



## A DOZEN TIPS FOR WINTER STORAGE – By David Cardone

### 1. Change Oil & Filter before storing your car

Even oil that has been under limited use holds combustion chamber by-products and moisture that has entered through the crank case breather. This mixture creates corrosive activity inside your dormant engine. In some case, this corrosion can eat away at bearing material. Also to consider: many vintage cars with carb/choke systems often are subject to extended enrichment during warm up. The excess fuel that isn't fully burned or expelled "slips" down the cylinder walls, thinning the protective oil film on the cylinder walls, increasing ring wear and that excess fuel can also eventually dilute the engine oil.

### 2. Battery

Battery life is greatly diminished if it's not recharged regularly. As the battery "sits" and discharges the sulfuric acid in the electrolyte bonds with the lead plates inside the battery's cells. This bonding, called sulfation, increases the battery's internal resistance and if left long enough on the plates, becomes brittle – permanently weakening the battery's ability to "create" electricity from its electro-chemical activity. Charging the battery with a professional charger on low, or a trickle charger, gently drives the sulfate off the lead plates, back into the electrolyte, reducing the battery's resistance, allowing the electro-chemical process to return to normal while not overtaxing the alternator's ability to recharge the battery. Charging a battery with an alternator can overheat and damage the alternator. Disconnect battery at the ground post when left for long periods.

### 3. Antifreeze Protection

First, confirm that the protection level is sufficient (-25°F to -35°F usually indicates a mixture of 50/50 antifreeze/water). Next, how does the antifreeze look? Clear or cloudy? Is anything floating in it? Antifreeze **does** lose its ability to protect against internal corrosion as the anti-corrosive protection components are leached out. This puts older engines at risk as internal corrosive activity accelerates – eating metal and gaskets, pitting surfaces, causing leaks and overheating. Since matter can't be destroyed or created, that corroded material that "breaks" away becomes deposited in radiators, heater cores, thermostat housings, and coolant passages within the engine. Antifreeze should be changed every few years to replenish the lost anti-corrosive protective properties.

#### 4. Brake Fluid & Parking Brake

Brake fluid is hygroscopic, which means it absorbs and retains moisture. Atmospheric moisture is introduced through the vent cap on the master cylinder. If the brake fluid (and clutch fluid, if your clutch is hydraulically activated) isn't changed every few years, the increased moisture that is absorbed into the brake fluid causes internal corrosion in the hydraulic brake and clutch components. This leads to fluid leaks past seals or binding of the brake caliper pistons. If enough moisture is absorbed, it can effectively reduce the boiling point of brake fluid, diminishing brake performance and safety.

Do not use the parking brake during winter storage – linings may “seize” to the drums.

#### 5. Lubrication

Grease or lube everything you can, not only the suspension grease fittings, but a shot of some lube or penetrant on door, hood, trunk hinges, trunk latches, throttle linkages. Spray some rubber silicone lube on door, trunk, and hood seals. And while you're at it, silicone spray the window channel seals too, something that will help reduce wear and tear, not only on your window regulator but also on your arms.

#### 6. Tires

Set tire pressure and, if you're not putting your car up on jack stands, at least move (or roll) the car every few weeks to prevent “flat spots” from occurring. As tires age, flexibility diminishes, tires are at a greater risk to be permanently ruined if left in one spot. Cracking tires are UNSAFE. The date code on your tires sidewall identifies the year and week the tire was made.

#### 7. Start Your Engine

Let it warm up fully (off choke as soon as possible). Vary the RPMs – don't just let it idle. Oil pressure is at its lowest while idling and moving parts can be exposed to metal to metal contact if your engine's oil pressure is on the weak side. Drive it if you can – at least around the block – it keeps suspension bushings, shocks, clutch, fan belts and brake parts from taking “a set” – causing parts or pattern distortions or wear, rust build up on contact/friction surfaces. Think of it like exercising – “use it or lose it”.

**NOTE: If you're not going to start the engine – at least rotate it manually so the piston rings aren't sitting in the same position of contact with the cylinder walls and the valve springs don't take a “set” and loose tension.**

## 8. Fuel

Depending on what you do with the car during the winter and where you store it, options vary.

- A) Fill the tank full to reduce air/moisture space, and add a storage stabilizer – amount consistent with manufacturer instructions – In this case, run the engine to get stabilizer into the carbs (the additive should NOT contain any alcohol).

OR:

- B) Drain all the fuel – in this case, run the engine until the carbs are dry.

## 9. Cosmetic Care & Protection

- A) Wash it, including underneath and inside wheel wells, anywhere dirt gets trapped.
- B) Wax it, including the chrome.
- C) Soft, breathable car cover for inside storage.
- D) Leather seats: treat with Lexol or similar product.
- E) Unfortunately, there is no such thing as “good” outside storage. Inside is always your best option for storage.

## 10. Rodents

- A) Use some kind of rodent repellent product: interior, trunk and engine compartment.
- B) Cover the air filter with a plastic bag.
- C) Put a plug in the exhaust.
- D) Wool interior: moth balls in interior.

## 11. Clutch

To prevent the clutch from “seizing” to the flywheel or pressure plate – devise an arrangement of boards to hold the clutch pedal down.

## 12. Service & Repair

Does your vehicle need repairs from this seasons use? Make a list while it’s fresh in your mind. Get a comprehensive Vintage Vehicle Safety & Maintenance Inspection. Either do it yourself or get one done at a garage (like ours) that is familiar with these vehicles, and will provide you with a written report. Know what your car needs. Make informed choices about what to fix on your car. Consider winter a great time to do those repairs. That way, your car will be ready in the spring. Have fun and get all of the drive time you can rather than waiting for springtime, backordered parts and backlogged garages.

### QUESTIONS ABOUT YOUR VINTAGE CAR?

**PLEASE DON'T HESITATE TO CALL ME OR DROP BY TO SPEAK WITH ANY OF US**  
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