



The finer points of **OPTIMIZING** old cars

MANY OF YOU WROTE IN ASKING FOR DETAILS ON OPTIMIZING TIPS AND PARTS I USE IN MY SHOP. HERE ARE SOME OF MY FAVORITES

In the March-April 2013 issue of ACC, I wrote of how I prefer an expertly prepared and “optimized” vintage car rather than a mega-buck state-of-the-art Pro-Touring one.

Many of you wrote in asking for more details on “optimizing” tips, tricks, and parts I use in my shop, so this month I will share some of my favorites. None of these things are magical elixirs that will smooth out a poorly rebuilt, unbalanced engine or make your M-21 with trashed synchros shift right. Remember: These are things you do AFTER everything else is as good as it can be. So, in no particular order, here we go:

Engine oil

Yes, the lack of ZDDP in modern engine oil is an issue. The bottom line is with flat tappet cams you do need an oil with at least 1,200 PPM of zinc and phosphorus. The more the merrier, and it helps more than just cams, too. Think cam lifters, piston skirts, bearings, etc.

While synthetic oil is better at higher temperatures and offers extended drain intervals, I never say it is a must. I’ve found a lot of engines work better (and leak less) with good conventional oil.

There aren’t many off-the-shelf oils available today that I have found to be exemplary. The best one you can buy in just about any auto-parts store is Valvoline 20w/50 VR1 Racing Oil in the silver bottle. A step up from that is one you’ll have to ask for: Valvoline Racing 20w/50 oil in the black bottle, part # VV851. It is even better than VR1, and most NAPA stores have a secret stash of it.

Torco makes exceptional motor oil as well, either their TR-1 conventional or SR-1 synthetic. We old-timers will recall Kendall GT-1 — the green oil. It is now sold as Brad Penn and is still good stuff. And for the best oil you’ve never heard about, Lubrication Engineer’s Monolec Ultra engine oil in 15w/40 (part #8800) is awesome stuff. It is the number-one choice in my shop, and protects everything from my 1973 Bronco to our 9,000-rpm, 800-hp race engines.

As far as oil additives are concerned, if you use one of the oils above, you don’t need ‘em.

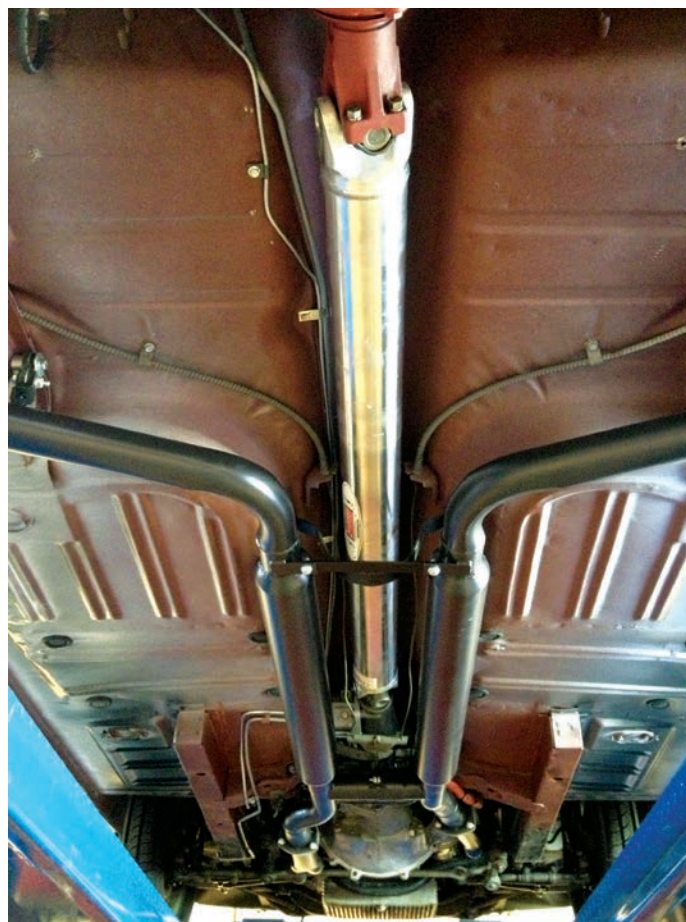
Transmission and differential lubes

For manual transmissions that require gear oil (not ATF), such as any Muncie or Borg Warner 4-speed, do NOT use GL-5-rated gear lube. Period. GL-5 with limited slip additive is just too slippery for proper synchro operation and will also chemically attack the bronze parts in your transmission.

Sta-Lube makes a GL-4 gear lube, and Brad Penn just released one as well. Synthetic? Don’t even think about it. Forget the hype about how much a synthetic lube will improve your manual transmission shift. It won’t.

Automatic transmissions are easy: Any good ATF is just fine, but if it is going in an old Ford that requires Type F, make sure it is compatible.

Differentials? Again, for street cars I steer people away from synthetic lubes. A good conventional GL-5 gear lube is all you need. I like Lakewood’s BFL gear lube, and we’ve never had a failure with it. For all-out race cars and locker (not plate-type limited-slip) diffs, Lubrication Engineer’s Duolec is available in numerous weights and is tough to beat.



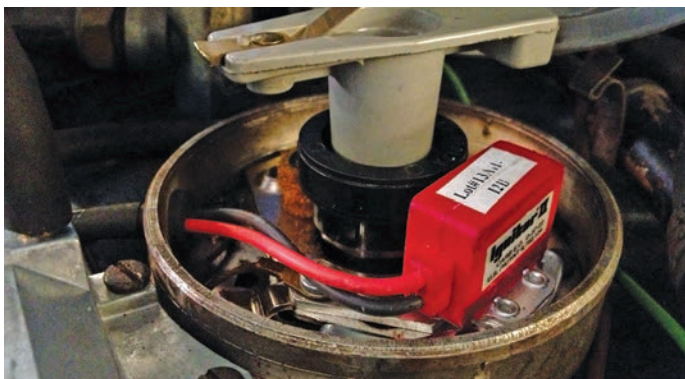
Driveshafts

Every driveshaft has a critical speed based on its diameter, length and rpm. OE shafts are typically dangerously close to it at today’s highway speeds. Add to this the fact that they are 40-plus years old and have countless hard miles on them and at best you’re driving a blender, at worst you lose a driveshaft and do a ton of damage to your

car — and possibly yourself.

A new driveshaft, properly sized and with the right type of material for your application, can make a tremendous difference. Plus, an aluminum or carbon fiber one can shed over 20 pounds of rotating mass.

Just make sure to go to somebody who knows their stuff. I've had great luck with **Dynotech Engineering**. Unlike your local driveshaft shop, Dynotech builds shafts for not only the Big Three, but also every form of racing, including NASCAR. They balance at 5,000 to 8,000 rpm to less than 1/8 of an ounce instead of 2,000 rpm and "good enough." Their website has really handy worksheets to help you measure and order your driveshaft right the first time.



Ignition

If you haven't heard, replacing your ignition points and condenser with a drop-in electronic conversion kit is a smart move. **Pertronix** is tough to beat. They have a kit for almost every application, are reasonably priced, and simple to install. Just make sure to follow the instructions and confirm you have a minimum of 12 volts in both crank and run positions. That means you, Ford and Mopar owners.



Tunes

I'm a big fan of a simple device called the **RediRad**, a simple, hidden interface that works with your stock AM or FM radio and allows you to plug in any smartphone or MP3 device and stream it through your original sound system. I have one in just about every old car I drive. Check it out at www.rediscoverradio.com.

Tires/alignment

It's tough to find decent tires in 14-inch and 15-inch sizes. Gone are the days of being able to choose from multiple H- and V-rated rubber.

However, with a little sleuthing, there are some decent tires left to be found, and it pays to seek them out. Try the specialty vendors such as Coker, Universal Vintage Tire, and Lucas.



For all-out performance, it is hard to beat the **Avon CR6ZZ**, a V-rated, super-sticky track tire that is also DOT road-legal. It has a great-looking tread design and is available in good sizes for muscle and pony cars. Sasco Sports (www.sascosports.com) sells them.

As for alignment, if your car originally came with bias-ply tires and you're running radials, you'll need to tweak the settings to get the best handling. I like a little negative camber, at least two degrees positive caster on manual-steering cars, and as much as four degrees positive on power steering cars. Don't forget to experiment with **HOT** tire pressures, too. On a 3,000-pound car, around 30 psi hot usually works best.

Brake pads/shoes

Don't neglect your brakes. Make sure everything is up to snuff, especially the flex hoses. Use good fluid, and change it often. If you run your car hard don't trust parts store shoes and pads — those \$19.95 specials are made to outlast the lifetime warranty, not to save your bacon. Porterfield Enterprises sells performance pads and shoes for most old cars. For the street, it is hard to beat their R4S compound.

Fuel

Today's fuel sucks. If you can avoid reformulated fuel, by all means do so. If you can't, it is even more important to keep it fresh, as the shelf life of ethanol-enhanced fuel is pretty short. Also, I highly recommend Lucas Octane Booster — the stuff in the red 15-ounce bottle. It is the only one we found that actually works, and it also provides upper-cylinder lubrication. In high-compression cars, use one bottle per full tank of unleaded premium. You'll be surprised.

So there you have it, a list of easy fine-tuning tricks that will make your car safer, faster, and smoother, all for almost no money. After all, if you don't enjoy driving your car, you won't drive it. And where's the fun in that? See you on the road! 