

Thank you for downloading the TechnoRV RV Safety Essentials Guide. We are Eric and Tami Johnson and the owners of TechnoRV. Over the past 8+ years of RVing, we've learned a lot about RV safety through firsthand experience and experts in the field, and we want to pass what we've learned on to RVers that might not have as much experience.

This guide is not intended to be a technical textbook-like guide on RV safety. Instead, we will introduce 3 essential RV safety items, what protection they offer, and why we think they are critical for every RV in America. We will also include Best Practices for RV Safety.

You can easily navigate through the guide using the topic links below.

### WHAT IS COVERED IN THIS GUIDE

### **Electrical Protection**

- 4 Electrical Issues RVs Face
- How Does a Surge Guard Protect an RV
- Electrical Safety Best Practices

#### Tire Safety

- Tire Care Tips
- Proper Tire Pressure Underinflated vs Overinflated
- How Does a TPMS Protect RV Tires
- Tire Safety Best Practices

### **Propane Safety**

- Propane Tank Design
- Built-in Propane Protection
- How Does the GasStop Protect an RV
- Propane Safety Best Practices

#### **Product Links**

So you just bought your new RV, and you are ready to get on the road! Unfortunately, even after you shelled out all that money for your RV, you do not have everything you need to travel safely in your RV.

Although RVs seem to come loaded with all of the extras you could ever want, the majority of them do not come with the devices that protect your RV from the electrical issues you will encounter at campgrounds, systems that monitor your tire pressure on the road, or propane shutoff devices to protect you in the event of a major leak, cut, or ruptured line in your propane system. It is the responsibility of the RV user to add these critical monitoring and protection devices. Let's look at each of these in more detail:



Electricity is a serious matter, yet we plug our RVs into shore power, which is simply the power pedestal at a campground, like we are plugging in a lamp. Think about it, when someone builds a house, they have electricians complete the entire electrical connection process from start to finish. As RVers, we must complete the final step of the electrical process by plugging our RV into shore power. We trust the campground power pedestal is wired correctly and safely, and it may be, but there are many times it is not. Old campground wiring, poor electrical design, and poor electrical workmanship are all real issues at campgrounds across the U.S. So how can you ensure that you are doing your part to protect your RV?

### ISSUES ALL RVERS FACE WITH CAMPGROUND POWER

Before we look at the solution, let's look at the 4 issues that RVs face when they are plugged into power.

#### **ELECTRICAL ISSUE #1: SURGES**

The first issue that most RVers think of as it relates to power coming into the RV is a power surge. A surge is a quick electrical spike that can quickly destroy anything in its path, so yes, we need to make sure that surges are accounted for when we look at protecting our RV.

### **ELECTRICAL ISSUE #2: LOW AND HIGH VOLTAGE**

While we discussed surges that are defined as quick, extreme voltage spikes, there is something that is much more common than a spike, and that is low and high voltage. As an RVer, you will rarely experience a true surge, but you will without a doubt experience low voltage and maybe even high voltage. Considering normal voltage for an RV is 120 volts, low voltage is typically defined as anything below 102 volts, and high voltage is anything above 132 volts.

When the voltage into your RV drops below an acceptable level, the amperage increases which generates heat. This happens because as the voltage drops, the amperage increases to try to make up for it. Over time, this can cause electronic components in your RV to fail. This may include refrigerators, AC units, washing machines, TVs, microwave ovens and more. The problem with low voltage is that you may not even know that it is happening when it occurs. Many times, a low voltage situation will not immediately zap an appliance, but it is guaranteed that the life expectancy of an appliance is reduced when given low voltage.

So, you wake up one day and you have an AC unit that has failed, and because there is not an obvious cause and effect happening with low voltage, you just assume that the unit failed because of natural causes. Low voltage and high voltage are the silent killers and dealing with this should be a part of your plan to protect your RV.

#### **ELECTRICAL ISSUE #3: MISWIRED OR DAMAGED PEDESTALS**

Now let's think about RV parks across America. The original electrical design of the park *should* have been professionally inspected and it probably was when it was originally built, but over time the electrical pedestals that we plug into can begin to have problems. Think of the thousands of RVs plugging into the pedestal before you, and then think of some of the things you have seen while traveling like RVs running into pedestals, RVers dropping their power cord in the dirt and then plugging it right in, jerking and pulling on the electrical cord to get it unplugged from the pedestal, and so on.

Miswired and damaged pedestals are real issues that are more common than you may think and should be addressed with a proper electrical protection system. There are 3 main electrical conditions that you may experience with a miswired or damaged pedestal:

- OPEN GROUND An electrical ground is designed to dissipate (or move) excess voltage/current to the ground connection at the campground or home service panel. If there is no connection to that panel ground, then this is considered an open ground condition. In an open ground situation, if there is current leakage for any reason, then that creates voltage which has nowhere to go, but it will certainly go somewhere. If the ground doesn't exist, or is "open," then that excess voltage could go to the chassis or frame of your RV basically charging it. This is called "hot skin" and if the voltage on the chassis reaches even 30 volts, it can be extremely dangerous if you come in contact with it.
- OPEN NEUTRAL The neutral line in a pedestal is a return path for electricity all the way back to the service panel. If this connection is missing, then this is considered open neutral. In a 30-amp outlet this will simply shut off the power. But if you're plugged into a 50-amp outlet and the neutral wire becomes disconnected, it puts your RV in danger of receiving up to 240 volts across appliances only expecting 120 volts. This usually presents itself where one line in the RV has little voltage, while the other is well over the recommended 120V. This condition is referred to as open neutral.
- REVERSE POLARITY This occurs when the hot wire and neutral wire get wired backwards at
  the pedestal. Everything in your RV could still work, but it can charge things even when a
  switch is off. For example, if a toaster is plugged into an outlet with reverse polarity, then
  even with the toaster turned off, the coils in the toaster could still be electrically charged.
  Reverse polarity is bad business and can be very dangerous.

#### **ELECTRICAL ISSUE #4: WIRING INSIDE THE RV**

There is one more thing to consider, and that is the wiring inside of your RV. Up until this point, we have just discussed dealing with the incoming power from the pedestal. What if the incoming power is fine, but you have a wiring issue inside of your RV?

If you have ground wire issues or neutral wire issues, your electronics, RV, or even your safety could be in danger. Imagine losing the neutral line in a 50-amp RV. In a 50-amp RV, there are two hot lines that share one neutral line, and if the neutral line is lost then those two hot lines can come together creating 240 volts in your RV. There is no electronic device that can handle that level of voltage for any sustained period of time without being destroyed. With all the movement that goes on in an RV while traveling down the road, it isn't unusual for things to become disconnected. I know we have found screws and other things on the floor after a trip and wondered where they came from!

So with all of these issues, you can easily see why you need to add something to your RV setup that protects you from them. We use the Surge Guard Total Electrical Protection every time we plug our RV into power to protect us from these dangerous situations.

### **SURGE GUARD ELECTRICAL PROTECTION SYSTEMS**

A <u>Surge Guard Total Electrical Protection System</u> is a device that connects between the power pedestal and your RV's electrical system and is designed to protect your RV against dangerous power surges and the issues discussed above. There are less expensive surge-only protectors, but we always recommend having the more advanced RV surge protectors that can also cut power off to your RV if it detects any dangerous electrical conditions such as undervoltage or miswired pedestals.

Here are the protection features you need in a great total electrical protection system, and the Surge Guard portable units have them all:

#### PEDESTAL ANALYSIS

An RV electrical protection system should analyze the pedestal and let you know if there are any issues with the ground wire, neutral wire, and if there are any reverse polarity issues. It should not only notify you of these issues, but it should also block power from coming through to your RV if any of these conditions exist.

### SURGE PROTECTION AND JOULES RATING

Of course, you want your electrical protection system to have surge protection, but how much? Surge protection is rated in joules, the higher the level of joules, the better the protection. Surges are different than lightning strikes, and no system can completely protect you from a direct lightning strike. A direct hit can blow the pedestal out of the ground and run the surge up through your RV jacks. Luckily, this would be a rare case and not a situation to try to completely account for.

#### OVERCURRENT PROTECTION

The Surge Guard Total Electrical Protection System is the only device that has the ability to cut power off if you are drawing too many amps for the rating of your RV's electrical system, referred to as overcurrent. Too many amps (the measure of current) can cause extreme heat on your RV's electrical system and may create a fire hazard.

### LOW AND HIGH VOLTAGE PROTECTION

Surge Guard Total Electrical Protection Systems have the ability to cut you off from the power if the voltage drops too low or goes too high. RVs require 120 volts, and usually systems will cut power off at 102 volts on the low side and 132 volts on the high side. A Surge Guard will not

only notify you of low voltage, but it will cut your power to the RV if it occurs. It will also automatically restore your power once the voltage returns to an acceptable level.

### **LOAD-SIDE PROTECTION**

Surge Guard Electrical Protection Systems detect elevated ground currents and open neutral conditions (50-amp only) inside the RV. This level of protection can be found in patented technology by the Surge Guard brand and is available in the 34931 and 34951.

When you have a <u>Surge Guard Electrical Protection System</u> in place, you can rest assured that you and your RV are protected. Surge Guard offers a lifetime warranty and industry exclusive Connected Equiment Coverage which provides insurance for your electronics in the event the Surge Guard fails to do what it is intended to do.

### **ELECTRICAL SAFETY BEST PRACTICES**

- Always ensure your power plug is free from dirt and grime before plugging it in.
- Inspect the pedestal inlet for dirt and grime before plugging in you need a clean connection to avoid charring or burning of your plug.
- Always turn the pedestal breaker off before plugging your RV in. Be sure you are not standing in water and wear rubber soled shoes during the process.
- Remove your power cable using the included pull-ring; do not yank or wiggle your cable to get it out.
- Be sure to unplug your RV before pulling out of the campground (yes, this happens!)
- Monitor your power usage in your RV and stay below what your RV is rated for.
- Use <u>proper adapters</u> when plugging into a pedestal with a different power level than your RV, for example a 30-amp RV plugging into a 50-amp pedestal.
- Use a <u>Surge Guard Electrical Protection System</u> to monitor and protect your RV from faulty power.

Want to learn more about your RV electrical system and how to protect it? Click here to download the complete RV Electrical Safety Guide by TechnoRV.



Tires carry everything precious to us, and they need to be monitored and maintained to do this effectively. There are a few things you can do to help maintain tires which will help extend their life and work properly. In addition to tire care, you need to ensure you are running with the correct tire pressure for your RV and continue to monitor your pressure and temperature using a Tire Pressure Monitoring System.

## TIRE CARE TIPS

- Avoid long-term UV exposure on your tires by using tire covers when parked.
- Exercise your tires by running them 1-2 times monthly when they are sitting for long periods of time.
- Avoid long-term parking on grass or asphalt, and always use a protective barrier under tires if you are parked on these to protect them from moisture and asphalt chemicals.
- Do not use petroleum-based cleaners on tires which can negatively affect the chemical makeup of the tire over time.
- Always maintain the proper pressure in your tires even when it is not being moved.

### **PROPER RV TIRE PRESSURE**

Let's start with what sounds like an easy thing to do: properly inflate your RV tires. We have all heard this before and there are serious reasons for it. The problem that comes with this simple request is how do you know what the correct pressure is for your RV tires?

Tire pressure is simply the amount of air inside of a tire. For those of us in the United States, that pressure is measured in pounds per square inch, or PSI. There is only ONE correct pressure for your RV tires. The best way to know the correct PSI for your tires is to follow the tips below:

- Get your RV weighed at each tire. The only way to truly know the proper PSI level is to get your RV weighed. The best way to get weighed is at each tire. If you cannot get weighed at each tire position, then weigh your RV at each axle using the scales found at truck stations. Once you know your RV weight by tire, you can refer to your tire manufacturer's tire inflation chart to find the correct pressure for your RV. We go into more detail on weighing your RV and applying the weight to the tire inflation chart in our complete RV Tire Safety Guide (link at the bottom of this guide).
- Refer to the tire sidewall. If you cannot get properly weighed, use the max cold tire pressure listed on the tire's sidewall. Your ride may be a little stiff if you are overinflated, but it is better than underinflation. Underinflation can create heat, and heat is the enemy to your tires. Your tires are better off being overinflated than underinflated.

### **UNDERINFLATED TIRE ISSUES**

Under-inflated tires are tires that don't have enough air inside of them for the load they are carrying. This could be a result of not putting enough air into your tire or could be a result of an overloaded RV which weighs more than the tire is rated for. This lack of proper pressure can lead to handling issues, a decrease in fuel economy and even structural damage to the tire.





Even if your tires were inflated to the perfect PSI for its weight, you could end up being underinflated a short time after. Tires lose air pressure over time, and this happens for 3 main reasons: osmosis, a valve stem leak, or a puncture.

**Osmosis**. Manufacturing quality will affect how quickly pressure loss through osmosis happens, but even the best tires out there will lose about 1-2 PSI per month by osmosis alone. Tires may look impenetrable, but air molecules do gradually make their way out.

**Valve Stem Leak**. The second major contributor is the valve stem itself. Standard valve stem caps are small and easy to misplace. If you over-tighten Schrader-type valve cores

beyond the recommended 4 inch-pounds, you can also have leaks. This is why tire supply companies sell a pre-set torque tool. If you are going to be tightening your Schrader-type valve core, make sure you have one.

**Puncture**. The last major cause of air loss in tires is a nail puncture around the tread. These leaks are relatively slow, since the nail is plugging the hole, but you could still be losing 1-2 PSI or more per day, instead of per month. Checking your tire pressure in the morning does not mean that you will be immune to nail punctures as you drive. You could end up with a severely underinflated tire before you know it.

Underinflation is also the leading cause of tire blowouts, which typically occur when an underinflated tire heats up abnormally (due to low pressure), but why is that?

When tires are underinflated, their rolling resistance increases significantly. If you imagine pedaling a bicycle with an almost flat tire, you will quickly get the idea. There is a lot more rubber touching the road when a tire is low. An RV tire footprint gets 18% larger if the tire is underinflated by 30%. That is why a bike with a low or flat tire is so hard to pedal and steer! You also get a lot of heat that is generated from the friction of more rubber on the road as well as sidewall flexing. When air gets hot, it expands, and in a tire that has been weakened by underinflation, that air will find a place to go in a hurry through a blowout if you are not careful.

When you have more rolling resistance, other problems follow, including lower fuel economy, uneven wear, and possible tread separation. Fuel prices are generally higher in the summer months when we all want to be out using our RVs, so even a 1-2% drop in fuel economy due to low air pressure can have a serious impact on your budget. You will also reduce the life of your tires and replacing them sooner than expected makes a noticeable dent in your wallet too.

The only time an underinflated tire is a good thing is when you need a lot of traction, since the load per inch is distributed over a greater area. One example is military vehicles that run in the hot, sandy desert. In this case, the tire pressure is lowered to increase traction. However, do not try this with your RV! You cannot drive at high speeds on underinflated tires, and you simply do not need this kind of traction on most roads. Some RVers will operate underinflated tires in hopes of a smoother ride, but the difference is very small and is not worth all the negatives.







### **OVERINFLATED TIRE ISSUES**

Overinflated tires are tires that have too much air inside of them. This excessive pressure can reduce the tire's traction, negatively affect your RV's braking ability and handling, and it can give you a bumpy ride. Just how an underinflated tire has more surface area of the tire on the road, an overinflated tire has less surface contact on the road. Although you may want to try to reduce the issues caused by overinflation, it is not a good idea to arbitrarily lower your tire pressure to do this. Don't make a guess on your load or weight and reduce your tire's PSI just to get a better ride; the only way to know your proper PSI is to be weighed and apply the weights to your tire's inflation chart from the manufacturer.

Just because your RV friend runs 90 PSI in his or her tires does not mean that is the right PSI for you. Of course, RV friends mean well and want to help, but unless you have the exact same RV and tires with exactly the same things inside as your friend, and assuming your friend's RV has been weighed and they too aren't just guessing on the proper tire pressure, then you really need to do the work to determine the correct pressure for your situation.

# TIRE PRESSURE MONITORING SYSTEMS

Tire blowouts are almost always preceded by low pressure and high temperature, but if you are not monitoring your tires in real-time using a Tire Pressure Monitoring System (TPMS) while you are driving, you will never know if these problems exist. Many RVers take the time to check their pressures before leaving for a trip, but this only ensures you start with the right pressure; this will not guarantee your tire pressure will stay at the proper pressure while you are driving. It is normal for tires to heat up on the road which drives the pressure up some as well, but there are safe limits for this increase that need to be monitored. The standard for unsafe operating pressure is 10% below cold tire pressure and 25% above cold tire pressure. When tires get outside of these parameters, real problems can follow...and quickly. When tires lose pressure, they begin to heat up. Some heat is normal due to friction and ambient temperature, but if your tires get above 158 degrees F, this would be considered abnormal heat, and you would need to stop and resolve the problem. Tires can begin to break down when they get above 200 degrees F, but you would not know this was happening if you were not using a TPMS.



A <u>TST Tire Pressure Monitoring System (TPMS)</u> is an electronic system designed to monitor the air pressure inside of a vehicle's tires and the temperature of the tires as well. A TST TPMS system will include sensors for each tire being monitored and a display monitor that reports the pressure of each tire. The purpose of a TST TPMS is to warn the driver of any tire issues that may create unsafe driving conditions.

The TST TPMS is designed to alert you if any of your tires do not meet your tire pressure specifications. Most RVs have more than 4 tires to monitor, including dual tires and towed vehicles, so an RV TPMS is a must. It's important to note that the majority of RVs do not come with factory TPMS systems, as this is not mandated for the production of recreational vehicles. There are a couple of RV brands that are getting into the TPMS market and installing TST TPMS systems on new trailers, but if you are like most RVers, you need to get yourself a tire pressure monitoring system that will monitor your tires and let you know if anything is out of the ordinary.

Here's a great example of why you need a TPMS and is a story I was told by a real RVer: An RVer is traveling in a motorhome with six tires. They are also towing a passenger vehicle behind them with another 4 tires. As the RVer is driving, the rear right tire on the towed vehicle picks up a nail and creates a slow leak. As the tire leaks down, the temperature on the tire rises, and the sidewall of the tire is stressed. Bam, a blowout occurs, and maybe you feel it or maybe you don't. Next thing you know a car pulls up next to you and starts waving you down. You pull over to realize your tire is shredded, the rim is damaged and the wheel well of the car is damaged as well. Luckily the RVer is safe in this example, but the damage is done. This situation could have been avoided if the driver was using a TST TPMS since it would have alarmed him of the low pressure and high heat on the towed vehicle tire before the blowout occurred.

What about 5th wheels and bumper pull RVs? They can all have the same tire issues and oftentimes the blow out can not only create a safety issue but can rip out the underside of the RV creating even more costly damage and even danger when propane lines are involved.

# TIRE SAFETY BEST PRACTICES

- Properly inflate your tires by weighing your RV to find the correct pressure or by using the max cold tire pressure on your RV tire.
- Inspect your RV tires for bulges, cracks, and uneven wear before every trip.
- Know the weights of your RV and attached vehicles and do not exceed your weight or axle ratings.
- Strive for even weight distribution in your RV to level out the pressure on your tires.
- Monitor your tires using a TST Tire Pressure Monitoring System.

Want to learn more about your RV tires and how to protect them? Click here to download the complete RV Tire Safety Guide by TechnoRV.



The RV propane system is pretty simple actually. RVs have propane tanks that feed different appliances in your RV like stove tops, ovens, furnaces and even refrigerators. Propane is a very effective method to power these systems, especially when there is no electrical power for you to use. Propane is used in all types of RVs, but especially in 30-amp RVs due to the limited amount of power available for heat-producing devices.

### **PROPANE TANKS**

There are two types of propane tanks in RVs: DOT tanks and ASME tanks. Towables, 5th wheels, and truck campers use the portable DOT tanks which resemble BBQ grill tanks, and they can range in size from 20-pounds to 40-pounds. DOT tanks are regulated by the Department of Transportation (DOT). Some RVs have two DOT tanks and have an automatic changeover regulator to quickly switch between the two. DOT tanks can be removed from the RV to be filled at a propane filling station.





Motorhomes use an ASME tank which is permanently mounted to their frame. ASME tanks are regulated by the American Society of Mechanical Engineers (ASME) and do not follow the same certification guidelines as the DOT tanks. These tanks can hold well over the 40-pounds that a DOT tank can hold and have different connection points and safety features. ASME tanks are not removable, so the RV must be driven to the propane filling station to be refilled.

### **BUILT-IN PROPANE PROTECTION**

I have been RVing for a long time, and honestly, I always thought that propane tanks had shutoff protection for leak situations, but they do not. While propane tanks do have some built-in protection, it is not complete protection, so let's look at what your propane tank includes as it relates to safety.

There are three safety devices that are part of your RV's propane system: an Overfill Protection Device, Excess Flow Valve, and LP Detectors. If the propane system is operating correctly, then you shouldn't have any problems. The problems occur when you have a leak, cut or rupture within the system, or when one of these built-in devices fails.

#### **OVERFILL PROTECTION DEVICE**

The connection valve at the propane tank is called an Overfill Protection Device (OPD valve). It is triangular, and if nothing is connected to this valve, then it can be turned on and nothing will come out of the tank. Once you connect your RV side propane line to the OPD valve, then the propane will flow freely once turned on.

The OPD valve is a device designed to prevent overfilling your propane tank, but the added measure is that propane cannot freely flow without a connection line. This is a great safety measure, and it works well. By design, all the safety measures that exist with the OPD valve are rendered useless once the RV side propane line is connected. Once the line is connected, the propane flows freely as it should, but the OPD valve does nothing after this to control excess flow.

#### **EXCESS FLOW VALVE**

Another safety measure in your propane system is a device called an excess flow valve. The excess flow valve is essentially a spring-loaded cylinder that acts only if the flow is over 200,000 BTUs/hr. If the flow is over this amount, the valve is triggered and stops 75-90% of the propane flow. So, what about the remaining 10-25% that is not stopped? This propane still flows and can quickly fill the RV up if there is a leak which is obviously a problem. In my opinion, you should have 100% shutoff of propane automatically in the event of a major leak or rupture in the system, but this type of protection is not built into your system.

### LP (PROPANE) LEAK DETECTORS

Every RV with propane should have a propane leak detector with an alarm installed inside. These critical monitoring devices are designed to be mounted low inside your RV since propane gas sinks to the lowest point inside. They detect an elevated amount of propane in the air and alarm you before it reaches a dangerous level. These detectors should be hardwired to your RV's 12-volt system, so they have consistent power. Most units have approximately a 5-year life span, but always check the manufacturer guidelines on your specific detector's life span. Be sure your propane detector is always operational and replace it when necessary.



### **GASSTOP PROPANE SHUTOFF DEVICES**

GasStop is a patented technology developed 15 years ago in Europe and was introduced to the US in 2019. GasStop is a propane shutoff device that will instantly and automatically cut off the propane flow to your RV if there is a major leak, cut, or rupture in your propane system. It can also be used to test for minor leaks in your propane system in only 5 minutes.

There are two different GasStop styles, the <u>ACME</u> and the <u>POL</u>, and they are designed to fit the two different types of propane tanks that we have already discussed. RVs with the DOT tanks will have the standard ACME style propane connection. Motorized RVs with the ASME tank will have a POL style connection on the tank.





Installation on a DOT tank is as easy as screwing the GasStop device onto your propane tank, then attaching your RV propane line to the GasStop device. Once you have the unit physically attached, then you simply prime the GasStop Device by pumping the gauge at least 5 times, and you are ready to go. If you have two DOT tanks, you will need a GasStop device for each one in order to be protected. Installation on an ASME tank will require a wrench to install the GasStop POL between the regulator and the tank. Once installed, you would still prime the GasStop by pumping the gauge at least 5 times before the device is ready to go.

## **How Does the GasStop Work?**

While the GasStop device looks like a simple propane gauge, it is a much more sophisticated piece of technology than that. The GasStop allows propane to flow through it, but it will cut you off from propane if the level gets too high which indicates a problem in your propane system, like a leak, puncture, or appliance issue.

The GasStop device obviously needs to let a certain level of propane flow freely through it so that you can operate your appliances. The maximum level of propane flow that an RV needs is very predictable when you look at the typical appliances in an RV that use propane. GasStop is designed to allow that level of propane flow in without any issues, so it won't cut you off during normal propane use in your RV.

Inside the GasStop is a small ball bearing calibrated for excess propane flow. If propane flow exceeds the maximum needed flow for your RV, the small ball bearing inside the GasStop catches the excess flow and seats itself against an O-ring. Once the ball bearing seats itself to the O-ring, the propane cannot flow any longer. It seems so simple, but this patented technology results in an instant and automatic propane shut off should you exceed normal flow levels.

Watch this video for a demonstration of how the GasStop works.



### PROPANE BEST PRACTICES

- Turn your propane off when you are traveling.
- Conduct a minor leak test every time you turn your propane on during setup. With the GasStop, this only takes 5 minutes and can detect any issues that may have occurred during travel.
- Check your propane tanks regularly and be aware of the date of manufacture on the collar. Be sure to have it requalified after 10-12 years of use and replace it if it shows excessive rust, dents, or damage.
- Check your LP detector annually and replace it after 5 years of use or according to manufacture guidelines.
- Check your propane hoses between your tank and regulator for cracks and tears and replace them at the first sign of issues. You can also proactively replace them with a higher-quality hose like the <u>GasGear</u> to avoid premature wear.
- Use a <u>GasStop</u> on your propane tanks to have automatic and complete shutoff in the event of a major leak, cut, or rupture in your propane system.

Want to learn more about your RV propane system and how to protect it? Click here to download the complete RV Propane Safety Guide by TechnoRV.

# FINAL THOUGHTS FROM ERIC AND TAMI

I hope you can see why these devices are recommended for all RVers. They continuously monitor important things in your RV that you simply cannot, no matter how hard you try.

You may check the pedestal with a multimeter when you arrive at a campsite, but that will not protect you against low and high voltage that occurs hours or days after you plug in.

You can check your tire pressure before you set off for the day, but you cannot monitor it while you are driving and that is when tire issues occur. Even if you stop occasionally and check the pressures and temperatures, tire failure can happen between stops.

Your propane tanks do not have any safety feature built in that completely shuts the propane off during excess flow. Even the Excess Flow Valve (EFV) on your tank doesn't completely shut the propane off in the event of a major leak. The EFV is only designed to stop 75-90% of the flow, and this is simply not enough when you live in an RV. When we moved to a travel trailer that had propane, the GasStop was the first piece of gear we bought, and we wouldn't travel with propane without one.

You can check out all the RV Essential Products we sell at TechnoRV using the Product Links at the bottom of this guide. Be sure to enter the code below to save 10% on everything mentioned in this guide!



If you ever have any questions about the TST TPMS, Surge Guard, GasStop, or any product we sell at TechnoRV, we are available Monday - Friday through phone, email, and chat.

#### **Contact TechnoRV**

Phone: 866-324-7915 Email: info@technorv.com Chat: TechnoRV.com

As always, safe travels, and we hope to see you down the road!

Eric and Tami Johnson
TechnoRV Owners and RVers since 2014







# **PRODUCT LINKS**

- TST 507 TPMS with Cap Sensors
- TST 507 TPMS with Flow Through Sensors
- TST 770 TPMS with Cap Sensors
- TST 770 TPMS with Flow Through Sensors
- GasStop Propane Shutoff Devices
- GasGear Propane Hoses
- Surge Guard Total Electrical Protection Systems (50A)
- Surge Guard Total Electrical Protection Systems (30A)

We do have more complete guides on Tire Safety, Electrical Safety and Propane Safety available if you would like to learn even more about one of these topics. You can download them using the links below:

- RV Tire Safety Guide
- RV Electrical Safety Guide
- RV Propane Safety Guide