** John Grusd Photography**

**Flat Tire! (Inspired by a recent real-life experience. The names have been changed to protect the innocent.)**

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You are asking yourself what flat tires possibly have to do with photography. Well, I’ll tell you. The joke is that the only tool kit you need these days is a Triple A Card, a credit card and a mobile phone. If you are a nature/wildlife/landscape photographer, you will often find yourself hunting down images many miles and hours from help and well out of mobile phone service areas.

We use our cars to ferry us and our gear to almost every photo location, remote or not. As such our automobiles have become an indispensable part of our photo gear. Automobiles these days are more reliable than ever but the one component that is still susceptible to failure is your set of tires. Flats happen and they’re nobody’s fault. Fixing a flat can be a minor inconvenience or a big-time problem. And a lot of that depends on your preparation.

We don’t need to think about our modern cars. They just go. When a flat tire occurs, however, we are usually quite unprepared to address the problem. The manufacturers make it worse by creating solutions that are different from make to make and from model to model. Long gone are the days when changing a tire was pretty much the same for any car. For example, my tools are behind a panel on the interior of the car while my full-size spare is mounted to the underside of the car. Many cars have “space saver” spares that can’t be run at highway speeds. On some all-wheel drive vehicles, those same space savers cannot be used on the front wheels. Instead, if the flat is on the front, the space saver needs to go on a rear wheel and then that good rear wheel replaces the front with the flat. This is not a terrible problem if you know before you go. It may only take you an extra 15 minutes. If you don’t know, it could be very dangerous, you could damage your vehicle further and it might lose you an entire day. On a recent trip that prompted this article, one of our group members hit a rock that had fallen onto the roadway causing a gash and an almost immediate flat. And of course, we had no phone service and were a long way from help. We soon discovered that his car came with no spare or jack or tools at all! It came with a small tire inflator that pumped a sealant into the flat tire while inflating the tire. That could work with a slow leak but this was anything but. It was going to be a long expensive day!

Note! If you have a vehicle with the foam/inflator system and the flat doesn’t inflate, you will need to be towed. You will need to replace the tire, even if the tire inflates and holds its pressure. If the tire does hold pressure, know that there is a recommended restriction on your speed. (There is also a speed restriction on space saver spares.)

Always have a serviceable spare! Many tire service centers will plug a nail or screw hole for free!

What follows will lead to a little knowledge and preparation that can go a long way towards getting you back on the road and photographing again.

**Here are 4 steps I suggest you do before you head out on your adventure:**

**1. Google “fixing a flat tire” and add your make, model and year. Chances are you will find a short YouTube video for your specific car and it will show you the entire process. If a picture is worth a thousand words, this is 30 pictures per second!**

**2. Consult the Operator’s Manual for your car and follow along as you watch the YouTube video. Note any discrepancies. The manual is probably more correct (but harder to understand than the video).**

**3. After 1 and 2 above, go out to your car and actually find your spare tire and the tools that come with it. Make sure everything is there and located where they are supposed to be!**

**4. Make a set of notes, in your own words, that outline the spare tire, the tools and the process of changing the tire. Keep a couple of hard copies of your own notes in the car where you can find them when you need them. For me, one copy is in the glove compartment and the other is with my tire changing tools. This is so you don’t have to remember anything. You just follow your own instructions.**

Other suggestions to make an unexpected flat tire emergency go better:

**1. Always have that AAA Card, a credit card and a mobile phone handy.**

**2. Always have extra water and snacks with you in case you need to hold out for several hours or even a day or so before help can come.**

**3. Before your trip, check that the spare is inflated (and stays inflated!) to the correct air pressure.**

The takeaway? Consider your car as an integral part of your photographic adventure and be as prepared as you can be. If the time comes when you need to change a tire, you’ll be ready and back to work capturing images with little time lost.

The pages that follow are my notes for my personal vehicle. Use my step-by-step format but in your own words and replace my specifics with your own. Then you’re good to go!

I’ll see you out there!

John Grusd

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**2016 Toyota 4Runner Flat Tire Change Notes**

(Helpful Hint: Google and watch the YouTube video for your vehicle)

1. Toyota 4Runner Owner’s Manual Instructions on Page 429
2. Spare tire is full size and stored under the rear of the car.
3. Tire gauge is in the glove compartment.
4. 4Runner tire pressures: 32psi (all 4 tires and spare)
5. Tools are in the interior bulkhead compartment to the left of the tailgate.
	1. Tool Bag
	2. T-Handle Assembly (3 pieces fit together and tighten screws)
	3. Jack
	4. Lug Wrench
	5. Wheel Ornament Remover
6. Extra Handy Tools
	1. Work Gloves
	2. Towel (to lay or sit on)
	3. Shop Rag
	4. Box End Wrench (for assembling Toyota’s T-Handle)
7. Before Starting
	1. Set emergency brake, shift to Park and turn engine off.
	2. Turn on flashers if on roadside.
8. Accessing the Spare Tire
	1. Inset T-Handle Tool into hole next to the latch on the rear hatch opening.
	2. Crank CCW and lower tire (Crank until crank stops, not when tire hits ground)
	3. Reach under car and slide spare out.
	4. The chain and holder can then be removed from the wheel, freeing the spare.
	5. Crank the chain back up but not all of the way. Leave about 10 inches. (if no tire)
9. Before Jacking
	1. Chock Wheels
	2. Remove Center Wheel Ornament
	3. Loosen Wheels Lugs (one turn)
10. Jacking the Car
	1. Jack Points
		1. Front – Behind front wheel, under the chassis frame side rail.
		2. Rear – Under the rear axle housing. (Align groove on jack’s head)
		3. Attach the Hook Tool to T-Handle and turn. (Hook fits onto jack)
	2. Jack until wheel is off of ground.
11. Changing the Tire
	1. Remove Lug Nuts and Tire
	2. Clean (with rag) wheel contact surfaces to relatively clean condition.
	3. Put the Spare in place and hand tighten lug nuts.
	4. Lower car so tire is in contact with ground and tighten lug nuts with lug wrench. (use a cross pattern when tightening)
	5. Tighten 3 times.
12. Finishing Up
	1. Stow the flat tire in the opposite procedure from accessing the spare tire.
	2. Stow the tools, jack, gloves etc.
	3. Have a tire service fix the flat or replace it with a new tire.
	4. Have the tire service remount the new or repaired tire and restow the old spare.