

The Preventative Maintenance Series

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The Preventative Maintenance Series begins again this month (the last startup was in 1984) with a statement of purpose: *Be comfortable driving your Corvair anywhere*. Someday I would like to see Larry Claypool have to give the Hard Luck Award at the convention to somebody who lost their room reservation. That came very close a couple of times, and it's entirely possible! We must share information, use common sense and follow a definite course of action in preparing a car for dependable service. Each month we will cover a topic with enough information for you to either dig in or provide a reference for additional help.

Let's look at the overall picture. First, you are usually catching up on any number of years of neglect. Second, there are a certain number of parts that wear out because of use and there are a certain number that cannot be trusted because of age. Once you accomplish inspection, replacement or maintenance, from that point on all you do is the normal service any quality car requires.

A Corvair is an excellent example of good basic transportation, requiring no complex electronic diagnosis and only a few special tools for servicing. You must keep a log for each car, without which you will begin to duplicate service or forget a step entirely. You should use a written list as a guide whose accomplishment signifies your readiness to "Drive It Anywhere".

We begin with a look at two common avoidable catastrophes and then move on to maintenance. The first is a "dropped" valve seat. Corvair heads are aluminum with hardened steel inserts for the valves to seat on. The seats are "shrunk" in to the heads with a .004 interference fit to keep them there. After years of heat treatment and valves hopping on them, they loose their fit and come out. The most common failures occur in Turbo, 140 or air conditioned cars, and are usually intake seats. The seat (looks like a steel ring) will either lodge under the valve, holding it open all the time or it can shatter in which case the piston in that cylinder and possible the two adjoining will be destroyed. The prevention: anytime you have a valve job done, **THE SEATS MUST BE PROFESSIONALLY STAKED IN THE HEAD**. In some cases they must be replaced with oversized seats to be safe. If you are preparing a Corvair for the "drive it anywhere" class, I strongly recommend having the heads done by Tom Noland at **Noland's Automotive Machine Shop** here in Kansas City (816 471-5167)

The second preventable disaster is the broken original cast piston. The cast aluminum pistons used in the 164 CI engines are the usual offenders. Age and mileage with the excesses of heat and detonation you may not have known about will initiate cracks at the oil ring groove. The speed you are driving will determine the extent of damage when the top comes off. Unless you love bragging about being a gambler, never rebuild a 164 engine using the original pistons. Not only can they break, but they will never even be close to the allowed clearance specification in a honed used cylinder. The loose pistons will slap in the cylinders (sounds like a diesel at a cold idle) until they fail. The prevention: use new forged aluminum pistons which are oversize and fitted to bored cylinders anytime an engine is rebuilt. The early model pistons (140 & 145 engines) are not as prone to breaking, but you still can have the loose fit if you hone used cylinders and reuse pistons.

Next month we will began to cover lubrication items – there are a lot of them, many areas were lubed at the factory and never touched again; it is up to you to do the catch up.