

Not so Obvious C-1 Upgrades

After 50+ years of ownership and with the same length of 20/20 hindsight I've learned a few things by trial & error. In the early years, I made my fair share of "never should have done that" mistakes. As a result, I have become cautious about running off to the latest upgrade fad if the results won't pass a critical inspection of the fellow NCRS / SACC members that I trust among our ranks.

When unleaded gasoline became the only fuel available and tiring of adding lead substitute with each tank full, I chose to have hardened valve seats installed in my otherwise stock heads. I also added a 327/ 350 HP camshaft at the same time. The result: Lower operating cost & more HP.

After driving on bias ply tires for many years, when Michigan began "grooving" curves & grades on sections of the interstate highways, my C-1s became instantly dangerous to drive on those sections. Rebuilding the suspension components, steering gearbox and alignment didn't solve the drivability problem, but wide-white radial tires cured it.

The result:

Better ride & steering control w/o the "wander & pulling". No alignment adjustment was required.

For those of you who have never seen it, an article appeared in the June 2002 edition of *VETTE* magazine entitled "The Mystery Alignment" giving a step-by-step tutorial on aligning a C-1 Corvette. A copy goes with me to the alignment rack so the young technician can see how to align my cars. You will find it in the *C1 Service and Maintenance* section of our club website www.solidaxlecorvettemi.com

For those of you still riding on bias ply tires, one of the attendees at Mechanicsburg, PA drove in with a new set of 670R15 radials that immediately caught my attention. It took a really close inspection to determine they were NOT bias ply. They were Coker American Classic 670R15 but looked like original bias-ply tires.

Editor's Note: Diamond Back Classic Radials also provides a radial the 'echos' the bias-ply. Like cost.

When 10% ethanol gasoline and its incompatibility with stock rubber components became a problem, two different upgrades were required but at different times.

The first upgrade was trying to locate fuel pumps with compatible diaphragms. Unfortunately, all the new rebuilt pumps available & the rebuild kits had been outsourced and had non-heat-treated diaphragm shafts. I managed to get about 3000 miles out of a purchased rebuilt pump & then another 3000 miles out of a new rebuild kit before it also failed.



I installed an inline electric fuel pump under the tank cover after the purchased rebuilt pump failed. We documented that in a previous technical article found on our club website *C1 Service and Maintenance*.

Note: the Mr. Gasket pump shown in that article was replaced due to leaking brass fittings that were pressed into the plastic housing. It was replaced by a Carter P74016 inline pump and



is what I am continuing to use as a secondary. The back-up got us home from Fort Wayne, IN, when the rebuild kit diaphragm shaft failed coming back from the Effingham, IL 2018 SACC Convention. A flip of the toggle switch and we were running again. Options: Carter P74016, Spectra SP1187 & Airtec 8135 are completely interchangeable.

The second upgrade came with the availability of 90 octane 100 % recreational gasoline. Due to ethanol incompatibility issues with other gasoline powered tools as well, I have switched over to using it for my old Corvettes. For longer trips like Carlisle, we use 93 octane premium gas then switch back to 90 octane 100 % RV gas when we get home.

During road testing getting ready for Carlisle, I was feeling the hesitation & irregular miss that several members reported experiencing which results from ignition coil failure so a new coil went on the must have list. I had also been thinking about installing an electronic ignition module, and wanted one that had proven performance, was simple to install, once installed didn't appear "modified" and was cost effective.



The **Lectric Limited** electronic ignition module kit replaces all the internal components; points, capacitor, clamp & screw and the lube wick, inside the Corvette distributor below. The original distributor, after installation, which was simple, still appears original. Other than needing a larger screwdriver to remove the distributor cap, tools needed were supplied with the kit. At disassembly, I found that points had started to burn after 19,000 miles.

The only complication was that one of the counter-weight attachment rivet heads on my rebuilt distributor was too tall and had to be ground down with my Dremel so the 2 piece/ 8 contact assembly could be attached below the rotor.

Since the distributor was not moved or rotated, after the installation was complete, the new ignition coil installed and the spark plug gaps checked but not adjusted to 0.035 in., the engine started and ran immediately.

The results: No more checking Engine Dwell; timing was unaffected, the engine ran much more smoothly than before, the intermittent miss was gone, smoother acceleration from a stop or when passing. Best of all, we averaged 18 mpg driving to Carlisle and 15.2 mpg driving backroads to Paragon last Saturday.

Not too shabby for a 283 w/Carter 4-bl carb, close ratio BW-T-10 4-sp, 3:70 rear axle running 3000-3500 rpm.

Distributor internal components were replaced by the parts shown on the left, using the included screwdriver & Allen wrench for assembly.



What's next?

Several members have installed dual chamber master cylinders and front disc brakes for safety reasons. My drum brake system was completely rebuilt 19,000 miles ago and should be good for another 10-15,000 miles. Then we'll recompute.

A few I have talked to have added an electric assist power steering unit that hides under the instrument cluster, usually in conjunction with a 15-inch steering wheel. I have the original 17-inch steering wheel with a rebuilt steering box that was sometimes difficult to turn in parking situations. I was thinking about adding the power assist but, it's about \$1500 and requires cutting the steering column. Recently, I found a GM Spec Lubriplate steering box lube that cost \$12. When I filled the steering box with it, the steering effort was reduced significantly. You might want to try it.



Another upgrade I'm investigating is a 85-amp alternator that looks exactly like the original AC Delco generator including the tach drive. Three current issues have me hesitating.



- 1) The cost \$688 and my generator works fine right now.
 - 2) The manufacturer recently closed their doors due to financial issues and reportedly reopened 16 Sept??
 - 3) One of the Texas cars at the SACC convention had a breakdown with one of these units. Time will sort it out.
- [Vintage Alternator | Authentic Automotive](#)

I'm patient here, no rush.

Bill Huffman

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