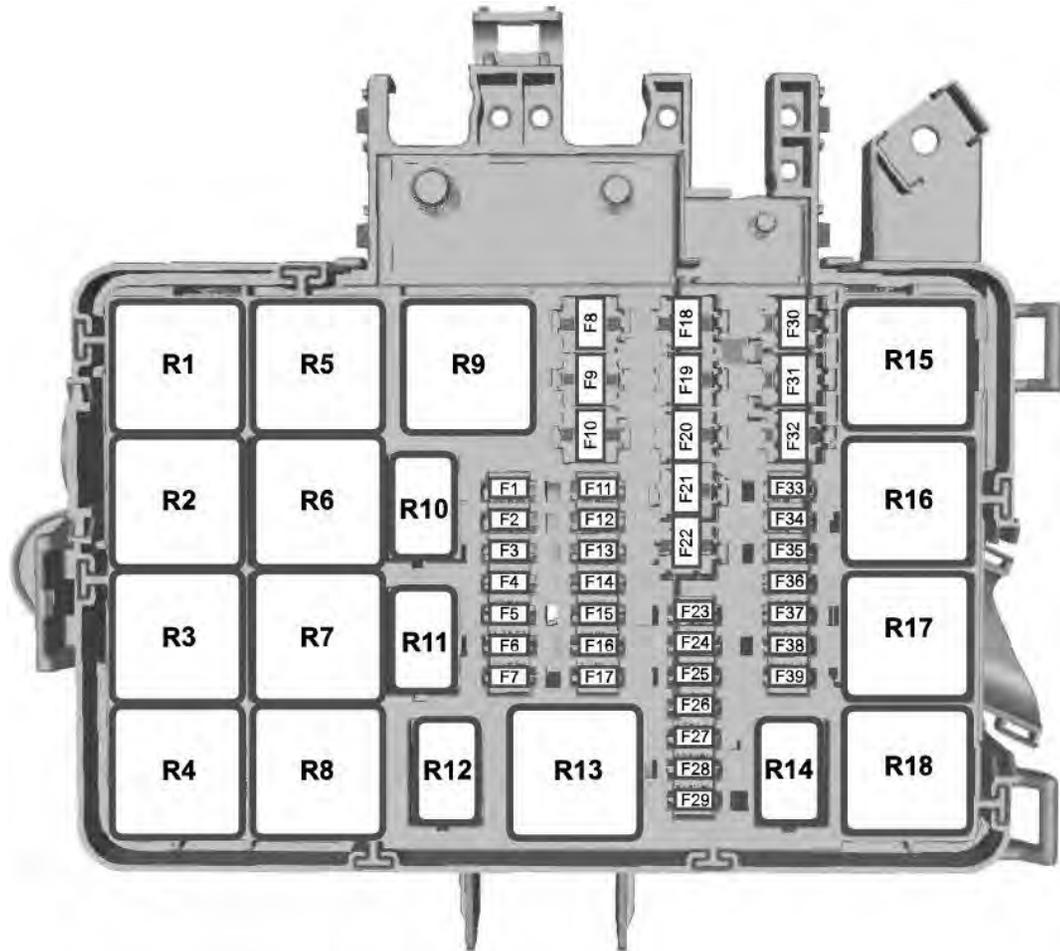


- | | | | | | |
|---------------------|---------------------|---------------------|---------------------------------------|------------------------|-------------------------|
| F1. Airbag | F10. Not used | F19. Trailer module | F28. Not used | F36. Horn | F45. Trailer |
| F2. ABS | F11. Not used | F20. Heated mirrors | F29. Not used | F37. Not used | F46. Power windows |
| F3. Interior lights | F12. Trailer lights | F21. Connectors | F30. Not used | F38. Blower/horn/wiper | F47. Cigarette lighter |
| F4. Trailer lights | F13. ABS | F22. Not used | F31. Trailer brake | F39. Keyless entry | F48. Rear power points |
| F5. Body connectors | F14. PCM | F23. A/C module | F32. Interior lights | F40. Blower motor | F49. Front power points |
| F6. Not used | F15. PCM relay | F24. Connectors | F33. Not used | F41. Not used | F50. Ignition relay |
| F7. Battery saver | F16. Body module | F25. Body module | F34. Not used | F42. Not used | F51. Not used |
| F8. AC power outlet | F17. ABS | F26. Heated mirrors | F35. Mirror switch & LH window switch | F43. Trailer | F52. Connectors |
| F9. Trailer brake | F18. Connectors | F27. Not used | | F44. Aux. power points | F53. Connectors |

Engine compartment



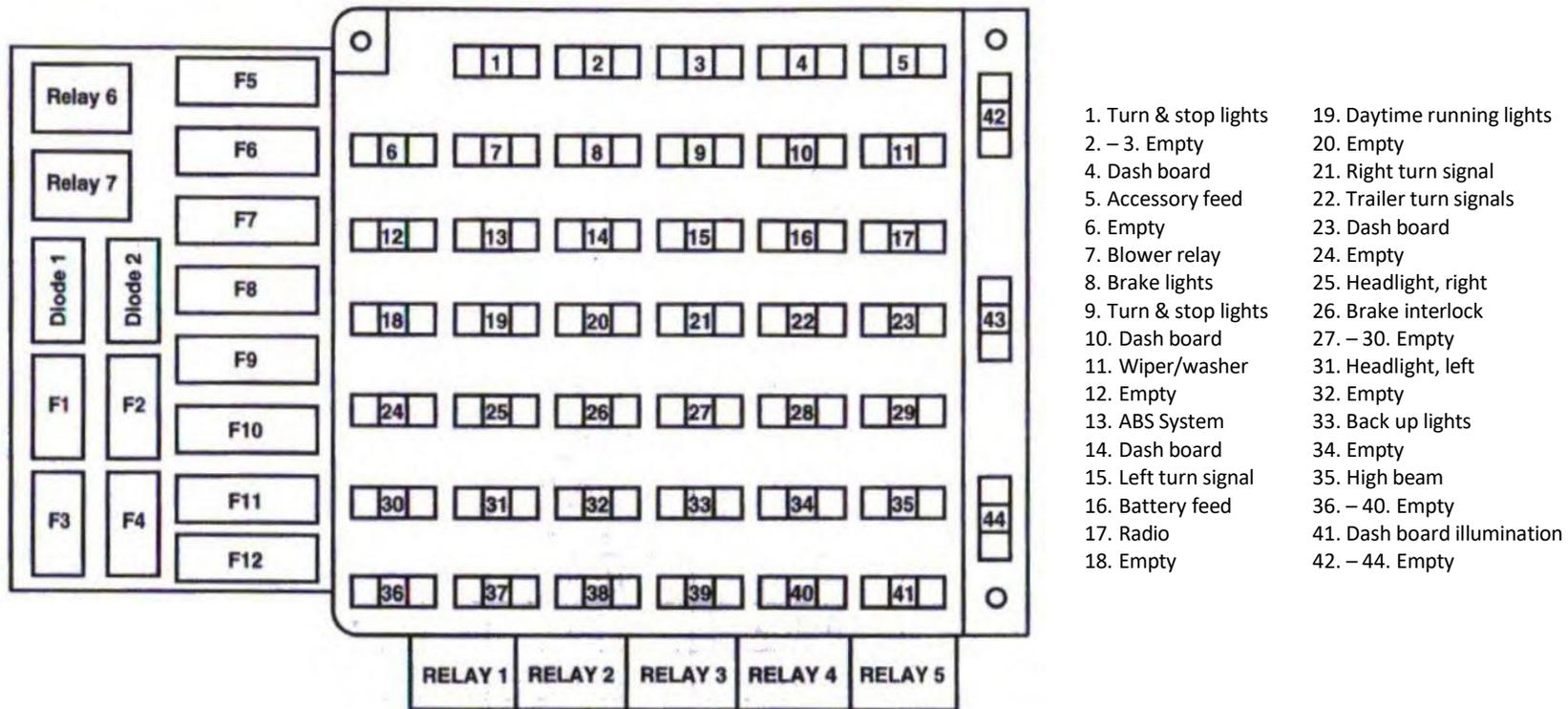
- | | |
|-------------------|---------------------|
| R1. Ignition | R10. A/C clutch |
| R2. Not used | R11. Diesel |
| R3. Not used | R12. Fuel inj. pump |
| R4. Not used | R13. Not used |
| R5. Not used | R14. Not used |
| R6. Wiper on/off | R15. Cooling fan |
| R7. Wiper speed | R16. Diesel |
| R8. Not used | R17. PCM |
| R9. Starter motor | R18. Cooling fan |



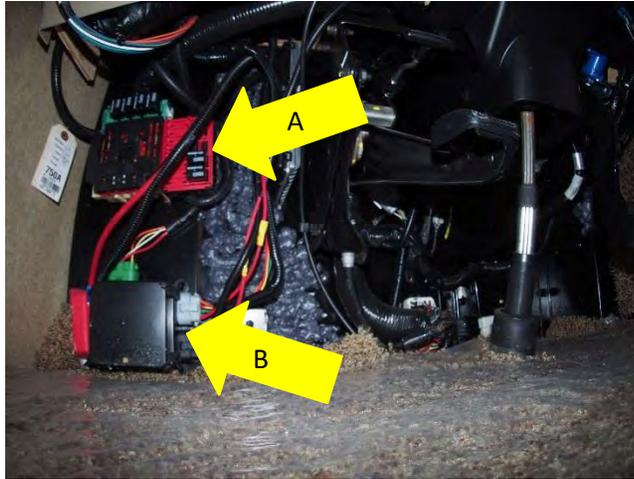
F1-F5 – Diesel	F12 – Diesel	F18 – Fuel pump	F28 – Crank case	F35 – PCM
F6 - Not used	F13 – Not used	F19 – Starter	F29 – PCV	F36 – Diesel
F7 – Transmission	F14 – Diesel	F20 – Diesel	F30 – Cooling fan 1	F37 – Fuel system
F8-F9 – Not used	F15 – Not used	F21 – Ignition	F31 – Not used	F38 – A/C clutch
F10 – Spare	F16 – Fuel pump	F22 – Diesel	F32 – Wiper motor	F39 – Emission systems
F11 – A/C clutch	F17 – Transmission	F23-F27 – Spares	F33 – F34 – Not used	

FORD – Bus style model:

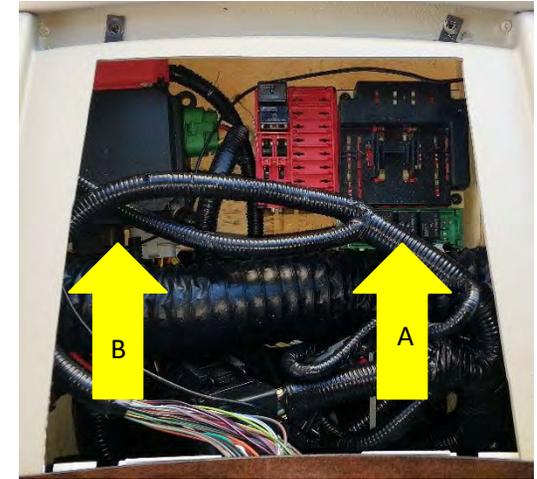
A. Under dash board (near parking brake):



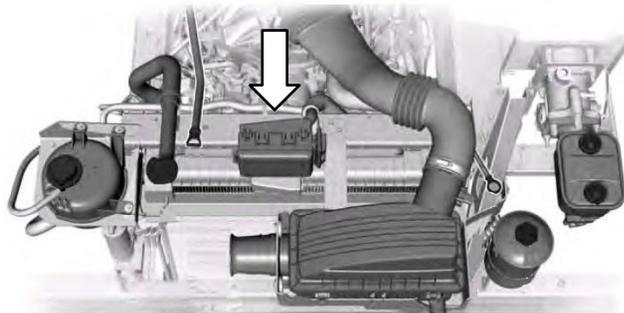
B. Below the dash board (near parking brake) or on top of dash board (underneath cover in behind the steering wheel):



CB1-10A DRIVER SEAT	F4-5A STEP SWITCH	F8-15A DOCK LIGHTS	F15-10A MIRRO HEAT
F1-20A STEP MOTOR	F3-5A STEP IGNITION	F7-5A REAR VISION	F14-5A JACKS
CB2-20A WIPER MOTOR	F6-5A WIPER	F13-5A MIRRORS	
IGNITION ACCESSORY R2	IGNITION ACCESSORY R4	F12-10A DASH FAN	F11 SPARE
F2-15A FOG LAMPS	F5-30A CHARGE LINE	CB3-5A SHADES	F10 SPARE
FOG LAMP R1	IGNITION ACCESSORY R3	F9-25A HVAC BLOWER	



Engine compartment (center):



1. Power brake assist
2. A/C clutch
3. Oxygen sensor
4. PCM relay
5. PCM
6. Parking lights
7. Ignition
8. ABS
9. PCM
10. Daytime running lights
11. Fuel pump
12. Instrument lights
13. Trailer brake
14. Lights
15. Trailer lights
16. ABS system
17. Horn
18. A/C clutch
19. Brake switch
20. PCM relay
21. Fuel pump
22. Cigarette lighter
23. Blower
24. Instrument panel
25. Ignition switch
26. Ignition switch
27. Head lamps
28. Starter
29. Power brake assist



MOTORHOME EQUIPMENT

KEYS AND DOORS

There is only one set of keys for the motorhome. Splitting up keys may prevent you from locking yourself out of the vehicle – one person keeps the entry door keys and the driver keeps all others.

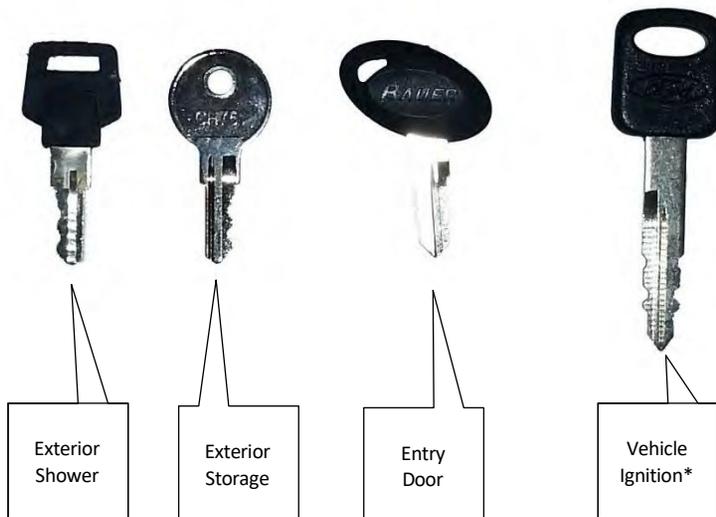
There are multiple keys for different locks:

- Entry door handle (round plastic head – Trimark; oval head – Bauer)
- Entry door dead bolt (rectangular head – Trimark; oval head, same key – Bauer)
- Some entry doors have one key for both locks (oval head – Bauer)
- Exterior compartment doors (round or square head; silver/grey – CH751 or G391)
- Some vehicles have a lock on for the exterior shower – use key CH751
- The bus style vehicles have a key for the engine compartment (large rectangular metal head – E3-5-15)
- The bus style vehicles have a key for the cab-over drop-down bed (round head; silver – 0C01)

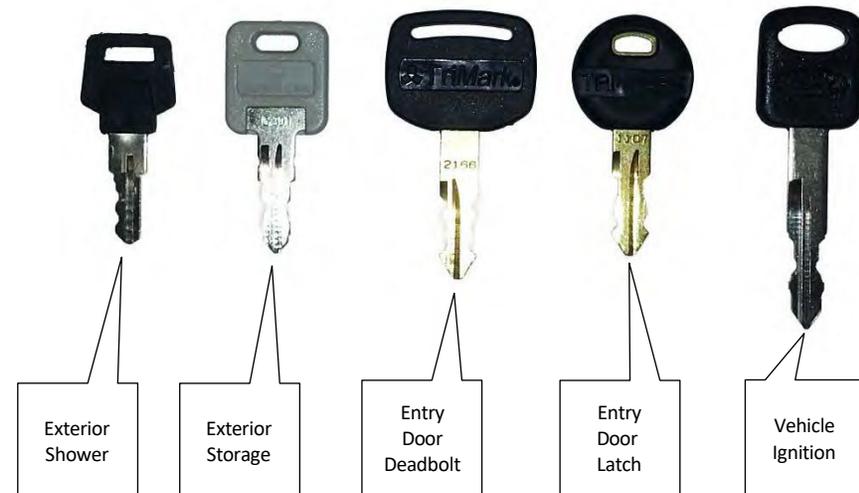


From the inside – move the handles to the lock (🔒) or unlock (🔓) positions. Aligned red dots = unlocked dead bolt.

Coachmen Vehicles Keys:

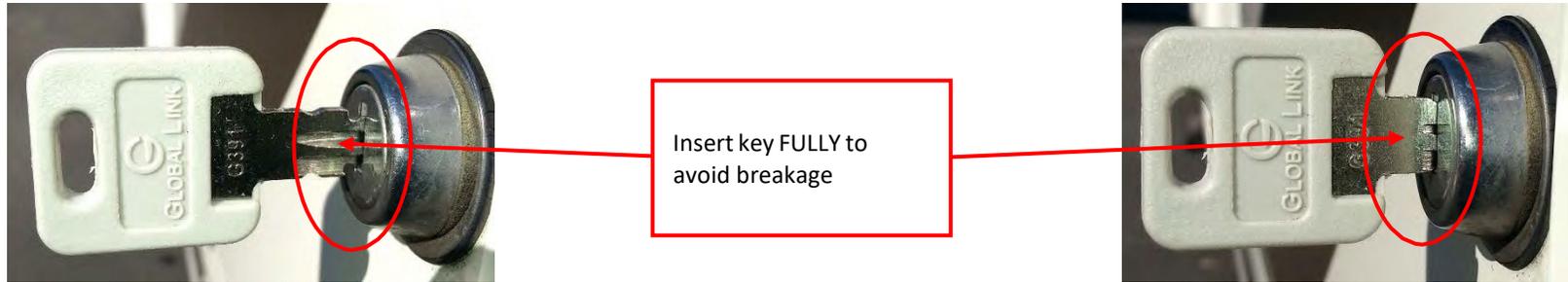


Thor Vehicles Keys:



* Ford Transit vehicles have a built-in remote control

To avoid damage to the keys, always insert the key fully and push on the doors while unlocking or unlatching.



Press against doors near the lock to lock/unlock and latch/unlatch the locks.



To avoid injury or damage during high winds – Make sure the entry door is always hooked-in (if equipped) or closed at all times.

MONITOR PANEL

The monitor panel provides you with an overview of various systems:

- Fresh water tank level
- Holding/Black water tank level
- Grey water tank level
- Propane tank level
- Coach (house) battery charging / condition

The AUX button has no function on our vehicles

In addition, you can operate the water pump, water heater – on some models also operate the generator and the slide rooms.



TROUBLESHOOTER		
Monitor Panel is off	Battery disconnect switch off	Turn battery disconnect on
	Blown fuse	Replace fuse
Monitor panel shows holding tanks to be full or registers more than empty after dumping	Waste is stuck on the sensors	Fill tanks with about four buckets of clean water and some chemical. Driving should clean off the excess waste

COOK TOP

While using the cook top, turn on the hood exhaust above the cook top or the kitchen roof vent fan and open a window for fresh air and to prevent the smoke alarm from going off just because you cook. To turn on the propane at the burners, push in and turn the desired burner knob to the LITE position. To lite the propane, use the built-in lighter – either mechanical or electrical. Or use the supplied lighter or a match.



NEVER use the cook top while the vehicle is in motion! Do NOT use the cook top for comfort heating – danger of suffocation!

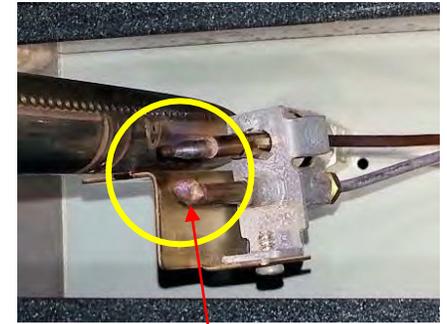
When cooking in a frying pan without non-stick lining use a small flame (low heat) only to prevent burning the food

TROUBLESHOOTER		
Cook top burner will not light	Out of propane or main valve closed	Fill propane tank or open main valve
	Electrical or mechanical lighter faulty	Use a match or manual lighter

OVEN (PROPANE)

While using the stove top and/or oven, turn on the hood exhaust fan or roof vent fan above the stove and open a window for fresh air and to prevent the smoke alarm from going off just because you cook. Push in, turn the oven knob to PILOT and HOLD it in for 30 – 60 seconds. While holding the knob in, use the open flame of a lighter or a match to light the pilot flame. Hold the lighter or match to the pilot (located next to the burner under the bottom rack of the oven) until the pilot flame lights up. Hold the knob for another 30 seconds – then adjust the oven control knob to the desired temperature.

Note: Be patient when lighting the pilot flame as it may take some time.



3. Ignite pilot flame with lighter



1. Turn to PILOT
2. PUSH IN and HOLD

4. HOLD 60-90 seconds until pilot flame stays lit
5. Repeat if necessary
6. Adjust to desired temperature



NEVER use the oven while the vehicle is in motion! Do NOT use the oven for comfort heating – danger of suffocation!

TROUBLESHOOTER		
Turned knob but oven won't light	Pilot light must be lit manually	Turn oven knob to "Pilot" and keep pushed in, then use match or lighter to light pilot light

MICROWAVE OVEN (120 volts)

To be able to use the microwave, the vehicle needs to have campground electricity or from the generator. Please refer to the sections about Household Power, Ground Fault Interrupter and Generator for further details.

KITCHEN COUNTER & DINING TABLE

Do NOT place hot pots and pans directly on the kitchen counters or dining tables. These surfaces are mostly plastic or covered by a plastic film and will melt/burn!



NEVER place a hot pot or pan on the counter top



ALWAYS use the trivet



ALWAYS use a cutting board when working with a knife

CAR RADIO

COACHMEN motorhome car radios can only be played with the ignition key in the accessory or run (ignition ON) position.
THOR motorhome car radios run from the coach battery.

Due to the variety of radios installed in the multitude of vehicles every different year, no descriptions can be made here. You can find details on the internet – search by radio name and model number.

On some models, iPhones & iPods cannot be played thru the USB connection. If the Bluetooth mode is asking for a code, try the generic codes 0000, 9999 or 1234.

CAB-OVER BED

Above the driver cabin there are different kinds of beds.

In the Class C motorhome, it is a permanent structure with a removable section for easier access to the driver area. Just lift the removable section out of the way during the day.

In Class A motorhomes the bed is raised out of the way to allow driving of the vehicle. The bed is operated electrically.



1. Pull the front curtains closed
2. Remove the ignition key
3. Lower the bed electrically

When raising the bed, make sure nothing is left on the mattress.



ALWAYS use the safety net if small children are sleeping in the cab-over!



DINETTE BED

The dinette table can be converted to a bed as well. Some motorhomes have a sliding mechanism: 1) release the mechanism under the table; 2) push table down; 3) re-arrange the cushions.



Other models have actual table legs: 1) lift the table top off the legs; 2) remove the legs; 3) lay table between benches and re-arrange cushions.

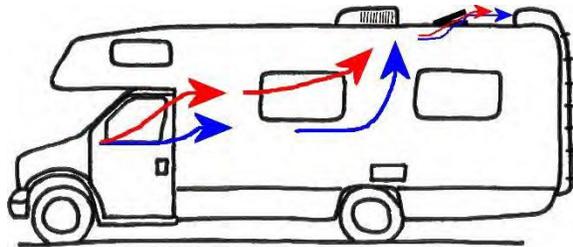
Some models require installation of shorter legs to support the table top.

WINDOWS



Some motorhomes are equipped with flip windows – bottom section flips out. To prevent damages, such windows need to remain **CLOSED** while driving.

VENTILATION



While driving, the windows should remain closed to reduce interior noise and negative air pressure. The bathroom roof vent can be opened two fingers wide to assist the interior cooling or heating with the cockpit air conditioner/heater turned on. The aerodynamics will pull the air entering the vehicle at the dash board all the way thru the motorhome out the rear roof vent. This assists in getting cool/warm air thru the motorhome and removing any odors out of the vehicle.



BATHROOM DOOR

It could happen that the bathroom door locks itself and needs to be unlocked from the outside. Some door knobs require a small flat screw driver and others can be unlocked with a coin. Turn  90°.



FRESH WATER SYSTEM



IMPORTANT:

Only use **potable (drinking)** water for city water hook-up and to fill the fresh water tank!

Water tank fill



Pump switch

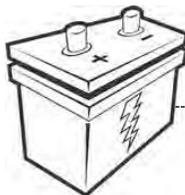
Tank filler & city water valve



Water Pump



Water Heater



The fresh water tank overflows when it is full – either thru the fill opening or to the ground below the vehicle.

If you are staying at a campground with city water hook-up, there is no need for use of the water pump. The water pressure at some campgrounds can be higher than normal. It should not exceed 45 PSI (3.1 bar) – check with the campground manager. To prevent leaks in the motorhome, use a pressure regulator or close the water faucet at the camp site ½-¾ way to reduce the water pressure – ask at campground office for details and regulators.



TROUBLESHOOTER		
Fresh water tank will not fill	Tank is already full	Check for over flow or the monitor panel
	No water supply	Check water faucet at campground
	Not filling water	Make sure valve is in correct position – if applicable Connect to Tank Fill connector (Drinking glass icon)
Fresh water dripping under vehicle or pushing back out the fill hole	Tank is full and overflowing	Turn off water supply
	Drain valves open	Close drain valves
Pump fails to start when switch is on	Battery turned off	Turn on battery disconnect switch
	Blown fuse	Replace fuse in power center
	No water	Check water tank level
	Water system hooked up to city water	Remove hose from city water
Water pump cannot be turned off	Exterior switch is on	Turn off exterior switch

WATER HEATER

The water heater requires battery power to operate and heats with propane. Water does not heat with electricity! It takes 20-30 minutes to heat the 6 gallons/22 liters of water. The 'Pilot out' or DSI light will turn on briefly during ignition but turns off while the water is getting hot. Higher altitudes can cause soot (smoke) and take longer time to get hot water.



For safety reasons turn the water heater off while driving

TROUBLESHOOTER		
Water heater not working or illuminated switch not lit	No 12V power	Turn battery disconnect on Replace fuse
	Water is already hot	Check for hot water at faucet
DSI/Pilot light turning on	Temporary ignition failure	Turn off and wait 30 seconds before turning back on
	No propane or main valve closed	Fill propane tank or open main valve

SHOWER

While dry camping – make sure you have plenty of fresh water and the grey water tank is empty. Full hook-up – make sure the city water at the campsite is on and the grey water drain valves of the tank are open. The shower head has a water saving feature with an on/off valve built into the shower head to reduce the water consumption.



TROUBLESHOOTER		
No water at shower head	Valve at shower head is turned off	Open valve at shower head
	Lack of water	Turn on pump, check tank level or city water hookup
Water backs up into shower	Grey water tanks are full	Empty the grey water holding tanks

WINTERIZATION



Winterization of the motorhome's water system is required in below-freezing temperatures to prevent damages to the water pump, water tank, water lines, water filter, water heater and holding tanks. Damages to the plumbing system due to lack of winterization are the renter's liability.

Depending on the temperatures, the following steps are the responsibility of the customer.

Overnight - for a few hours - just a few degrees below freezing (32°F/0°C):

- ▶ Empty the waste water tanks before the temperature drops below freezing for the night. Frozen valves in the morning will prevent emptying the tanks. Defrosting solid ice will take more than just a few degrees above freezing in the morning
- ▶ Keep the water heater on overnight
- ▶ Turn the furnace on; set at minimum of 55°F (13°C) – even if you are not staying in the vehicle for the night!
It is strongly recommended to have electrical hook up as the furnace may drain the batteries in one night

All day below or around freezing; below freezing all night

If the day-time temperature remains below freezing or reaches barely above freezing, the water system has to be professionally winterized. This can only be done at a qualified RV service center or at a Road Bear RV or El Monte RV branch and includes emptying the water tank, draining and bypassing the water heater and flushing the water system with a non-toxic antifreeze. Any cost associated with such a winterization (and de- winterization) is the renter's responsibility.

While a vehicle is fully winterized, the fresh water tank **CANNOT** be filled or the city-water be connected. Bottled water can be used to wash one's hands, face or brush one's teeth. Occasional rinsing of the drains with RV/Marine-approved antifreeze is required. When using the bathroom facilities of the motorhome, antifreeze needs to be used to flush.

Vehicles picked-up at the DEN, NYC, NYL, ORD, SEA & SLC locations are always winterized between October 31st and March 31st. Depending on weather conditions this period may be longer. Vehicles out of other rental locations may be winterized as well, depending on outside temperatures.

Renter can pay a fee to have the vehicle de-winterized (may not be available if local weather conditions are too severe).

Vehicles picked up at locations where the vehicle is NOT winterized can pay a fee to have it winterized for their trip (may not be available at all locations).

It is the renter's responsibility to have the vehicle winterized while on a trip at his/her own expense should the weather conditions require it. The renter is also financially responsible for having the vehicle re-winterized on the return trip if the vehicle was winterized at the time of pickup. A winterization fee will be charged at drop off if the vehicle is returned non-winterized, regardless of the outside temperatures (exceptions only with prior authorization).

Returns at DEN, NYC, NYL, ORD, SEA and SLC locations need to be returned winterized (at own cost) from October 31st to March 31st. Depending on weather conditions, this period may be longer (check with the return location of not sure).

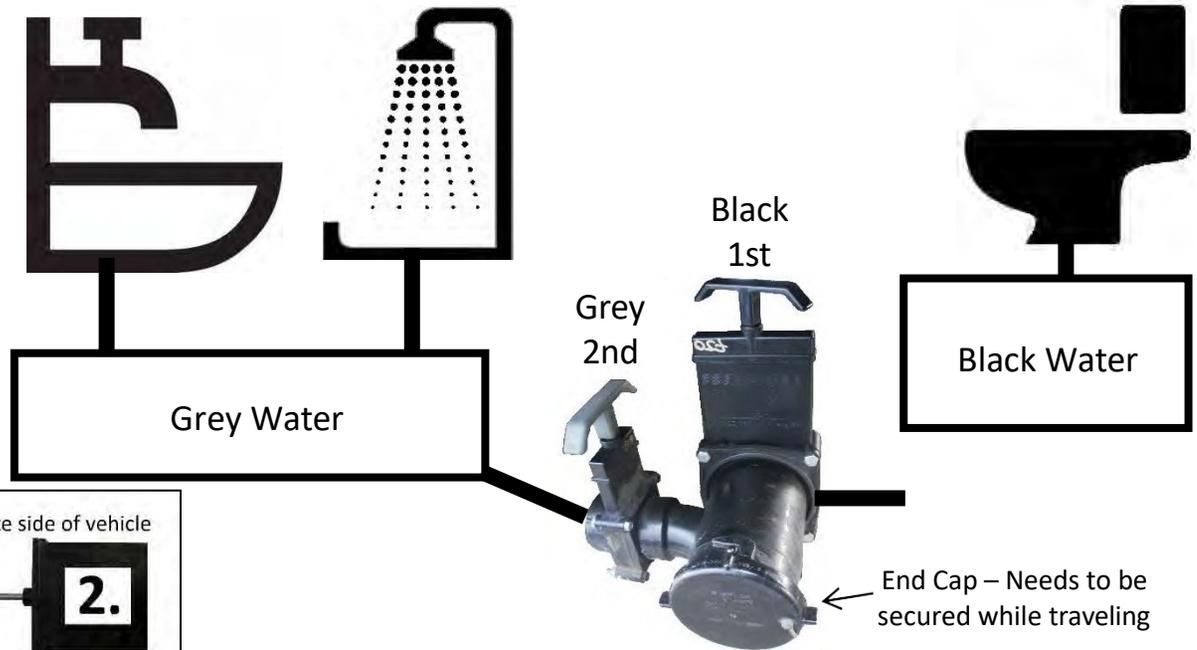
The renter will be fully responsible for any damages to the water system caused by freezing during their trip.

The state of Washington and certain surrounding states require the carrying of snow chains from November 1st until April 1st. We will provide 1 set of chains to fulfill the state requirement, but insurance regulations do **NOT allow their use** (NO coverage of undercarriage damage and driving in unsafe conditions).

Waste Water System



The waste water system operates without a pump and empties thru a hose



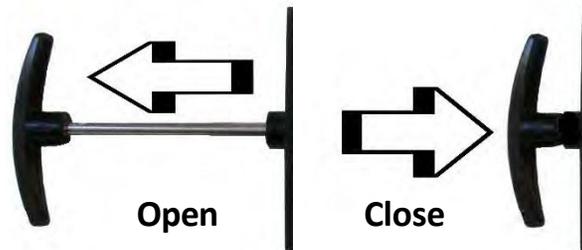
Some vehicles may have an extra valve on the passenger side



Drain BLACK water only when at least 2/3 full!

To drain the tanks:

1. Remove end cap
2. Attach sewer hose
3. Stick hose in ground
4. Open BLACK water* (large valve)
5. Close black water valve
6. Open GREY water valve**
7. Close grey water valve
8. Remove sewer hose
9. Install end cap
10. Rinse hose



* Some vehicles have TWO black water valves! Open both valves to drain the tank
 ** L- Models (Ford Transit) have two (2) GREY water valves – make sure to open both!

TROUBLESHOOTER

Waste tank will not drain	Valve(s) closed	Ensure all valves are open – see opposite side of vehicle
	Waste tank empty	Check for water in tank thru toilet (on some models)
	Drain pipe plugged	Insert a wire to unclog from the outside – CAUTION: sudden discharge
	Contents in tank are frozen	Dump in warmer climate
	Waste water valve is broken	Visit a repair facility – see page 22
Grey water is backing up into shower	Full waste tanks	Empty the grey water holding tanks
Monitor panel shows full or registers more than empty after dumping	Waste is stuck on the sensors	Fill tanks with about four buckets of clean water (adding ice cubes may help) and some chemical. Driving should clean off the excess waste

TOILET

All motorhomes are equipped with a flush toilet. Flushing the toilet requires water pressure from the water pump or city water connection. Before using the toilet ensure you have water pressure!

Tank sensors will misread the level if not enough water and chemical is used. Too much toilet paper and not flushing enough can clog some of the toilets.

Flushing the toilet is done with a foot pedal. Flush for at least 10 seconds.



To prevent odors and to dissolve human waste add **RV holding tank chemicals** after every first time use on an empty tank. Do NOT use regular household toilet cleaner!

Treating Your RV Toilet

YouTube
Learn how to properly and easily treat your RV toilet.

View The Video Here
www.uniquecampingmarine.com/pages/road-bear

unique + ROAD BEAR



Do NOT drop anything in the toilet that does not belong!



ELECTRICAL SYSTEM

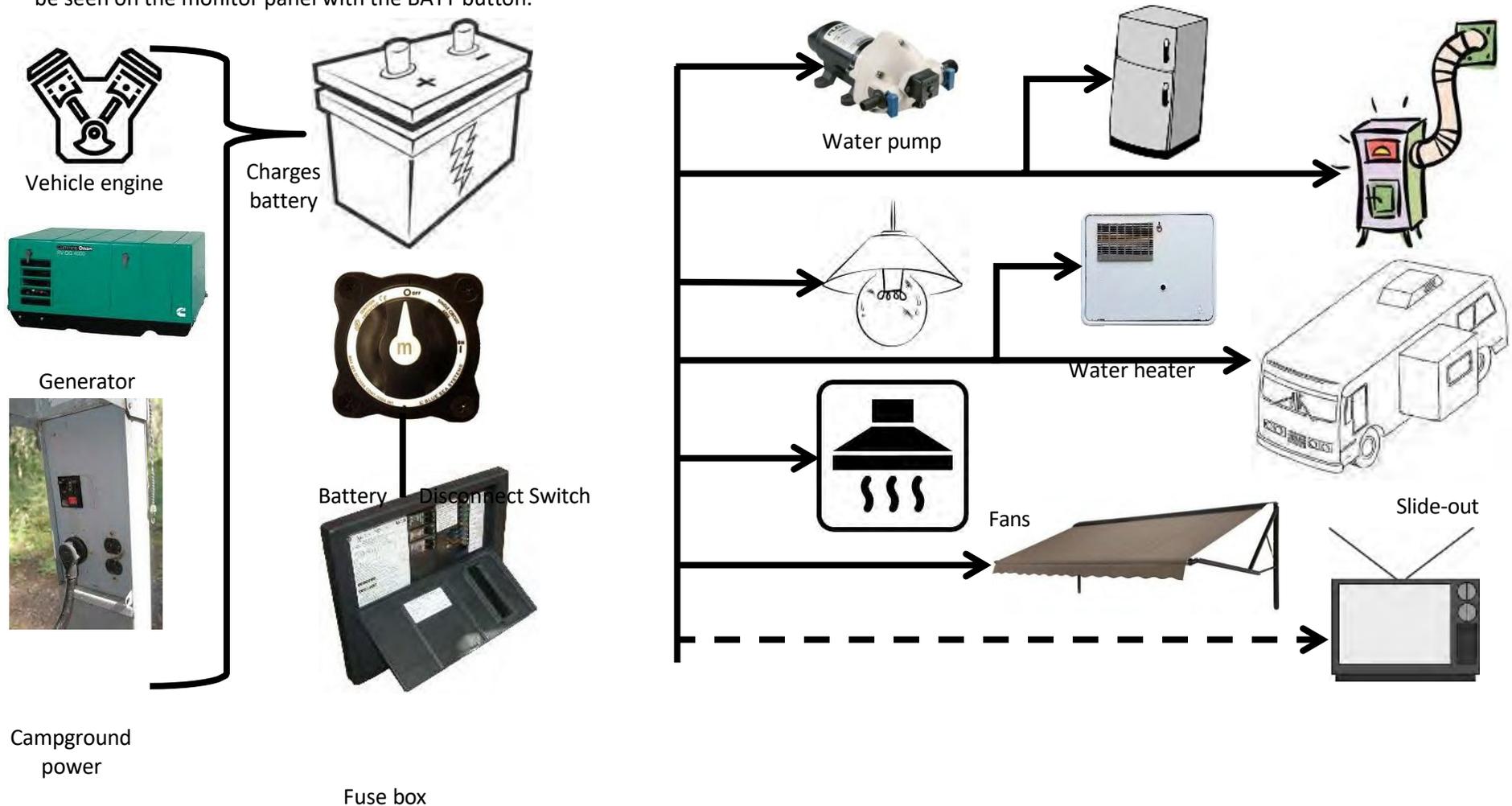
12 VOLTS – BATTERY POWER

The coach (house) battery operates many electrical appliances. Make sure the battery disconnect switch is always turned ON (USE).



If you are dry (freedom) camping (without electricity from the campground) for a few days and do not drive much, you have to run the engine at least two hours per day to maintain enough battery power. If the outside temperature is low and you use the furnace (heater) at night, you have to run the engine at least four hours per day to maintain enough battery power. A fully discharged battery requires driving (or running of engine) for at least eight hours. Battery life varies widely depending on different factors.

The coach battery is getting charged while driving and when connected to the campground or when the generator is running. The battery condition can be seen on the monitor panel with the BATT button.



BATTERY DISCONNECT SWITCH

All motorhomes have a coach battery disconnect switch which is located by the entry door. Leave the switch ON (USE) to assure overall function of the appliances. If the switch is OFF (STORE) – nothing in the motorhome will work and the coach battery will not get charged when connected to campground electricity or running generator.



The only time the battery disconnect has to be turned OFF is when re-filling fuel or propane

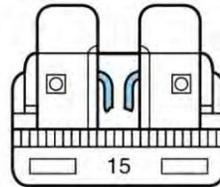
FUSES



Each motorhome has a fuse box which is located in the bedroom or living area. It contains a series standard 12-volt automotive fuses. If any electrical appliance stops to operate, check the fuses first. A defective fuse has the thin wire inside broken. A red LED in the fuse box lights up if fuse is blown.

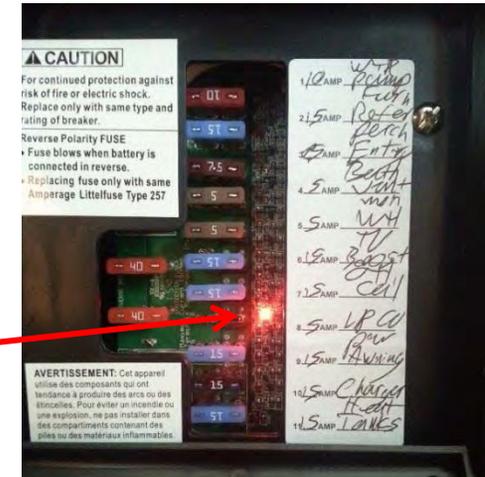


Good



Bad

Red light = bad fuse



TROUBLESHOOTER		
No power at all	Battery disconnect switch off	Turn battery disconnect switch back on
Battery level low on the monitor panel	Battery voltage is low	Recharge the battery by starting engine or connecting at campground
Battery not charging while driving	Blown fuse	Call the Help Desk for assistance
Battery not charging with campground electricity	Tripped circuit breaker	Reset all circuit breakers in the fuse box
	Technical problem	Call the Help Desk for assistance
Lights don't turn on	Switch at wall or on lamp off	Turn both switches on
	Battery disconnect switch off	Turn battery disconnect switch on
Lights dim or half bright	Battery voltage is low	Recharge the battery by starting engine or connecting to campground

120 VOLTS – HOUSEHOLD POWER (max. 30 Amperes)



110-128 Volts are required for proper operation.

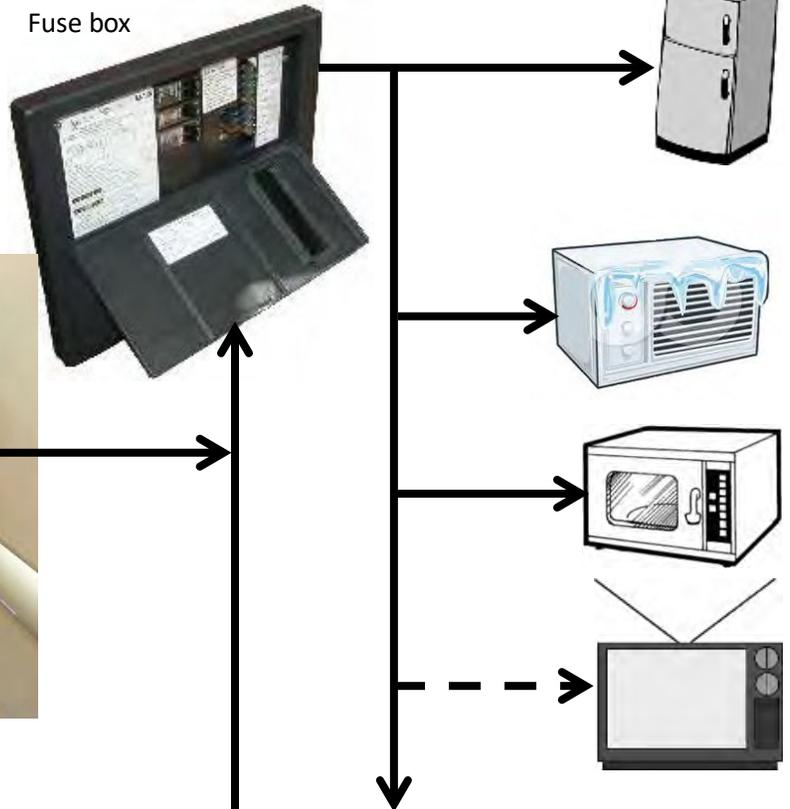
Switch main power on **after** connecting power cord



Push & Twist to connect



Fuse box



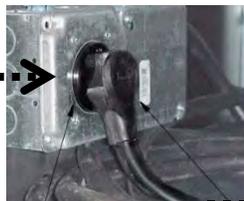
GFI/GFCI – see next page

30 Amperes campground power

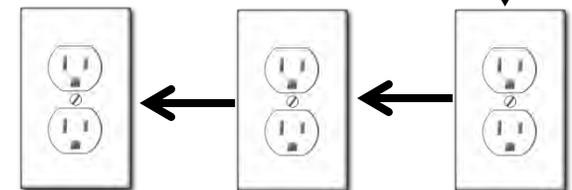


Vehicles with a detachable power cable or no power outlet automatically select between generator and campground power

Generator Power



Generator Receptacle Power Cord



Generator power

Some vehicles have a power outlet for the fixed cable and it always needs to be connected to have generator power

CIRCUIT BREAKERS

Every motorhome has a fuse box which is located in the bedroom or living area. It contains a series of 120-volt circuit breakers. If any electrical appliance stops to operate, check the circuit breakers first.



- A circuit breaker ON
- B circuit breaker TRIPPED (activated)
- C circuit breaker OFF



1. Move breaker to OFF
2. Move breaker to ON

Turning the circuit breaker directly back ON will keep the electricity interrupted.

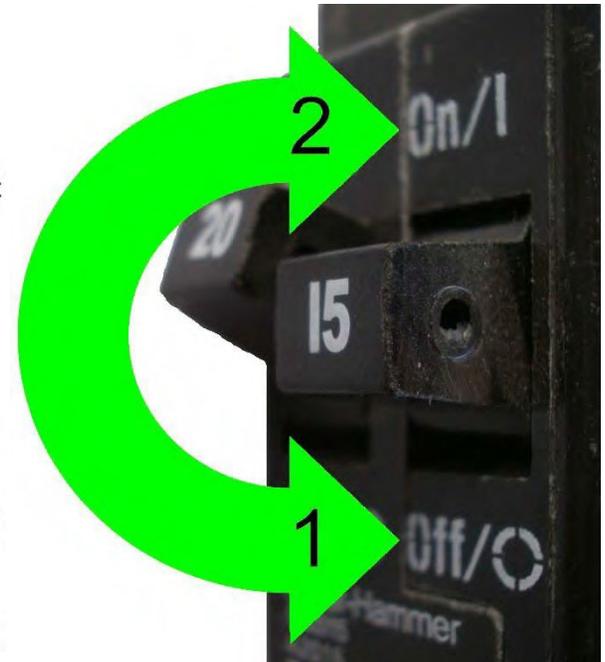
GROUND FAULT INTERRUPTER (GFI/GFCI)

The GFI (Ground Fault Interrupter) is a special circuit breaker for 120-volt wall outlets. It is part of an electrical outlet – usually in the bathroom. To reset, first unplug all devices and push the RESET button back in. It will only reset if you have 120-volt power from the campground or generator.



Push to Reset circuit after ground fault tripping.

Push to Test . Should break circuit. Press Reset button to reconnect.





Tripped GFI/GFCI outlets indicate an interrupted circuit with a red or amber light.



OVERLOADING THE CIRCUIT

Using more than one appliance at the same time will overload the circuit and interrupt the power. Turn off the air conditioner before using the microwave, toaster or hair dryer, etc.

The campground provides 3600 watts (120 volts @ 30 amperes) - Typical power usages:

Air Conditioner	~1200-2400 watts	10-20 amperes (30+ peak)	Microwave	~900 watts	7.5 amperes
Coffee maker	~900 watts	7.5 amperes	Toaster	~900 watts	7.5 amperes
Laptop charger	~300 watts	3 amperes	Battery charger	~720 – 3360 watts	6-28 amperes

For proper operation of all electrical equipment the correct voltage supply is required. Too low voltage of 110 or less and excessive high voltage of over 128 Volts can cause improper function or even damage the equipment. Change to a different power supply on the campground or run the generator if you notice improper function of the electrical equipment.

TROUBLESHOOTER		
No electrical power	No power source	Connect to campground or start generator
	Campground power off	Check breaker/main switch at campground
	Power cable unplugged	Plug in cable into junction box for generator or to campground
	Circuit breaker may be off or tripped	Reset breaker(s)
	Bad power cord adapter	Replace adapter
No power at receptacles (outlets)	No power source	Make sure you have power from the campground or generator
	GFI receptacle may be off or tripped	Reset GFI (only possible with 120V power to vehicle)
	Circuit breaker may be off or tripped	Reset breaker in fuse box
Incorrect operation of equipment	Voltage too low or too high	Change power source on campground or use generator

GENERATOR



The generator uses gasoline from the vehicle fuel tank. A minimum of $\frac{1}{4}$ fuel tank is needed in order to operate. Fuel use up to 0.7 gallon / 2.7 liter per hour. Using two appliances at the same time can overload the generator itself and shut it down. Turn off every appliance before re-starting the generator.

NEVER run the generator for more than one minute with the green service door removed! Overheating and serious mechanical damage could occur!

Higher temperatures & altitudes will reduce power output and can cause the generator to stop running. Temperatures above 100°F/38°C can cause fuel vapor-lock and stop the generator from running (3.5% power decrease for every 1000ft/300m in elevation and 1% decrease for every 10°F/5.5°C above 77°F/25°C).

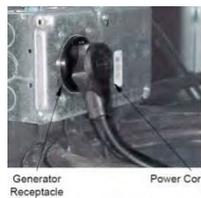
Press & hold the PRIME button (or STOP side of the switch) for 10 seconds before starting the generator to improve start up.

The generator produces **3600 watts** (4000 peak) 120 volts @ 30 amperes - Typical power usages:

Air Conditioner	~1200-2400 watts	10-20 amperes (30+ peak)	Microwave	~900 watts	7.5 amperes
Coffee maker	~900 watts	7.5 amperes	Toaster	~900 watts	7.5 amperes
Laptop charger	~300 watts	3 amperes	Battery charger	~720 – 3360 watts	6-28 amperes



Circuit Breaker on Generator



Generator Receptacle Power Cord

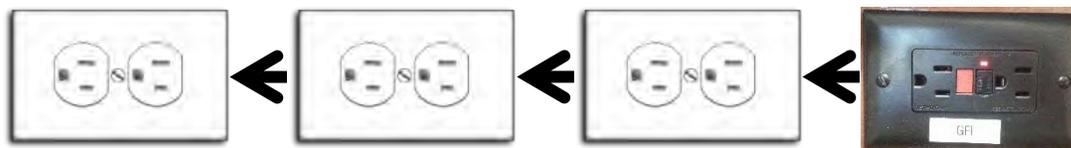
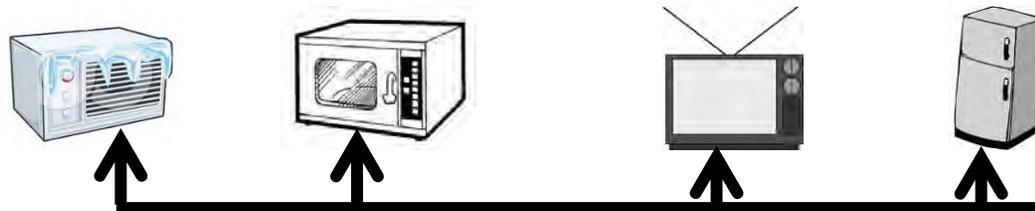
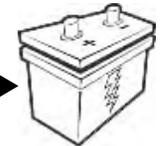
Generator Power



Power Cord connected*

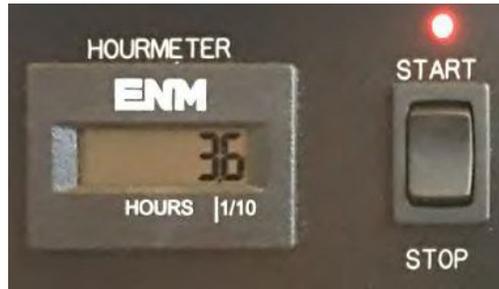
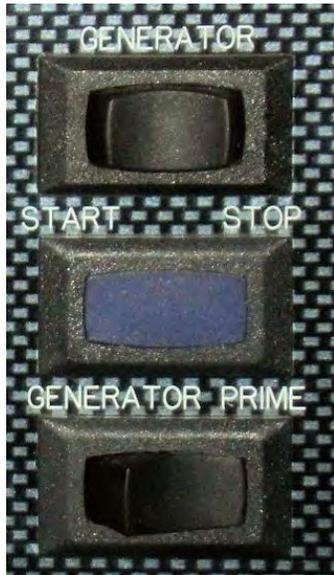


Fuse box with Circuit Breakers

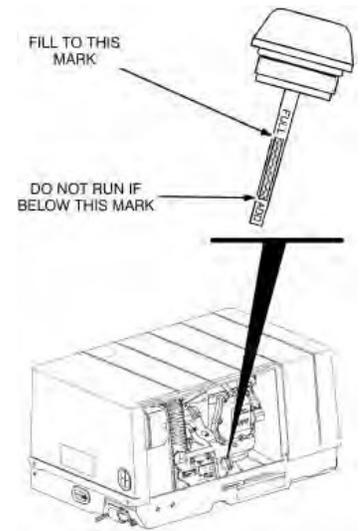


GFI/GFCI – see page 49

*Vehicles with a removable power cord or no outlet to connect the cable into will automatically select between generator and campground power



The generator motor oil level needs to be inspected and adjusted every eight (8) hours of use.



Higher temperatures & altitudes will reduce power output and can cause the generator to stop running. Temperatures above 100°F/38°C can cause fuel vapor-lock and stop the generator from running (3.5% power decrease for every 1000ft/300m in elevation and 1% decrease for every 10°F/5.5°C above 77°F/25°C).

TROUBLESHOOTER		
Generator does not crank	No battery power	Start engine and run for 15 minutes before starting generator Class A (U- models) check circuit breakers next to coach batteries
Generator cranks but will not start	Generator may be out of fuel	Press 'Prime' or 'Stop' button for 15 seconds and try again
	Fuel vapor-lock (not liquid anymore)	Check the fuel level - At least ¼ of fuel in vehicle tank required It is too hot – wait for cooler temperatures
Generator runs but no power	Circuit breakers may be off or tripped	Reset breaker at generator and/or in fuse box
	Power cord unplugged	Plug power cord into receptacle – if equipped
Circuit breaker trips	Overloaded circuit	Turn off all the electrical loads and reset the circuit breaker
Generator stalls	Overloaded	Turn off all the electrical loads and wait 3 minutes before restarting
Stops while driving (corners)	Low on fuel	Refill fuel tank – more than ½ full is recommended

REFRIGERATOR



The refrigerator is using propane or household (120 volt) power to cool but needs battery power (12 volt) to operate. For an extended stay it is recommended to have electricity from the campground. The motorhome refrigerator is technical different from a household refrigerator and therefore less efficient by design.



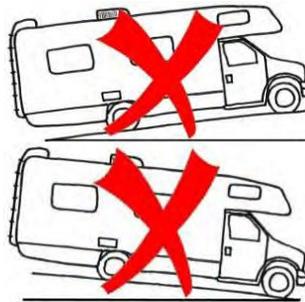
Electrical hook up recommended

Damage can occur if operated off-level!! For proper operation, the vehicle needs to be level.

Use the drive-up levelers as needed.

Leveling:

CAUTION: The refrigerator is made to operate within 3° off level side-to-side and 6° off level front-to-back (as looking at the front of the refrigerator). Operating it at more than these limits can cause damage to the cooling system and create a risk of personal injury or property damage. Make sure the vehicle is level before you operate the refrigerator.



Engage the door latch to prevent fridge from opening while driving!

For the most efficient operation pre-cool all food at home; do not place any hot or warm food in the refrigerator and do not overfill it, blocking air circulation.

In cases of loss of cooling – add ICE (available at most gas stations & super markets).

If possible, keep the refrigerator side of the motorhome in the shade.

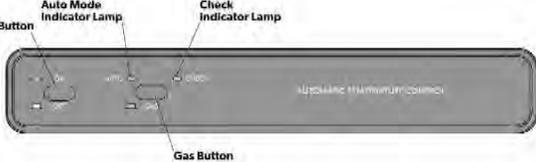
Some DOMETIC models have an adjustable temperature sensor. Make sure the sensor cable is not hanging loose.



Refrigerators work best with outside temperatures between 32-75°F (0-25°C) and below 5500 feet (1675 meter) elevation

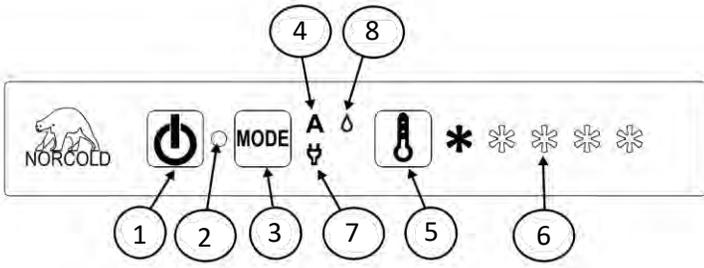
Operation

DOMETIC



Push ON/OFF Button to turn ON the refrigerator
 Set GAS Button to Auto mode (pushed in)
 AUTO Mode Indicator Lamp needs to be on
 Check Indicator Lamp indicates propane ignition problem – turn the fridge OFF and check the gas supply and turn back ON

NORCOLD



Press button (1) to turn on – green LED (2) on; Select AUTO mode (3); (4) lights up; Select temperature (5, 6); (7) = electrical operation; (8) = propane operation
 A red light (2) indicates a problem – turn the fridge OFF, wait one minute and turn back ON

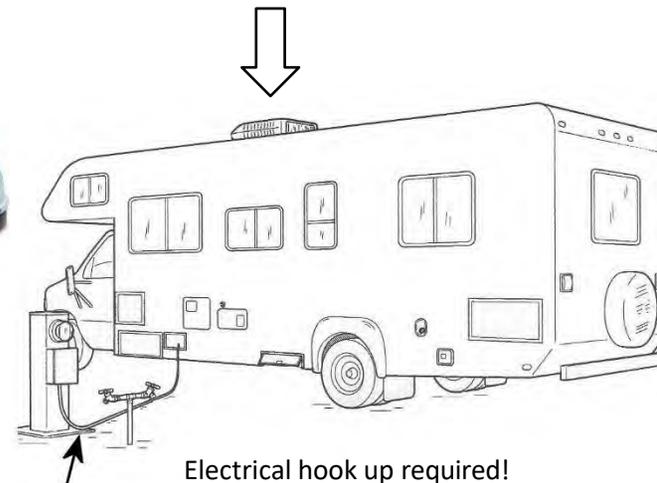
Refrigerators work best with outside temperatures between 32-75°F (0-25°C) and below 5500 feet (1675 meter) elevation. At higher altitudes the propane operation may not properly ignite and cool less or not at all. At higher temperatures, the cooling will be less efficient. At ambient temperatures below freezing the fridge can fail. Extended exposure to freezing temperatures the fridge could get damaged.

TROUBLESHOOTER		
CHECK or RED light on	Temporary malfunction	Turn off and wait about 45 seconds before turning it back on
	Out of propane or main valve closed	Fill propane tank or open main valve
	Ignitor problem	Elevation – Air/gas mixture unable to ignite – travel to lower altitude Visit a repair facility – see page 22
Refrigerator is off	Fridge turned off	Turn it on
	No or low 12V power	Turn battery disconnect on / recharge battery
	Fuse blown	Check and replace fuse
	Thermal fuse tripped	Reset thermal fuse on back of refrigerator (outside)
Reduced cooling	Outside extremely hot	Move out of sunshine
	Temperature sensor not properly adjusted or hanging loose	Adjust temperature sensor (Dometic only)
	Motorhome not level	Level out motorhome
Refrigerator not cooling	Any of the above	All of the above
	Motorhome not level	Level out motorhome and turn off refrigerator. Requires complete shut down for 24 hours. Vibrations while driving may restore system but problem may persist and will require a larger repair.

AIR CONDITIONER



The roof air conditioner requires 120-volt power from the campground or the generator (while driving) to operate but also battery power for the controls. See pages 43 & 45

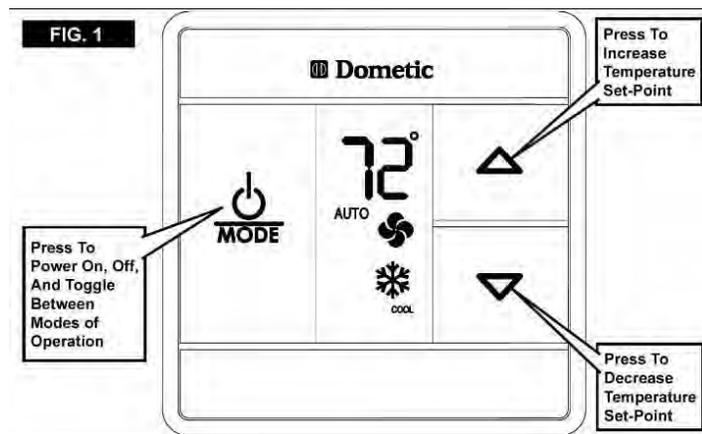


Electrical hook up required!

A/C do **NOT** provide any heat – such options are not installed.

Wall thermostats:

These systems have air channels in the ceiling and multiple vent openings. To quickly cool the vehicle, close the ceiling vents and open the main vent at the air return/filter. After cooling the main area, open the smaller ceiling vents and close the main vent.



1. Press (MODE) once
 2. Fan – Select Au (auto)* (press **I::**, & **V** to change selection)
 3. Press MODE again
 4. Select temperature
- To turn OFF - press MODE again 2x
- To change between Fahrenheit & Celsius press the **I::**, & **V** buttons at the same time

*In Hi or Lo the fan will work without cooling

1. System – Select COOL
 2. Fan – Select Auto Low
 3. Select temperature
- To turn OFF – Select System OFF

Ceiling mounted controls – next page

Ceiling mounted controls:



- 1. Cooling – Turn system knob to COOL (blue) – NO heat (red)
- 2. Select temperature (blue)
- Fan only (grey) – NO cooling

- 1. Cooling – Turn system knob →
- 2. Select temperature (blue) →



A/C cools to a **MAXIMUM of 20°F/11°C** below ambient (exterior) temperature
 Klimaanlage kühlt **MAXIMUM 11°C** unter Aussentemperatur

With inside temperatures of 100°F/38°C or higher it can take hours to cool to a comfortable temperature. Opening windows and doors will prolong the cooling time.

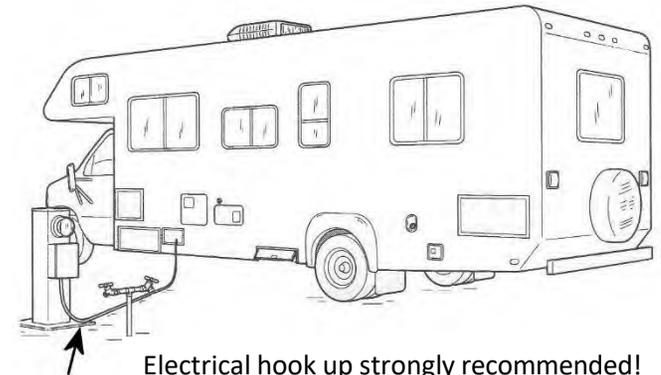
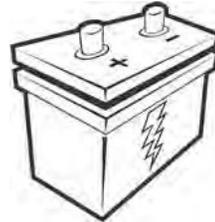
To avoid tripping the circuit breaker or stalling the generator, wait 3 minutes before turning the A/C back on again.

TROUBLESHOOTER		
A/C does not run	No power source	Make sure you have power from the campground or generator
	Circuit breakers may be off or tripped	Reset circuit breakers at campground, fuse box and/or generator
A/C not or weak cooling	Evaporator coils are iced up	Turn A/C off and run fan only for about 1 hour
Blower runs but no cooling	Blower on but not the A/C	Set fan to AUTO and switch to COOL

FURNACE (HEATER)

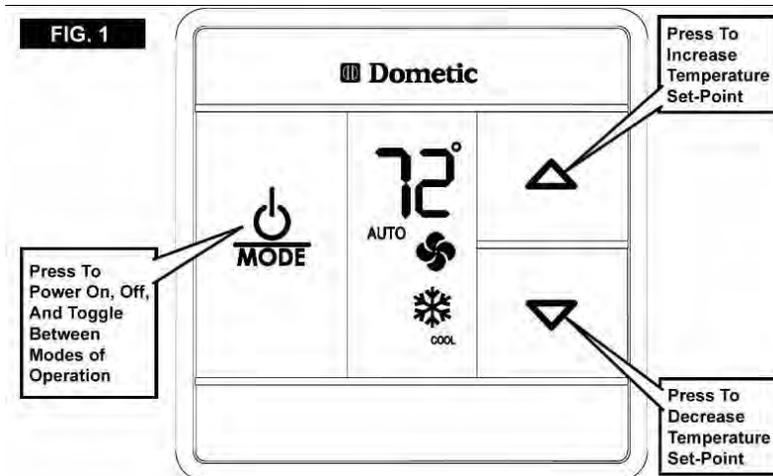


The furnace (heater) is using propane and requires battery power. For a stay longer than one night it is strongly recommended to have electricity from the campground



At higher elevations, the propane may fail to properly ignite or not ignite at all due to the oxygen levels

A built-in time delay turns on the blower first before heating. It also keeps the fan run longer than there is actual warm air blowing.



1. System – Select HEAT
 2. Fan – Select Auto Low
 3. Select temperature
- To turn OFF – Select System OFF

To change between Fahrenheit & Celsius press the **D.** & **V** buttons at the same time.

Fan: Set to AUTO - in Hi or Lo the fan of the air conditioner will blow unrelated to heating

Additional Thermostats – next page



ON ← → OFF

- Move top lever to ON (may go hard)
- Adjust temperature at bottom

OFF ← → Temperature setting



During any extended stay without campground power supply, the furnace will drain the battery in just one night at low temperatures. See page 43 (12 Volts Battery Power)

To operate the furnace, ensure to have enough propane and campground power or a fully charged battery



TROUBLESHOOTER		
Furnace blows only cold air	Out of propane or main valve closed	Fill propane tank or open main valve
	Too cold outside - Propane cannot vaporize	Travel to warmer weather or use electrical space heater
	Possible technical defect	Buy and use electrical space heater
Ask for assistance on campground or call the Help Desk		
Furnace does not run at all	No 12V power	Turn battery disconnect on or replace fuse in fuse box Reset switch behind exterior access door (with exhaust)
	Low battery power	Start engine to charge battery – see page 43 (12 Volts Battery Power)

TV & DVD PLAYER

TVS THAT COULD DISTRACT THE DRIVER WILL NOT OPERATE WHILE VEHICLE IS IN MOTION!

Most TVs require 120 volts from the campground or generator to operate

TVs have a power light on the front:

AXXERA: A dim LED indicates there is power to the TV. When the TV is turned on, the LED becomes bright.

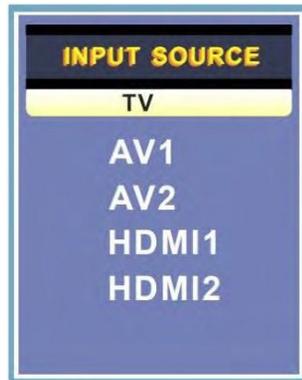
FURRION: A red LED indicates there is power to the TV. When the TV is turned on, the LED turns green.

JENSEN: A blue LED indicates there is power to the TV. When the TV is turned on, the LED turns off (black).



At every new location, the TV needs to be set up first:

1. Connect the optional TV cable (if service available) to motorhome & campsite
2. **AMPLIFIER** – For cable reception turn it OFF / for antenna reception turn it ON. The amplifier is usually built into the TV cable outlet. In some vehicles it could be separate, located inside of or on the outside of an overhead cabinet
3. Set the input source to TV [press source/input button on TV or remote]
4. Select AIR or CABLE in the CHANNEL menu and run an AUTO SCAN to receive the locally available channels. Repeat this step at every new campground.



TV = Antenna or cable
AV = DVD player*

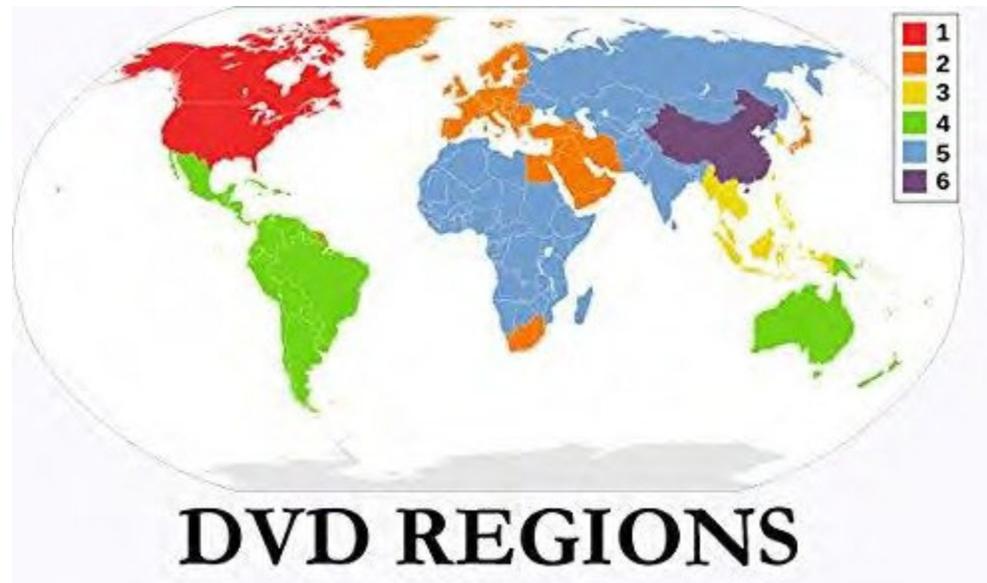


Amplifier:
Light on = ON



*Newer vehicles connect the DVD player by **HDMI**

DVDs need to be designed for Region 1 (USA & Canada) to properly work. If you brought DVDs from another country, they may not play.



TROUBLESHOOTER		
TV does not turn on	No campground / generator power	Plug into campground / start generator
	TV power switch off	Turn TV switch on (usually near DVD player)
	Power plug in cab-over not fully plugged in	Check connector and plug in properly
	Circuit breakers may be off or tripped (120 volts)	Reset circuit breakers
	Fuse blown* (12 volts)	Replace fuse*
	Ignition interlock activated	Move TV out-of-view of the driver Remove ignition key from lock
No picture / reception	Input source incorrect	Change input source as required
Poor/no cable TV reception	Antenna amplifier turned ON	Turn amplifier switch OFF & do channel search (auto scan)
Poor antenna reception	Antenna amplifier turned OFF	Turn amplifier switch ON & do channel search (auto scan)
DVD not playing	TV not set to AV	Change input source on TV to AV
	Incorrect region	There is nothing one can do
	Cables not connected	Check audio/video cables at TV and DVD player
	Technical glitch	Press reset button and try again (Jensen models only)

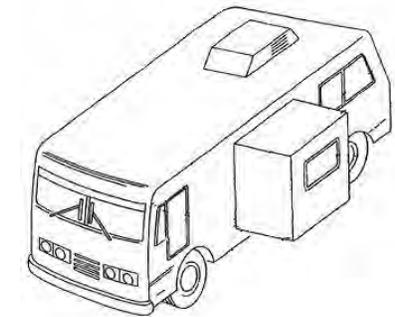
*Possibly labeled as Appliances/Entertainment. Some TVs have also an in-line fuse in the power cable to the TV; in addition to a fuse in the fuse box.

SLIDE ROOM (SLIDE-OUT)

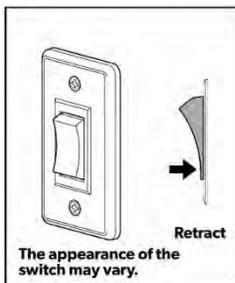
The slide room (if equipped) is a great feature that allows you to greatly expand your living space while parked.

Please follow these instructions to assure proper function of the slide room:

1. Make sure the motor home is level 
2. The parking brake has to be engaged 
3. Make sure the transmission is in the 'P' (park) position 
4. Turn the engine off and remove the ignition key or the slide room will not operate* 
5. Make sure the driver seat backrest is moved forward so that it does not interfere with the motion of the slide room. Damages to the driver seat and slide room trim are the responsibility of the renter
6. Verify clearance to objects on the outside before operating the slide room to its full extension (min. 3.3 ft. / 100 cm outside clearance)
7. Make certain that no objects get jammed between the slide room frame and the sidewall while extending the slide room. **NEVER store anything on top or on the sides of the slide room**
8. Do not allow anyone to sit on the slide room sofa, bed and/or dinette while operating the slide room
9. Push the button to extend the slide room until the slide room stops completely **and the motors turn off automatically – hold button for 3 more seconds**



*Some newer vehicles may require the engine to be running for the slide room to function!



To retract the slide room, repeat the steps 5 – 9.

Make sure the path is clear of objects and watch your feet while retracting

NEVER drive the motor home while a slide room is extended



Move seat forward before operating slide room

Move seat & backrest forward while driving to avoid damage to the driver seat.

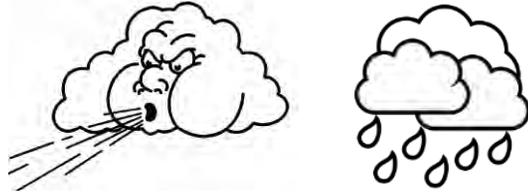


TROUBLESHOOTER		
Slide room does not move	Safety inter-lock engaged	Apply parking brake and remove key from ignition
	No power supply	Turn on battery disconnect
	Weak battery	Run engine for 15 min. – start generator – turn off engine
		Connect to campground electricity
	Fuse blown	Replace fuse – call Help Desk for location
Slide room only moves on one side	Possible technical defect	Retract as much as possible to be able to drive – call Help Desk

AWNING – Electric



Before rolling out the awning, ensure there is enough space to fully extend it and that it does not interfere with tree branches, etc. The engine needs to be off and the ignition key removed.



NEVER leave the awning open in windy conditions or rainy weather!

NEVER leave the awning unattended (absence or overnight)!



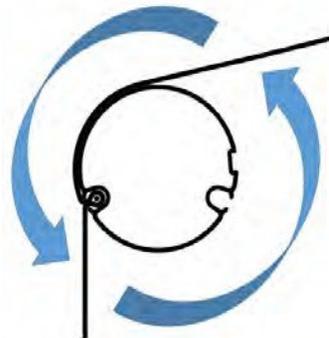
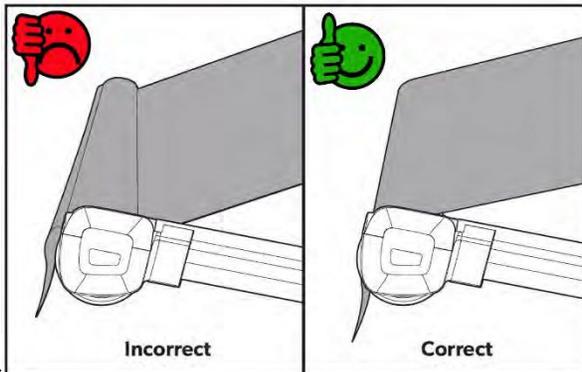
Turn off ignition & remove keys to operate awning



Rolling Up

Rolling Out

Do NOT unroll too far - Ensure the awning rolls up the correct way – fabric over the top of the roll.



Rolling Up

ALWAYS ROLL UP!

IMMER AUFROLLEN!

Coachmen Leprechaun vehicles:

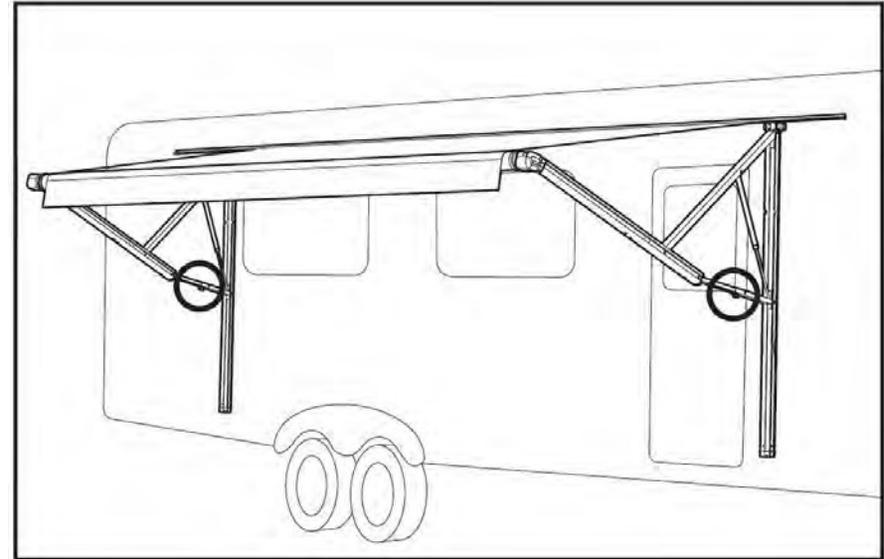
Make sure the knobs are NOT tight – just snug – before rolling the awning up.

CAUTION: When it is windy or rainy, retract and roll-up the awning!



Damages to unrolled awnings are always considered the customers fault.

Remember – Weather conditions can change rapidly. Especially in the desert and mountains!



Before driving off – ensure the awning is fully rolled up

TROUBLESHOOTER		
Awning does not move	Safety inter-lock engaged	Apply parking brake and remove key from ignition
	No power supply	Turn on battery disconnect
	Weak battery	Run engine for 15 min. – start generator – turn off engine Connect to campground electricity
	Fuse blown	Replace fuse in fuse box

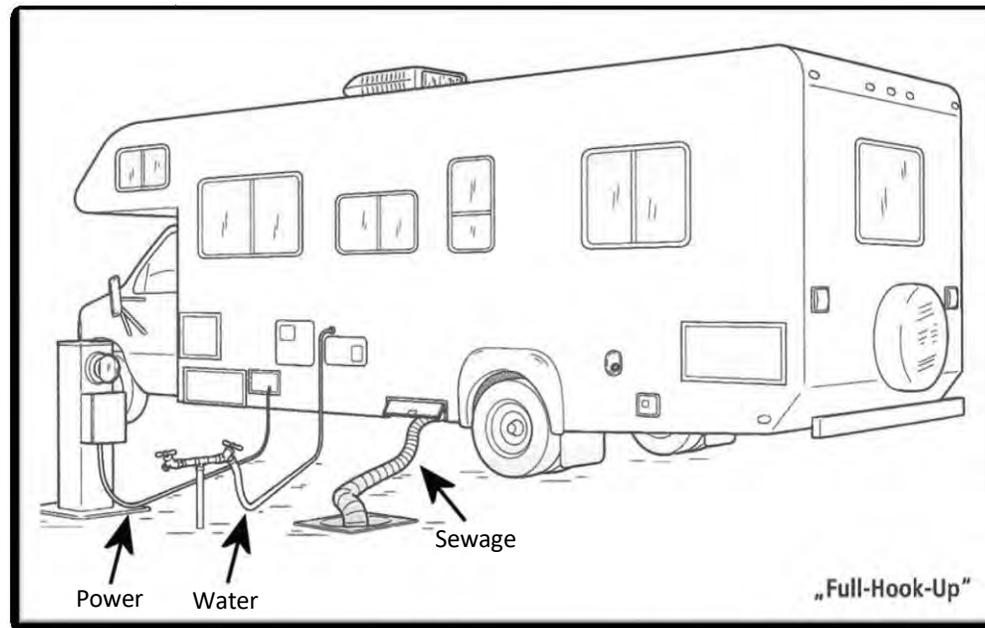
In case if damages prevent safe storage of awning for travel – remove defective pieces

SETTING UP AND BREAKING DOWN CAMP



When you arrive at the camp site

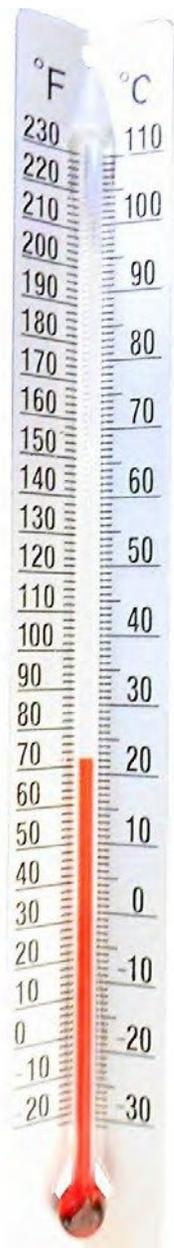
1. Have a passenger guide you into the camp site to prevent hitting an obstacle and damage the vehicle
2. Park the motor home on a level surface. Otherwise use the levelers to level the vehicle from front to back and side to side (see page 50 – Refrigerator)
3. Apply the parking brake before shifting into park
4. Before extending the slide room(s) make sure there is enough clearance
5. If equipped – extend the entry step (turn off the electrical step, so it remains extended)
6. Hook up the power cord, fresh water and sewer hose
7. Turn on air conditioner or heater – as needed
8. Turn on water heater



Before leaving the camp site

1. Roll in and secure the awning
2. Retract the slide room(s)
3. Close all roof vents and windows
4. Turn off the air conditioner/heater
5. Turn off the water heater and water pump
6. Unplug and store the power cord and TV cable
7. Disconnect and store the fresh water hose
8. Close dumping valves, disconnect and rinse the sewer hose and store it. Put the sewer cap on
9. Release the parking brake and drive motor home off levelers
10. Put levelers in storage
11. Close and lock all compartment doors
12. If equipped – retract the entry step (turn on electrical step, so it retracts when closing the door)
13. **Walk around vehicle for final inspection**
14. Lock the entry door
15. Secure any loose items in the motor home
16. Close all drawers and cabinets inside the motor home
17. Ensure everybody is wearing seat belts
18. Drive carefully on the campground and roads – request help from a passenger in narrow spots

For safety reasons we do not recommend 'street-side' camping, which is illegal in some areas



MEASUREMENT CONVERSION

Length	
1 Kilometer (km)	0.621 miles
1 Meter (m)	3.28 feet
1 mile (mi) / 5730 feet	1.609 kilometers
1 foot (ft.)	30.48 centimeters
1 inch (in)	2.54 centimeter
Liquids	
1 gallon (gal)	3.78 liters
1 quart (qt.)	0.94 liters
1 ounce (fl. oz.)	0.03 liter
1 liter (lt.)	0.264 gallons
Weight	
1 kilogram (kg)	2.205 pounds
1 ounce (oz.)	28.35 grams
1 pound (lb.)	453 grams
1 ton (t) / 2000 lbs.	906 kilograms
Speed	
35 miles per hour (mph)	56 kilometers per hour
45 miles per hour (mph)	72 kilometers per hour
55 miles per hour (mph)	88 kilometers per hour
65 miles per hour (mph)	105 kilometers per hour
75 miles per hour (mph)	120 kilometers per hour