Storing Your Triumph

by Ken Streeter

One of the most frequently asked questions every October is that of "How do I store my Triumph for the winter?" This article is intended to help in answering that very question.

Q: What is the *minimum* I should do before storing my car?

A: Just run the car until thoroughly hot, drive it into the storage area, kill the engine, drain the carbs (if any), remove the battery and take it inside, make sure the antifreeze is good, put the vehicle up on jackstands, and fit a quality car cover

Q: Anything else I should do for more protection?

A: For added protection for the engine, you can unscrew the plugs, drip a few drops of engine oil in the cylinders, crank the engine around a couple of revs to distribute the oil on the cylinder walls, then put the plugs back. Yes, the exhaust will smoke some at startup, but no damage should result from the smoke.

Q: Any common "car storage" myths?

A: Running the engine while on jackstands is a bad myth. You won't be able to run it long enough to fully warm the oil which means corrosive combustion products will condense and mix with the oil. You'd be setting up the same conditions as exist in cars "driven by little old ladies to the store and back", ie, ideal conditions for sludge to form. Engines can be stored for years with no more precautions than making sure it was good and hot when turned off. If you're really paranoid, pull the plugs and hose each cylinder with something like CLP Breakfree or LPS. You could even replace the plugs with some of those anti-corrosive vapor emitters sold out of some catalogs.

Q: Should I use a car cover? Any disadvantages or precautions?

A: Generally, car covers are good things. Two precautions are to avoid moisture condensation (get a cover that breathes, or make sure there is plenty of ventilation, or store in a dry environment), and watch for cover flutter if stored outdoors in the wind (this will dull the paint).

Q: What about using the car a minimum amount while in storage, rather than completely shutting it down? Is that good or bad? -

A: -- The following was sent in by a reader of "The Shelby American" magazine. --- The qualifications of the author are unknown. --- For an alternative set of directions, see the subsequent article (immediately following this one).

MINIMUM USE OR STORAGE

We'll break it down into two types of storage: long term and short term. Short term storage is essentially a lengthened period of inactivity. The main question, here, seems to be how long can you go without starting a car before you begin to risk damaging it? And the answer is about 4 weeks. If you let your car sit longer than that without taking special precautions (outlined in 'Long Term Storage', below) you're courting disaster. The internals of your engine, transmission and rear end are bare metal surfaces which are highly susceptible to rust. In fact, they can cease operating effectively if they begin to get even a slight amount of surface rust. They are bathed in oil during normal operation and oil prevents rust. When the car sits, the oil drains off of some of these surfaces. Moisture is the key ingredient necessary for the rusting process and when the bare metal encounter moisture the result is... rust. The less moisture in the air, the less the tendency for rust to occur; dry weather in the southwest and colder temperatures in the northern climes help to ward off rust. High humidity accelerates it. Some so-called 'experts' advise people who don't drive their cars throughout the year to start them up periodically to circulate the fluids and, thus, keep the internal bare metal surfaces coated with oil. While this might seem reasonable, it is the automotive equivalent of the 'old wives tale'. It is exactly the WRONG thing to do. A car in short term storage needs to be driven at least once a month. It requires more than just getting the water temperature gauge off of the peg. The oil temperature should also be brought up to normal operating conditions - and this isn't possible if the car just sits in the garage - no matter how much you rev the engine. You need to take the car out for a drive for about 20 miles or a half an hour. When you go out to the garage to just warm the car up, what you're doing is raising the temperature inside the block - but the engine doesn't run long enough for the engine block to get entirely heated. As a result, when you shut the car off the difference in temperatures (hot inside but cold outside) causes condensation on the inside. Condensation is moisture - and moisture causes rust. A car

sitting too long without being run also invites fuel in the carburetor and fuel pump to evaporate, leaving behind a gummy residue. Gaskets dry out are then prone to cracking and disintegrating... more things you don't want happening to your car's engine! So Dr. Hipo recommends a half hour of exercise once a month, every month. On the way back home you should stop off at the gas station and top the fuel tank off... because condensation can also form on the inside of a partially empty gas tank. The oil change interval isn't effected too much by inactivity. Moisture can be collected in motor oil and if it is, it reduces the oil's lubricating ability. Don't be pennywise and pound foolish thinking that you don't have to change oil just because you've only driven the car 250 miles in the past year. Under those condition, an oil change once a year is warranted (although changing the filter probably isn't - you can stretch that to every other year).

LONG TERM STORAGE

Long term storage is another story entirely. Here, instead of breaking that annual 250 miles into twelve 20-mile drives once a month, you're using the car 250 miles all at once and then putting it away for the next eleven months. Or longer. The way to prepare a car for this kind of storage is to drive it long enough to heat the block (about 20 miles or so) and then change the oil. With the car idling at about 3000 RPM, slowly pour about a half a quart of oil down the carburetor. Be careful not to dump it in all at once - pour it in a slow, steady stream. The exhaust will begin to smoke and the engine may even stall. If it does, do not attempt to restart it. What you've done is to coat the intake and exhaust ports, the valve steams and guides, combustion chambers, piston surfaces and cylinder wall with oil - the very surfaces which are most exposed to moisture - and rusting - during storage. You should then seal the carburetor and oil breathers and back off the valve adjustments until all the valves are closed. This buttons the engine up so that moisture-laden air doesn't get inside the engine - where it would come in contact with with bare metal surfaces. Hit all the nipples with a grease gun (don't forget those hard to-get-to ones on the universals!) and top-off the master cylinder, steering box, transmission, rear end, radiator and fuel tank (and throw in a can of dry gas while you're at it). Remove the battery and move it inside (do not store it on concrete; if you put it on the floor sit it on a piece of wood). Raising the car up on jackstands or blocks relieves the constant pressure on the coil/and or leaf springs and helps keep the tires from dry-rotting and flat-spotting. It also allows you to turn the rear wheels by hand every once and a while to keep the transmission and rear end gears coated with oil. Finally, a coat of wax and maybe a quick once-over for the interior with protectant or moistureizer and you're ready to say 'so long' to your friend before you put the car cover on. Now, you're probably asking yourself one final question: How short can 'Long Term Storage' be? In those parts of the country where winter driving means ice, snow, sand and salt, most Shelby and Cobra are put away around Thanksgiving - or at the first sign of freezing weather. They are brought back out in the spring - after the rains have washed the residual sand and salt from the roads. Four months isn't too short a time for the oil down the carburetor treatment (but you may not want to mess with the valves).

Following is an alternate set of Long Term Storage tips; compare it to the immediately previous directions. The author is Manager of Lubricant Marketing, Texaco (Miami).

LONG TERM STORAGE TIPS

I feel the advice given to your readers on the proper method to store autos for the winter needs clarification:

A. Gasoline tank condensation and water contamination is not a big problem as long as you fill the tank completely with gasoline. Just by limiting the volume of vapor space above the gasoline, in the tank, you will eliminate condensation related damage in the fuel tank.

B. Additives to eliminate water contamination in gasoline should be chosen very carefully as most additive that advertise themselvesas removing water from fuel are alcohol-type products. It is true that alcohol will put vagrant water molecules into a solution that will inhibit rust formation in the gas tank as well as making the gas/water/alcohol mixture suitable for burning. What people generally don't realize is alcohol is corrosive to white metals and can do damage to fuel gauge sensors, line couplings and carburetors.

C. The best method of preparing your fuel system for storage is to add upper cylinder oil to your gas tank prior to filling the car and allowing it to mix thoroughly by filling the tank. Pouring oil down the carburetor is not a recommended practice in that most oils' additive package will not burn properly and will foul both your carburetor and your spark plugs. If you feel strongly about providing sufficient lubrication inside the carburetor system, I recommend you increase the quantity of upper cylinder lubricant in the gas tank, and spray the throat and exterior of the carburetor with a light machine oil like WD-40 or a similar protectant after the car has been placed on storage blocks.

D. The most important part of storing the car for a long period is to protect the cooling system from unnecessary corrosion by doing the following:

1. drain and flush the cooling system (including the heater);

2. replace coolant with 50/50 water/antifreeze solution (straight antifreeze is also corrosive and should never be used straight);
3. add 100-200 milliliters of water soluble oil to the coolant and run the car until it reaches operating temperature. The water soluble oil will turn milky in the coolant and will inhibit the formation of rust and deposits on the surfaces of the water jackets. Treatment with this type of oil will also inhibit dissimilar metal corrosion that occurs naturally in most engines. If you have trouble finding water soluble oil in convenient package sizes, products such as "Bars-Leaks" are a good source of this type of oil. Regular oil will not do.

E. An oil change to API classification SG motor oil is also recommended. The formulation of SG will keep sludge deposits from forming in engines subject to condensation such as infrequently run engines. I think you will find that your car will come through a long period of storage in much better condition if you try the above techniques.

Jim Shields (Manager of Lubricant Marketing, Texaco) Miami, FL

Q: Are there any good corrosion preventive sprays I can use for a very long term storage item?

A: WD-40 is good for a light film treatment of bare metal surfaces (carburettors, etc). For a heavier soft waxy film, LPS-3 is fantastic. CLP Breakfree is also reputed to be good.

Q: What about putting the whole car in a giant baggie, or sealing it into a container of some sort? Is anything commercially available?

A: There is a new product designed specifically for the purpose of long term auto storage. The name of this product is OMNIBAG and it's sold by Ridge Enterprises of Bath MI. [Ed note: The product has since evolved into the "CarJacket" and is now online at http://www.carbag.com/. It's a special storage bag that fits completely over your car and seals hermetically. The bag comes with a desiccant (moisture absorber) and slips over the entire car like a sock. The bag is made of triple laminated polyethelene and is air and moisture tight. According to customers who have used the bag, car emerges form storage virtually in the same condition they were in when first stored. No dust settles on the car, metal surfaces are still polished and uncorroded and carpets and upholstery are free of moisture and mildew. OMNIBAG is designed for inside use only.

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