

Wench With a Wrench
Wagner

By Gail

MID/LATE SUMMER MAINTENANCE REMINDERS

Hello Miata Club Folks,

Remember when your Mom used to remind you of stuff...like don't forget to put on clean underwear "in case you have to go to the hospital" and wear your rubbers because it was raining? ☺

We've all been driving our Miatas for a number of months and miles so it's time to remind you of some maintenance suggestions that you might wish to consider, especially before you put your roadster away for the winter. You might want to use this column as a check-list to make sure you're up-to-date with maintenance suggestions. Your friendly owner's manual is a good reference too. (Tip: I always write what maintenance I do/have done in the back p[age of my owner's manual with the date.)

TIRE FAILURES CAUSED BY OLD TIRES

One of our Ithaca members recently brought this to my attention and I thought it was a really good reminder. I have briefly mentioned in a past column about tire age but I think it's important to mention it again. (See our website: TECH "Tires Part 1 & 2": www.midstatemiata.net) In this member's case, he bought a used Miata last year BUT he didn't check the manufacturer's date on the tires even though the rubber looked quite good. As a result, this summer he had a tire split open between the tread blocks while driving around a corner! ☹ Obviously, this could have been catastrophic at high speed. He admitted he was very lucky.

Because most of us store our Miatas in the winter and tires do not get much yearly wear, it's easy to have low mileage and outwardly good looking tires BUT.....

Tires do not last forever, even if the tread shows little visible wear. As rubber ages, it loses elasticity, hardens and can become brittle. The reinforcing cords inside a tire can also deteriorate and lose strength. This increases the risk of a sudden tire failure the older a tire gets. **After six years, the risk of failure goes up sharply.**

Not to worry. All tires have a date code stamped on the sidewall. You will find it in a little recessed oval or triangle on the side of the tire (see below). The date code reveals the week the tire was manufactured and the year. For most tires made after 2000, the third and fourth digits are the year (15 = 2015). So, for a date code of 4315, this tire was manufactured during the 43rd week of 2015.



← Tire on my 2016 Mazda CX-3

***** Because of this, many safety experts say tires that are 6 to 10 years old have expired and should be replaced regardless of how much tread is left on the tires. Read that sentence again.**

Is a serious accident or your life worth the price of four new replacement tires? Check 'em out for manufacturer's date if you're not sure.

ANITFREEZE AND COOLANT

I decided this was the summer to drain, flush and replace my coolant/antifreeze with some new stuff. (Note: It went a heck of a lot better than my first oil change a couple of years ago if you've read my article in archived TECH columns! However, just don't lose the petcock drain plug; they cost \$14 special order from Mazda Parts for a ½" piece of plastic. Don't ask me how I know this; let's just not go there... ☹). For all I know, my antifreeze could have possibly been original fluid in my '06. I did test it with my handy hygrometer and it was still viable for high and low temps but I do know antifreeze degrades over the years and I wanted *Scarlet* to have the best protection in summer and in sub-zero winter storage.

It wasn't very difficult to flush, drain and replace except time-consuming and it saved me \$200+ over having a repair shop do it but I recommend that you think about having this done if it's been a number of years or you're not sure. Engine coolant is replaced as part of recommended scheduled maintenance. **Mazda recommends flush and replacement every 30,000 miles.**

Antifreeze, also known as **coolant**, is a bright yellow or green liquid that may be pre-mixed in the jug or is mixed 50/50 with water to keep the engine and its components from freezing or overheating. Made from either ethylene glycol or propylene glycol, antifreeze and coolant change the freezing and boiling points of water. Ethylene glycol is highly toxic to animals, including yourself, if ingested, and can damage paint finish so beware if you're doing this yourself and wear gloves and eye protection and be careful of spills.

Your engine cooling system is made up of a set of components connected in a closed loop to circulate antifreeze/coolant through the engine and maintain a constant temperature and uses coolant passages inside the engine block, cylinder head, and intake manifold. These passages allow coolant to flow through these components to absorb heat or keep components from freezing in temperatures below 32F degrees. The water pump pushes the coolant through the thermostat and into the radiator where it is then returned to the engine for another cycle.

Driving a vehicle with a faulty engine cooling system can result in overheating, cylinder head gasket failure, engine block failure, or cylinder head warping (read \$\$\$\$ repair). It's never recommended to drive a vehicle with engine cooling issues or leaks (the green stuff in a puddle under your car).

MORE MAINTENANCE ITEMS TO CONSIDER

TIRE PRESSURE

Have you checked your tire pressure lately? Recommended tire pressure should be on a sticker on the inside of the driver's side door or in your owner's manual. Correct pressure is not only a safety thing but a fuel economy saver as well. **Check monthly.**

AIR FILTER

Replace after 60 months or 60,000 miles. The new "permanent" filters are nice. You just take them out and vacuum occasionally.

TIMING BELT

Well, the jury is still out on this. Some say replace after 60,000 miles BUT failures appear to be few and far between and does not hurt the engine if it breaks. You're just unable to drive the car. Replacement is expensive, like \$700+. It's recommended that you replace the water pump if you do replace the belt.

ENGINE OIL

Checked your dipstick lately? Top up per the dipstick but don't mix conventional with synthetic and make sure per your owner's manual it's the correct grade..

And also.....

OIL CHANGE

If you're using conventional motor oil (not synthetic or blended synthetic), consider changing it before storage if it hasn't been changed in **5 months OR 5,000 miles. Some Miata diehards (like me) recommend every 3 months/30,000 miles.** (I change my 100% synthetic oil every spring after storage.)

BRAKE PADS

This is important. These will be checked (I hope) during your yearly auto inspection but it's recommended that they be **replaced every 2-3 years**, especially if you are a "spirited" driver and do hard driving/hard braking, high performance track days or lots of stop and go driving.

BRAKE FLUID/CLUTCH FLUID

Brake and clutch fluid (same fluid) are located in the same reservoir under the hood. Brake fluid degrades as it attracts water, even a partially used closed container on your garage shelf. It's recommended you have your brake fluid flushed and replaced with new fluid every 2-3 years. Toss partially used cans of brake fluid after 2 years at the latest. (Tip: I mark the date I purchased the brake fluid and opened it with a magic marker so I know how old it is.) If you are a "spirited" driver who hard brakes a lot or someone who does high performance track days, it's recommended that you use high temperature (DOT 4) brake fluid. I do.

DIFFERENTIAL FLUID

I covered this in detail recently but consider **draining and replacing every 30,000 miles per Mazda's factory recommendation**.

TRANSMISSION FLUID

It's recommended you have it **drained and replaced every 30,000 miles**.

PVC VALVE

Replace every 20,000 – 50,000 miles. If you normally drive **short trips, change every 30,000 miles**.

FUEL FILTER

Replace every 60,000 miles. If it's plugged, believe me, you'll know, i.e., lack of power driving up hills! Been there, done that. 😊

POWER STEERING FLUID

Guess what? **You never have to change this fluid!** Yippee! Just check and keep it topped up.

SPARK PLUGS

When was the last time you had these checked or changed? Check spark plugs and spark plugs wires (cracks, breaks, broken covering) for older Miatas and just the spark plugs for the newer models (which have "coil packs" in place of wires that do not need regular replacement). **Replace about every 30,000 miles**. NGK plugs are recommended by many, including me.

HOSES

Take a quick peek at all of your engine hoses to make sure there are no leaks, cracks, breaks or any have come loose. Only takes a minute. Replace as necessary; hoses are cheap.

BATTERY FLUID

Do you have a battery that requires adding water or a closed battery system? Unscrew those battery caps with a rag and top off with distilled not tap water if the cells look low on fluid. By the way,

how OLD is your battery? Some have a date printed on top. You can have its useful remaining lifespan checked at many auto supplies stores. Consider cleaning corroded battery terminals with a toothbrush and a paste made with water and baking soda, cleaned off with a rag or paper towel. (Tip: Don't put the toothbrush back in the bathroom.☺)

INSPECTION STICKER

I always forget until two dates before expiration date. Duh. **Make sure you know when your inspection is due.** It's a pain but it's also a good safety check if you use a good repair inspection shop.

I hope this has been interesting and useful info. Next month I will re-run the "Putting Your Car in Winter Storage" tips as this is important.

Zoom Zoom Safely!

Gail

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