

Restoring Your High-School Sweetheart

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So you just bought your high school dream car at auction—that Plum Crazy 1970 Hemi Road Runner with a four-speed.

Now it's time to drive it and—holy smoke! The belted tires follow every crack in the road; it doesn't want to turn or stop; the engine's spinning at 4,500 rpm at 70 mph; and you can't hear yourself think.

Maybe Thomas Wolfe was right—you can't go home again. And if you do, you'll find Peggy Sue isn't your 100-pound high school sweetheart any more. But maybe she moved out to California and had herself nipped and tucked? That's what you need to do with your dream car: Upgrade it and give it a chance to fulfill your high school fantasies.

There have been huge technological advances in the 40 years since the first muscle cars rolled out of Detroit. They've raised our expectations of how a car should drive. Perhaps it's time to make that perfectly restored muscle car behave as good as it looks.

Having four-wheeled garage art is only half the fun. Weather permitting (I do live in Wisconsin), I drive an old car every day.

Unless you are satisfied with a trailer queen or a limited-use concours car, improvements can peel away the years from that old Detroit iron.

First make sure the car will actually get from point A to point B. Although British car owners know driving shoes must also be comfortable walking shoes, there is no need for that here.

Concentrate on basics: spark, fuel, cooling, starting, and charging.

1. IGNITION: Conversion kits exist to rid your distributor of its breaker points and replace them with reliable solid-state electronics. It's completely hidden; I like the PerTronix brand. For under \$100, you can't go wrong.

2. FUEL: Make sure everything is absolutely perfect from the fuel tank forward, including having factory-specified fuel line diameters. I have seen lots of big blocks with small block line sets and sending units. Get the car on a chassis dyno with an exhaust gas analyzer to make sure the carburetor jetting, timing, and distributor advance curve are spot-on. I've seen increases of over 50 hp from a proper "super tune." A properly set-up, carbureted V8 will run nearly as well as a fuel-injected one. At this point we have a car that really runs and still looks bone-stock. Be thorough, though, and inspect, calibrate, and change everything from the ignition wires to the idle jets—the devil is truly in the details.

3. COOLING SYSTEM: Put the original date-coded radiator in storage and buy a stock-appearing, high-performance version—either brass or aluminum painted black. Install the right thermostat and make sure the cooling fan is correct and the shroud is in place. If equipped with a fan clutch, check that it works.

4. STARTING SYSTEM: Buy a modern sealed battery with more juice than stock, and no more acid leaks. Have the starter rebuilt correctly, and make sure all cables are tight and insulated properly. Invest in a high-output rebuild of your stock alternator, and if equipped, hide a solid-state external regulator under the cover of an original points-style version.

5. TRANSMISSION: Now that we have this baby humming, let's make her dance. Steep gears and four speeds sound great on paper, but in reality, nobody wants to be spinning 4,500 rpm at 70 mph. Bolt-in five-speed conversions are readily available for all domestic cars—and if that doesn't appeal to you, calculate your overall tire diameter and what rear axle ratio you'll need to put your engine around 3,000 rpm at 70 mph. For automatic transmission cars, four-speed automatic overdrive transmission conversions



Looks good, drives bad

are available—again, bolt in and swap back to stock if you ever need to. Have the driveshaft balanced. Measure and correct the rear differential pinion angle to minimize vibration, if needed. A car that can go down the freeway effortlessly is more useful than one that is a half-second faster in the quarter mile, but makes you feel like you're stuck in a Mixmaster when you're on a cruise.

6. TIRES: Although correct bias-ply tires look great, they'll make your car wander like a drunken hound on the scent of fifty rabbits. Calculate the overall diameter and width of

the OEM tire and find a suitable radial replacement. For suspension, install improved bushings, establish proper ride height using good aftermarket springs painted and detailed to look stock, and add a good set of gas shocks painted the OE color. Blueprinted and quick-ratio steering boxes rival the best rack-and-pinions. Research aftermarket companies to learn correct alignment settings or your suspension won't work properly. Most suspensions were fairly well engineered when new, and only become ineffective after many years of Joe Bob Cooter deciding he "knows better than all them fancy engineering types in Deetroit."

7. BRAKES: Bolt-on disc brake kits are available and the change is easily reversible. Updated lining material is available for both factory and aftermarket systems. On cars prior to 1967, it's a good idea to incorporate a dual-circuit master cylinder in place of the stock single-circuit. Make sure all rubber parts and hoses are new, and that the lines and hoses are properly routed where they won't be cut by other components or melted by the exhaust. Brake upgrades such as vented rotors, bigger calipers, and even bigger rear drums are available, but they're not necessary for the street if the stock system is fresh. Remember to use a high quality DOT 4 fluid and change it every year.

8. GREMLINS: Lastly, have a competent mechanic chase out the "bugs." If your lights or wipers don't work, you surely won't find out until 10:00 PM about 300 miles from home on a deserted country road. Your car functioned reliably when new and should do so now. There is no excuse for a car that doesn't work.

Following this program, I've built some super-reliable and thoroughly enjoyable old muscle cars. There's nothing like a thousand-mile road rally or showing your 40-year-old taillights to a Honda festooned with more wings than a Wright Brothers experiment.♦

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