

# **ROADTREK 101**

**A REFRESHER COURSE FOR  
THE OPERATION AND MAINTENANCE OF  
ROADTREKS**

**copyright © 2014 John Roy & Harish Verma  
Cape Cod Roadtrek Rally 6/8/14 (Rev 6/10/14)**

**DEVELOPED & PRESENTED  
BY**

**John Roy  
Roadtrek CyberRally Monitor  
&**

**Harish Verma  
VP Region 3**

# NOTES

- ▶ **DISCLAIMER:** information provided in this presentation reflects the experiences of the authors and is for information purposes only. Always refer to your specific Roadtrek manual, associated appliances and ancillary equipment as the authoritative source  
<http://www.roadtrek.com/manuals.aspx>
- ▶ The objective of this presentation is to highlight the many areas of owner/user topics that will ensure enjoyable travels.
- ▶ While many procedures included in this presentation are generically applicable to all Roadtreks, no attempt has been made to specifically address the Sprinter diesel
- ▶ In addition to using product manuals, join and use the free CyberRally to ask model specific questions. Make certain your post identifies your model and year to allow an accurate response from fellow trekkers

# THE BASICS

Essential items that you must know  
in order to operate and maintain your  
“Home on Wheels”

# BASIC TOPICS

- Pre Trip Preparation
- Control Panel
- Hooking Up
- Power Sources
- Monitors
- Water & Water Tanks
- Black & gray Water Tanks
- Macerators
- Refrigerators & Notes
- Propane
- Generators
- Furnace
- Hot Water Heater
- Air Conditioner / Heat Pump

# BASIC TOPICS (Continued)

- Fantastic Fan
- Tires
- Weight
- Batteries
- Antenna & Switch
- Awning
- Cables, Adapters, Tools, Spare Parts
- Check Lists
- Lubrication
- Winterizing / De-winterizing
- Resources

# Pre Trip Preparation

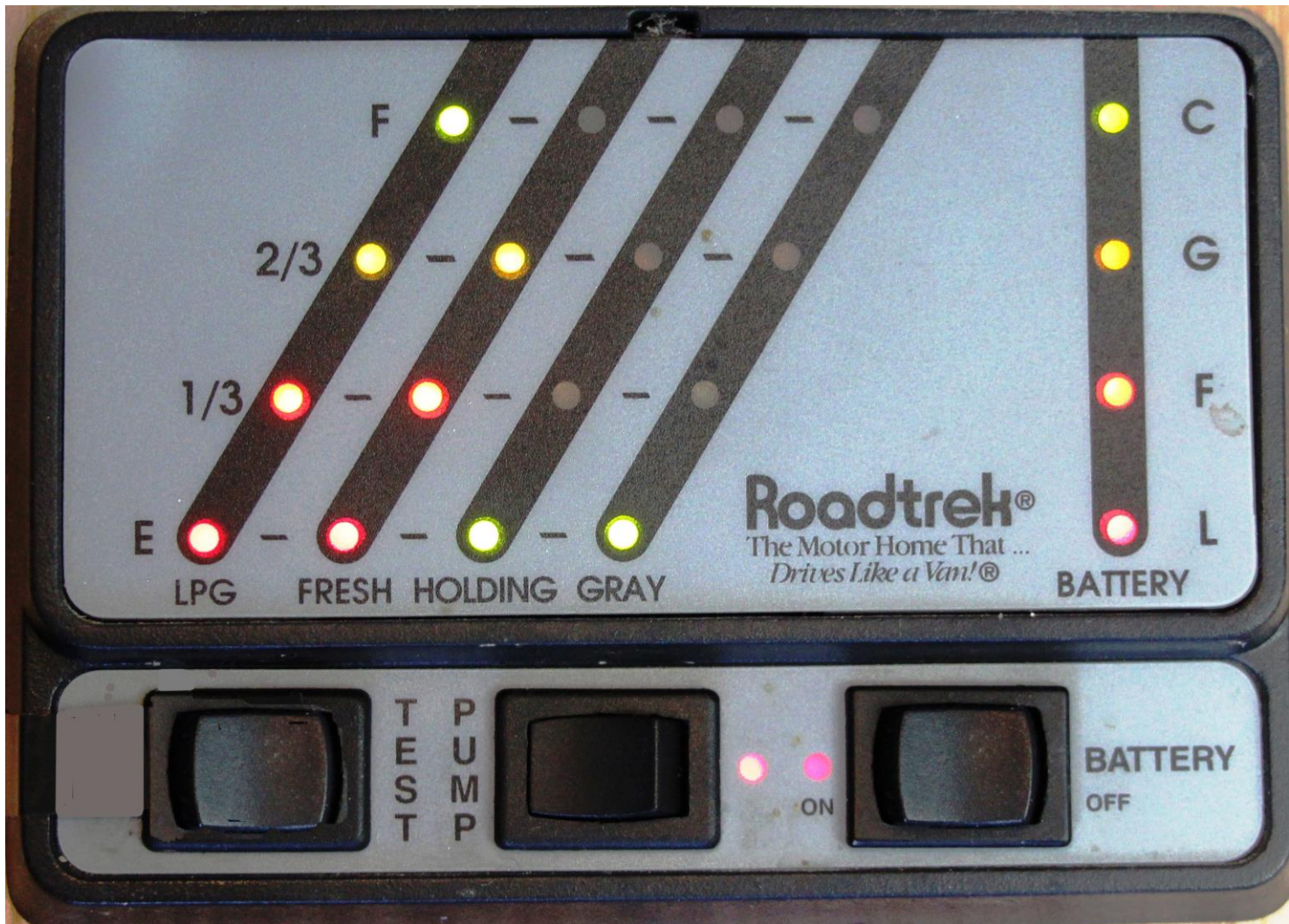
- Check & confirm all engine & house systems are operational
- Turn the refrigerator on the day before so it will get up to temperature before traveling
- Consider only partially filling your water tanks unless you are going directly to dry camping. It will cut down on weight and increase gas mileage
- Check and fill propane but not over  $\frac{3}{4}$  full

# Control Panel

- Battery switch must be on before you connect shore power so house batteries will charge
- Water level indicators can not be depended upon. This is especially true for the Holding and gray tank monitors
- Do not leave switch on for an extended time without being connected to AC or propane and CO2 monitors will eventually drain the battery



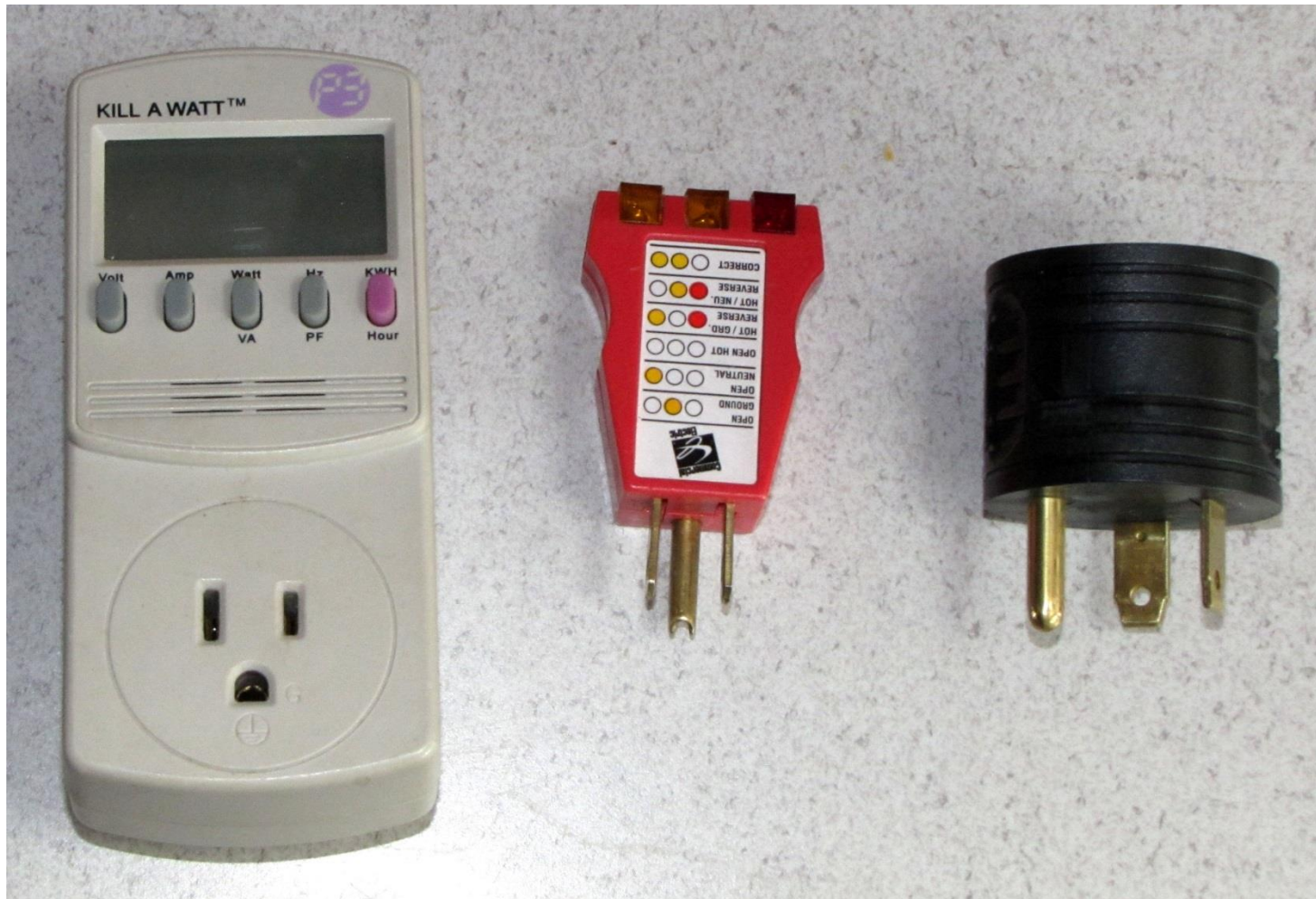
# Control Panel



# Hooking Up

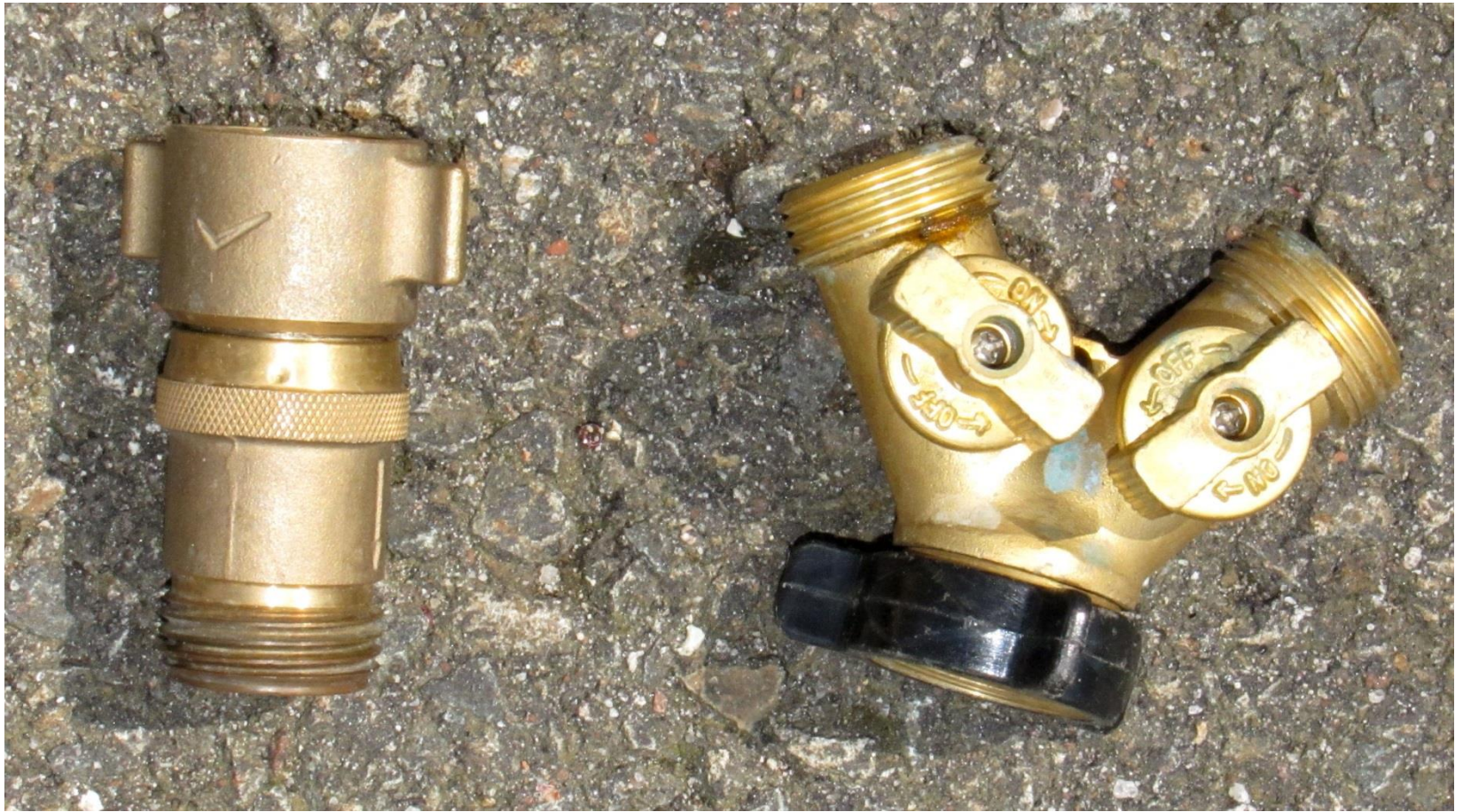
- **Leveling**
  - Before hooking up level your Roadtrek
  - Carry commercial blocks or homemade ramps
- **Electrical**
  - Test campground outlet before plugging in
  - Some people use AC power monitors that protect from surges & over/under voltages
- **Water**
  - Install pressure regulator if not installed by campground
  - Run water through hose for a few minutes before connecting to clear hose and campground piping
- **Cable**
  - No special considerations other than quick disconnects do not always make a good connection

# Electrical Equipment





# Water Adapters



# Power Sources

- **Shore Power**
  - Check Power source before connecting
    - Can purchase & use dedicated power monitors
    - Use 30 Amp adapter & Electrical phase tester
    - Use voltage meter or something like a Kilowatt meter
  - Turn on Control Panel Power Switch before connecting to shore power
- **Generator**
  - Starting the generator with the engine running is advisable to minimize house battery drain
  - Turning generator on will override shore power after a short delay
  - While only one source can deliver power, disconnecting shore power is probably good practice

# Power Sources - Inverter

- Use only when other sources not available
- Only some AC outlets will have inverter power
- Limited to 750 watts (see specific model)
- Will not power A/C, microwave or refrigerator
- Inverter will consume battery power even without any AC load
- Okay to run inverter while traveling if AC required. Engine will keep batteries charged

# Monitors

- Know where your monitors are located (CO2/Carbon Monoxide, Propane/LPG, Smoke)
- Periodically test monitors
- The CO2 and Propane Monitors are hooked up to the house battery and will discharge it over time unless the monitor power switch is turned OFF
- The Smoke detector uses batteries



# Monitors



**Propane**



**CO2**



**Smoke**



# Water Tanks

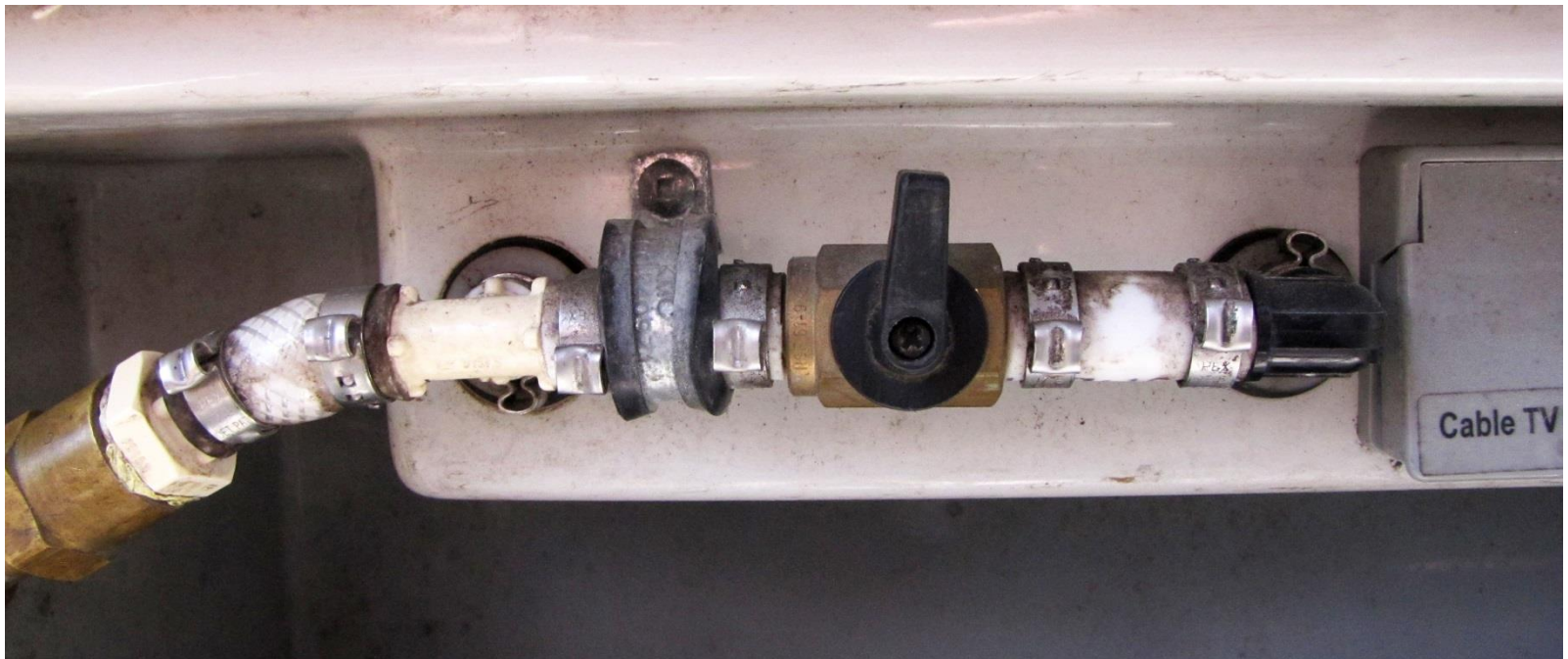
- Depending on Roadtrek year, you may have two tanks, Inside and Outside
- Valve positions to control tanks is confusing and dependent upon RT model
- Tanks can be filled by either the main water line or the gravity fill port
- Overfilling will cause water to pour out of an overflow port or the external fill port

# Water

- **Pump**
  - Must not run continuously
  - Make certain water input valve is perpendicular to the line for normal use
  - Hot water tank may need air cavity
- **Filters**
  - Consider buying an external or faucet filter
- **Pressure Regulator**
  - Buy and use it unless campground has one already installed

# Typical Hookup Configuration

Valve position as shown (perpendicular) is normal position to use city water or tank water. Parallel position fills the storage tank. If in wrong position the water pump will continue to run.



# Water Filters

**Faucet Filter**



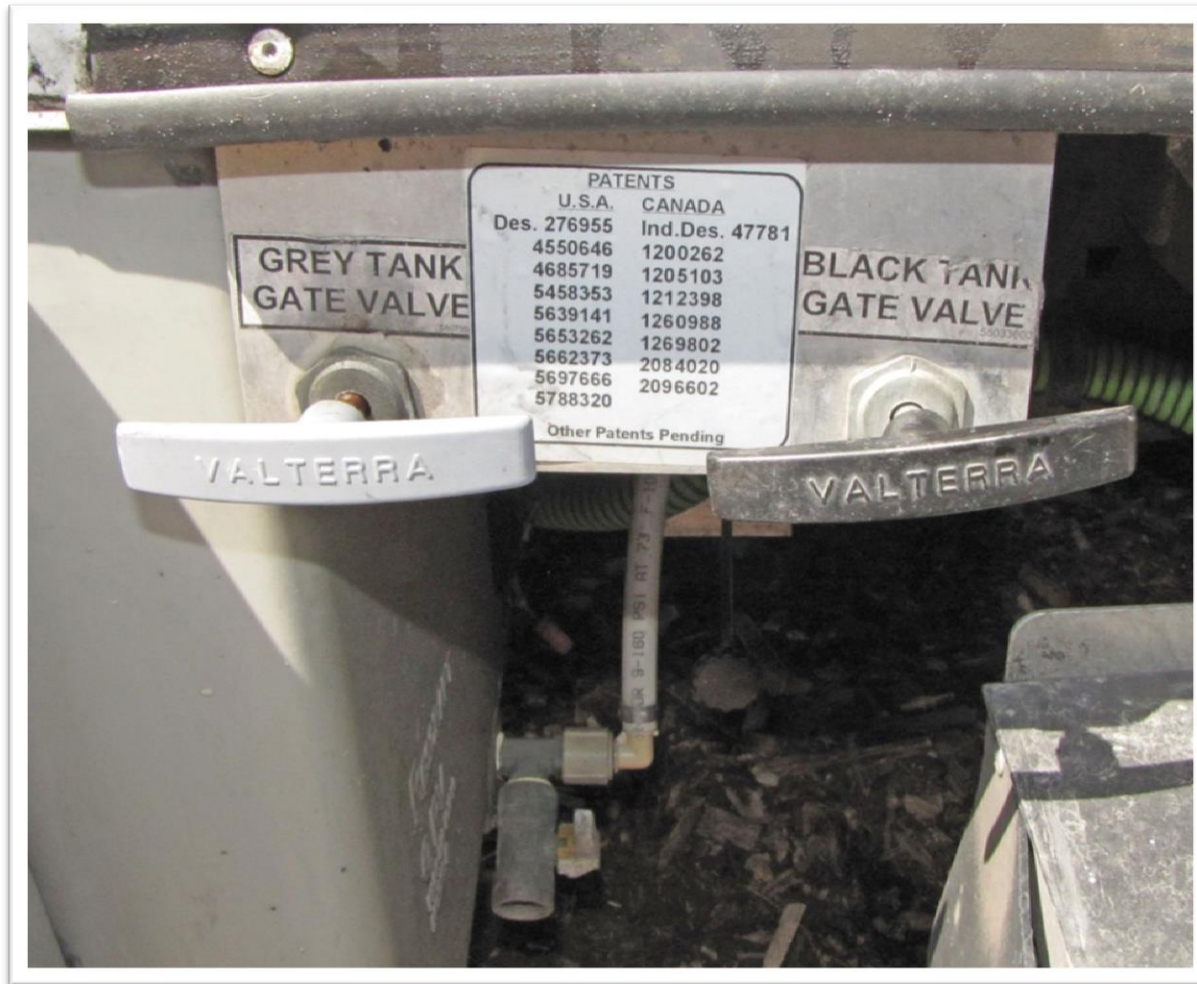
**External Filter**



# Black & Gray Water Tanks

- Leave drain valves closed until you are ready to dump
- Consider adding water to the black and gray tanks just before dumping to provide a good dump flow
- Open the black water valve and dump first
- Open the gray water valve and dump second as it will help clean out the lines

# Holding Tank Controls



# Macerators

- Earlier Roadtreks were not configured with macerators but some may have aftermarket installations
- Control panel must be ON to operate
- Best to operate with engine running
- DO NOT run dry (when discharge sputters consider stopping operation)



# Refrigerators

- **Modes**
  - **Propane:** Probably the most efficient
  - **Electric:** Almost as efficient as propane
  - **Battery**
    - Used mostly to maintain and not to start up a warm refrigerator
    - If engine not running, a refrigerator will drain a battery in the matter of a couple of hours. Don't park and forget to turn the refrigerator off if longer than that
- **Leveling:** Important because refrigerator damage can result
  - Driving is not a problem because of constant change
  - If you can sleep comfortable don't worry
  - If any of the level bubble within the circle its Ok
  - I shoot for 50% in the bubble



# Refrigerator Notes

- When the refrigerator is not in use, prop the main and freezer doors open to prevent mold
- Buy a dual remote thermometer and put remote in the refrigerator. While not 100 percent accurate it is a good temperature monitor without opening the door
- Every minute the door is open it takes one hour to get back to temperature @ 80 degrees
- Standard – 43 deg inside for 90 deg outside
- Keeping door closed temperature should keep 3-4 hours
- Consider using a battery powered refrigerator fan

# Refrigerator Accessories

Remote Temperature Monitor



Air Circulating Fan



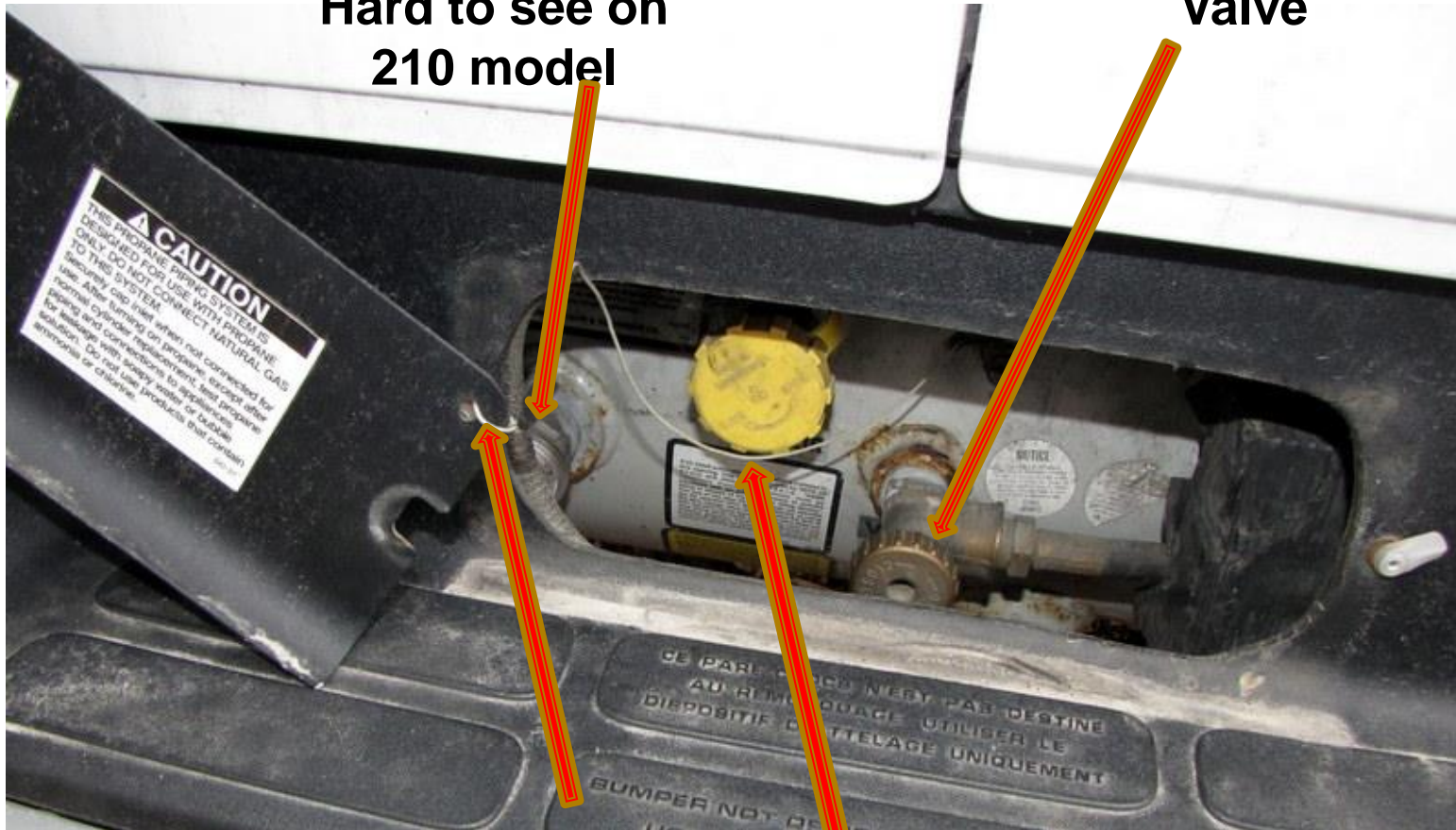
# Propane

- Most, if not all, RTs have a safety valve that will close if a break occurs and gas escapes
- Always open valve slowly or the safety shut off may activate blocking propane flow
- Driving while running the refrigerator on gas is a personal choice and typically frowned upon
- If you do drive with propane on then turn it off while refueling
- Lighting the stove is best method to confirm and prime propane if other devices are not working

# Propane Tank

Analog Meter -  
Hard to see on  
210 model

Flow  
Valve



Removable panel Safety Wire

Fill  
Connector

# Generators

- MUST run monthly for ~ 2 hours with a load
  - Run a few minutes without load before and after applying load
  - Use electrical heater or A/C for 50%-75% load
  - Ensures fresh gas pumped through carburetor and lines
  - Dissipates moisture within generator
- If not done carburetor will gum up resulting in an expensive repair
- Service per owner's manual

# Air Conditioner / Heat Pump

- Start with only fan on for a few minutes before turning on the compressor
- Start the compressor on low before increasing
- Heat Pump only good when outside temperatures are 40 degrees or higher
- In hot weather consider making heat dispersing Fins (see presentation part 2)
- Coils could ice up with high humidity
- Clean the filter periodically

# Furnace

- When turned on or off it will blow unheated air to ensure no gas is in the chamber before it ignites
- Do not block the exhaust grill area
- A new heater may smell as the oils burn off. Consider doing this before taking a trip



# Hot Water Heater

**Pressure Relief Valve**



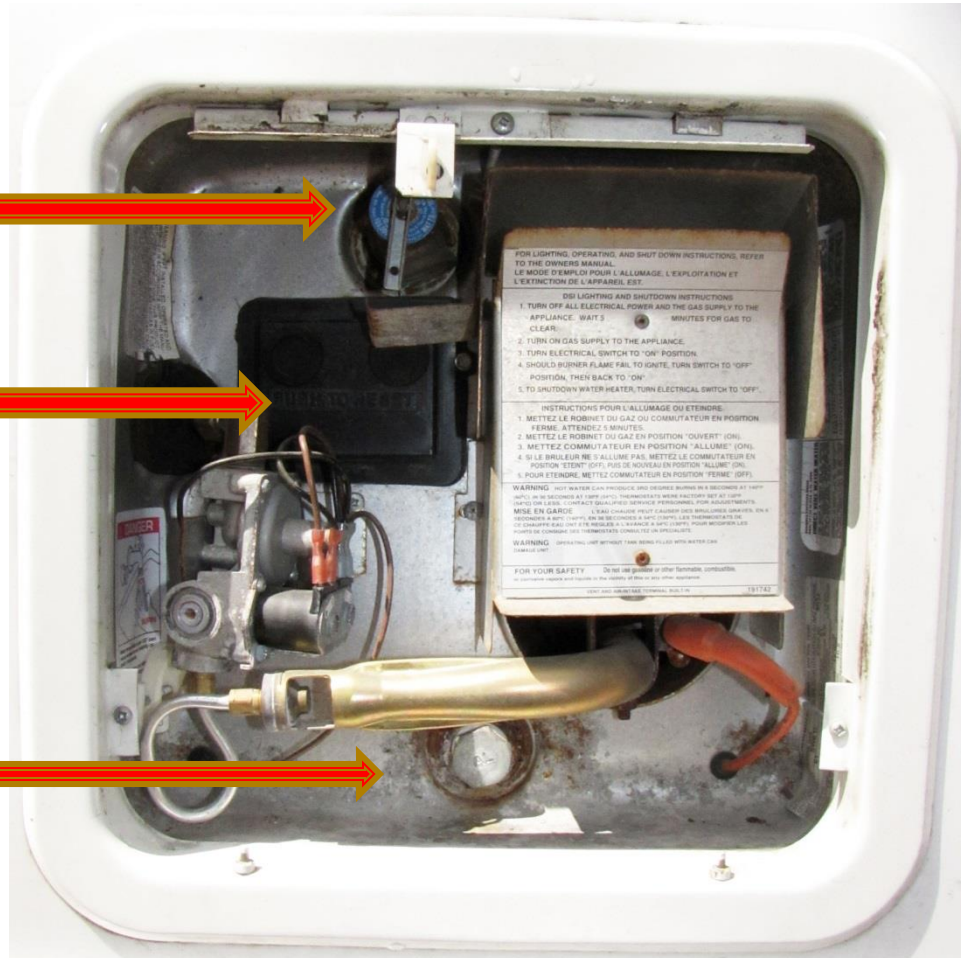
**Reset Switch**



**Anode Rod**



*(Sacrificial element that should be replaced yearly if not sooner)*





# Fantastic Fan

- Great company and product. Usually all that is needed in warmer weather
- Remember to close the lid of the Fan before driving off even though damage is unlikely
- The screen needs cleaning once in a while
- The fan assembly can be unscrewed and cleaned
- If you have a screw down screen, consider replacing it with a snap up screen.

# Tires

## ■ Pressure

- Should be specified on driver's door jamb
  - Typically 50 PSI front and 80 PSI rear when cold
  - Some models require 65 PSI in the front

## ■ Age

- Even tires with little wear should be changed every 5-7 years
- Tires have date code on side wall (Week, Year)

# Weight

- It's important to know your Roadtrek is not overloaded in total weight or in distribution
- Weight information is typically located on the driver's door jamb
- Stop at a truck stop such as Loves and drive onto the scale. It won't do individual tires but will weigh the front and rear axles
- Be prepared with an umbrella or other extended item to push the speaker button to get the attendant's attention

# Batteries

- **Lead Acid**
  - Cheapest and most forgiving
  - Corrosion problems
- **Sealed: Gel & AGM**
  - More expensive
  - Maintenance free
  - Sensitive to overcharge and extended discharge

# Antenna & Switch

- Older Roadtreks have antenna built into roof. The only way to fine tune is moving RT
- Crank up antenna allows flexibility. Employ a reminder method to ensure you don't drive off with it extended
- Position Internal/External coax switch to reflect signal choice
- If unit has an amplifier, turn on when using antenna

# TV Coax Switch & Amplifier



# Awning

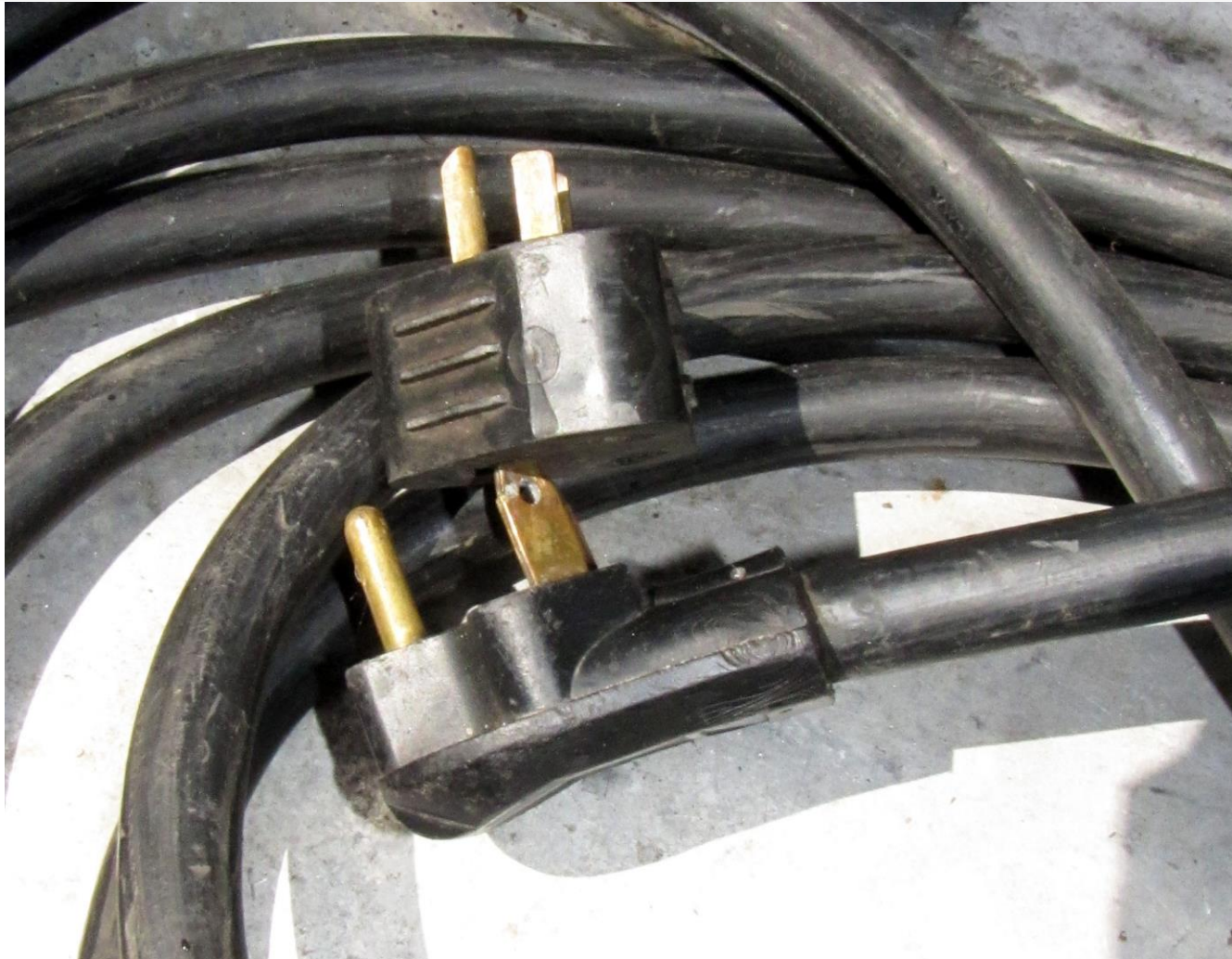
- DO NOT roll out beyond the limit
- DO NOT leave up when you are not nearby (A sudden wind can destroy the awning)
- When setting up, tip one end such that rain will run off

# Cables & Adapters

- 30 Amp to 20 Amp plug
- 50 Amp to 30 Amp plug
- Extra 30 amp extender cable
- 20 amp extension cable
- Coax cable for TV
- Water Pressure Valve
- Extra water hose



# Cables & Adapters (30 – 20 amp)



# Tools & Miscellaneous

- Pack a general purpose set of tools
- Socket (1- 1/16 inch) to remove the hot water tank anode rod
- Tape: Duct, Plumbers, & Electrical
- Lubricants: Silicone Spray, WD 40, Graphite
- Jumper Cables

# Spare Parts & Accessories

- First Aid Kit
- Flashlights
- Fuses & Bulbs (familiarize yourself with fuse and circuit breaker locations)
- Leveling blocks
- Bungee cords
- Bubble level
- Portable heater

# Portable Heater



# Create Checklists

- Make one or more checklists to ensure you don't forget anything
  - Pre Trip
  - Departing Campground
  - Storage
- Important Items
  - Plug in refrigerator the day before your trip
  - All drawers and cabinets closed & secure
  - Outside storage areas closed & locked
  - TV antenna down
  - All power, water and cable disconnected & stowed

# Lubrication

- WD 40: many items
- Silicone Spray: crank items
- Graphite: locks
- White Grease: outside drawer slides

# Winterizing / De-winterizing

- Required unless you live in an area that doesn't go below freezing
- RTI Website has details performing this task
  - 1-2 gallons of RV Antifreeze distributed throughout the water system
  - Use hot water bypass valves and remove anode rod to drain tank and check for next season replacement



# Resources

- Roadtrek International Website  
<http://www.roadtrekchapter.org/>
- Animated Electrical Drawing by John Slaughter  
<http://metrotrekkers.org/utility/electrical.htm>  
<http://www.metrotrekkers.org/utility/notes.pdf>
- Electrical Myth Busters by John Slaughter  
[http://region7rally.org/RV\\_Myths\\_web\\_final.pdf](http://region7rally.org/RV_Myths_web_final.pdf)



# **PERIPHERAL Topics**

**ADDITIONAL ITEMS THAT WILL STEAMLINER  
THE HANDLING AND MAINTENANCE  
OF THE ROADTREK  
THEREBY ENHANCING YOUR ENJOYMENT**

# PERIPHERAL TOPICS

- Spare Tire Lift Devices
- Overnight Parking
- Electronics
- Isolators
- A/C Heat Dispersing Fins
- Refrigerator Snyder Kit
- Solo Trekkers
- Traveling to Canada
- Phone Service
- Issues Dealing with Pets
- Under The Hood Maintenance
- Toilet Maintenance
- Storage
- Odds & Ends
- Emergencies
- Roadside Assistance
- Internet Resources

# Spare Tire Lift Devices

- After market kits exist to reduce the effort moving the spare tire up and down
- EZee Lift (~\$300)
- (<http://www.ezee-lift.com/>)
- Springy Device (~\$150)

# Spare Tire Lift Devices



# Overnight Parking

- **Public Domain Areas**
  - Good Sam Article from Attorney states it's okay to park in areas accessible to the public unless specifically stated otherwise
- **Private Areas – Common (always ask first)**
  - Wal-Mart, Cracker Barrel, Truck Stops
  - For overnight, DO NOT setup camp
- **Private Areas - Other**
  - Churches, schools, libraries, hospitals, motels, professional plazas & strip malls

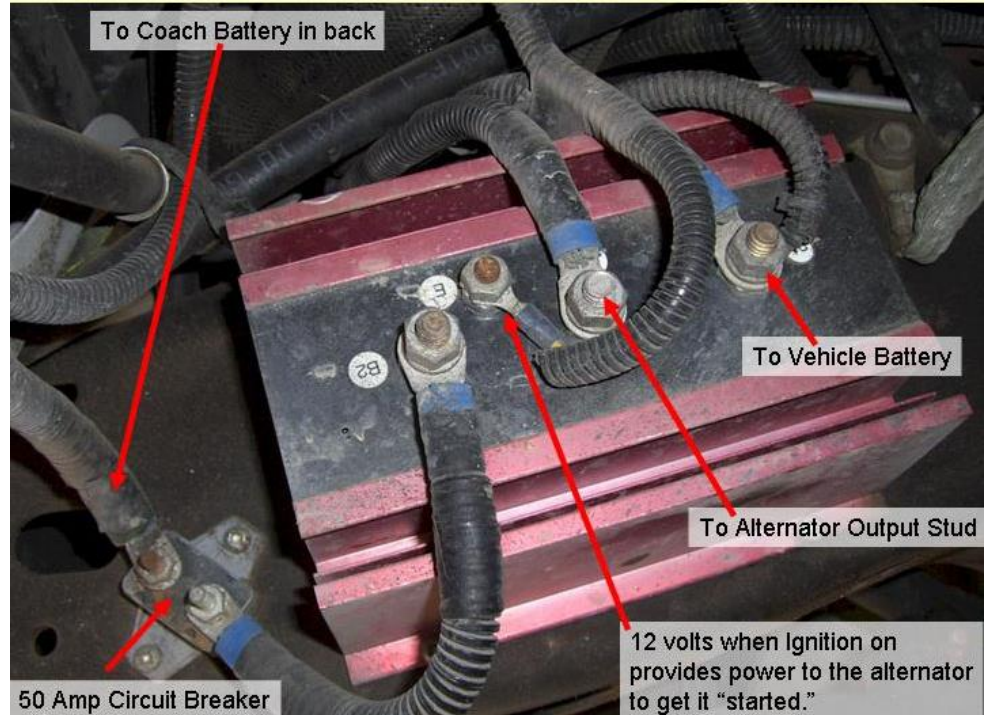
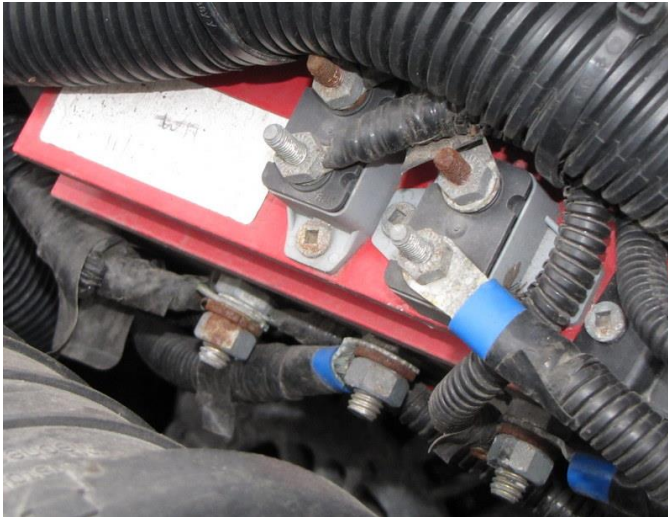
# Electronics

- Consider using a GPS (Garmin, Magellan, TomTom etc.). Buy one with free lifetime map updates
- Do not talk back to the GPS if you get lost!
- Consider installing a back-up camera
- Wired back up cameras are more reliable than wireless ones. Wired ones require running a cable from the back to the front. Consider professional installation
- Carry your laptop or tablet or ipad with you. Free Wi-Fi is available at most places (campgrounds, McDonalds, Panera Bread etc.)

# Isolators

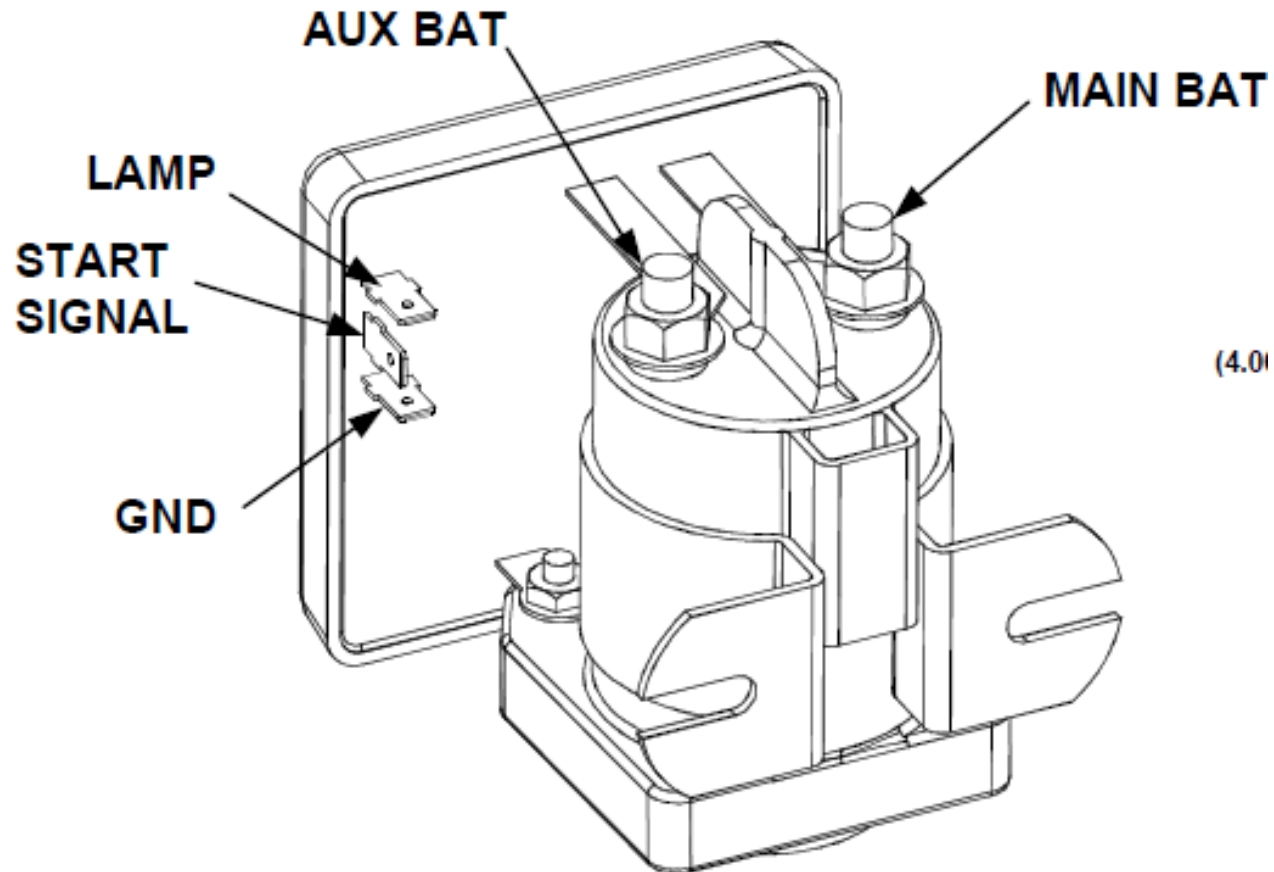
- Device under the hood, which “Isolates” the power going to the House Battery from the power going to the Engine Battery
- If one battery goes down the Isolator stops the drain from the other battery

# Isolator





# Separator



# Isolator vs Separator

- The difference is the flow of current
- The isolator works with a diode system that only allows charging the house battery.
- Some of the newer Roadtreks have separators instead of isolators
- The separator will allow either source to charge the other when either source exceeds 13.2 volts. A solenoid controls when both sources can be connected together

# A/C Heat Dispersing Fins

A Roadtrekker designed the fins to minimize the recycle of hot air back into the cool intake. Good results have been experienced with this simple addition.

<http://www.trekin.digital-digs.net/AC-Improve.htm>



# Refrigerator Snyder Kit

(kit currently unavailable)

- After Market plenum and fan to increase air flow through refrigerator fins
- Trekkers have reported good results keeping refrigerator at temperature in hot climates
- Installation ease depends on Roadtrek model
  - 190's may need refrigerator removed
  - 210's can be done without refrigerator removal

# Solo Trekkers

- Solo trekkers have special needs and requirements
- For ladies, safety is important
- Have quick access to an alarm in case of emergency
- If your vehicle has a remote alarm button, test it and use it if needed
- Have cell phone handy

# Traveling to Canada

- You will need Passport to enter Canada. More importantly you will need it when returning back to the USA
- Be cool when crossing the border
- Answer the Border Guard's questions as briefly as possible. Make eye contact.
- Do not joke with Border Guards. They are poorly paid and have no sense of humor
- DO NOT, REPEAT DO NOT, carry arms into Canada
- If travelling with Pets, have vaccination papers handy
- No need to convert currency. Canadians love your green stuff

# Phone Service

- Matter of personal choice & budget
- Verizon appears to have the best cell coverage
- Be careful when using service near borders or you may pick up an out of country tower and be charged for roaming
- Traveling in Canada consider using Free Skype if you have Wi-Fi

# Dealing with Pets

- When travelling to rallies, let the Rally leader know that you are arriving with pets
- Arrange for pet care when leaving campsite for extended length of time (city tours etc.)
- Traveling out of the country requires special paperwork.

<http://travel.gc.ca/returning/customs/pets>



# Under the Hood Maintenance

- Check oil frequently
- Consider switching to full Synthetic (Lasts longer and is easier on the engine)
- Check Coolant level frequently
- Check Brake Fluid
- Check Power Steering Fluid
- Check Battery terminals and water level

# Toilet Maintenance

- Flush Black Water Tank after dumping
- After dumping, add a bit of Lubricant to the deodorizer (Coco Lube is a good brand)
- After winterizing, leave a little bit of pink antifreeze and a lubricant at the bottom of the bowl. Will keep the seal moist.

# Storage

- Select location that allows periodic access
- Take precautions to deter rodents
- Check monthly
  - Run engine and/or take a short drive
  - Run generator
  - Check for any rodent activity (mice, squirrels)
- Using covers is questionable. If one is used make sure it can breath and not trap moisture

# Odds & Ends

- Periodically check your fire extinguisher. It is also advised to shake it occasionally
- Carry and display a placard with your name
  - Fellow Trekkers can find you
  - Use as a placeholder on your site when running errands

# Emergencies

- Travel with appropriate travel medical coverage
- Have emergency numbers handy and easily accessible
- Have a few copies of your medication and medical history that can be provided to a doctor in case of an emergency

# Roadside Assistance

- Have a reliable Roadside Assistance company to help you in case of breakdown
- Keep their number handy, on the dashboard
- Insist on using flatbed truck when towing. The underside tanks can be damaged if towed with a normal tow truck with a hook
- Unless you feel very confident, do not try to change your tires yourself

# Some Internet Resources

- [Harvesthosts.com](http://Harvesthosts.com)
- [www.boondockerswelcome.com](http://www.boondockerswelcome.com)
- [www.rvillage.com](http://www.rvillage.com)
- [www.Freecampsites.net](http://www.Freecampsites.net)
- <http://roadtreking.com/>
- <https://groups.yahoo.com/neo/groups/roadtrek/info>





Roadtrek<sup>®</sup>

*Fuel Efficient Motorhomes  
You'll Love to Drive!*<sup>®</sup>

**Roadtrek®**

The Motor Home That ...  
*Drives Like a Van!*®

**Roadtrek®**

The Motor Home That ...  
*Drives Like a Van!*®

**And brings people  
TOGETHER  
like nothing else can! ©**

**And brings people  
TOGETHER  
like nothing else can! ©**

**And brings people  
TO GATHER  
like nothing else can!**