

El Ratio de Camino

Recently I acquired a 1965 Chevelle El Camino with 250-bhp engine, power steering, Posi-traction, heavy-duty suspension 3-speed manual transmission and 7.75-14 in. tires. The problem is, the only rear axle I could get with this combination was 3.07:1. What could I do to lower this ratio without a new gear set? In other words, what kind of wheels and tires would be needed to give the equivalent of a 3.31 or so rear axle with the standard tires?

Also, what do you think about adding 100 lb. or so ballast to the rear axle with a heavy piece of steel between the bumper brackets? I would like to improve handling, traction and weight distribution.
Spokane, Wash. Bart Haggin

The BCOP intermediate cars all use the same rear axle. The Pontiac Tempest lists the most ratios, including 3.36 gears. Buick's Special also offers this ratio. Order from your nearest dealer. Smaller wheels and tires just aren't recommended.

Of the four cars, the Buick Special V-8 engine is by far the lightest. It follows that it has the best weight distribution. Adding a 100-lb. steel bar is a good idea, but make it easily removable for your annual vacation trip. In relatively mild climates, you can move the battery from front to rear to good effect.

Tappet Tipoff

How can you distinguish Ford's High Performance 289 (271 bhp) from the regular 289 without taking the engine down and checking that the innards are of the goody variety they are supposed to be—or do you just have to trust a salesman's word? Cambridge, Mass. David B. Allen

The engines are plainly marked with decals for identification. However, the 271-bhp version can be readily identified by tappet clatter, particularly when the engine is cold. The exhaust headers are quite different from the 289/225 and the 4-barrel carburetor is bigger with 1.562-in. throats.

Boxed In

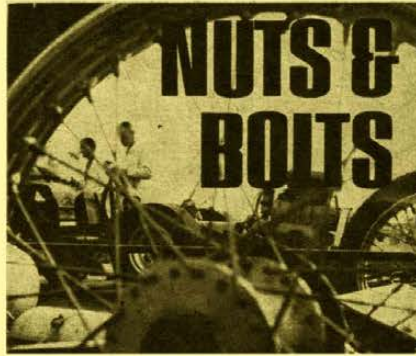
I have a '63 Tempest with the 326-cu. in. engine and an automatic transmission. I want to replace the automatic with a good, all-synchro 3- or 4-speed box, but the stock 3-speed is too noisy (and not synchronized in 1st), while the stock 4-speed will not handle the big engine. Do you know whether or not anyone is manufacturing a good box that will fit rear-mounted in my car, and if so, who?

San Diego, Calif. D. Clinton Passey
The Pontiac experimental department built two or three Tempest V-8s with the heavy-duty Corvette 4-speed attached to the differential. That would be the way to go, but it would be costly.

For 1966, Pontiac will use a Chevrolet-built all-synchro 3-speed. It is doubtful that these 1966 internal parts will fit into a 1963 3-speed Tempest transaxle, though the gears for both are from Chevrolet.

A possible solution may be to use 1965 Corvair 4-speed internals in a 1963 4-cyl. 4-speed Tempest case. These late Corvair gears have more torque capacity than the earlier Corvair and Tempest parts.

Of course, for \$1000 or so, you could convert to the Huffaker-BMC 4-speed trans-axle, but that's hardly feasible.



Take It And Blow

I own a 1965 Mustang 289 with 225 bhp and the 3-speed automatic. Would the addition of a Paxton supercharger require any changes in the engine? Would any of the components have to be replaced? My local mechanic told me that I would have to install colder plugs and possibly a racing cam and mechanical lifters. Is this true? Also, is there any reason why this car couldn't take Ford's 3.79:1 rear end (the present ratio is 3:1)?

Levittown, N.Y.

Dave Williams

The Paxton supercharger is a good unit. The kit includes everything needed to attach it. The maximum boost is only 5 or 6 psi and usually no change in spark plugs is needed. It is positively not necessary to change the camshaft and lifters, in fact not recommended.

Ford builds 3 basic rear axles, of which the Mustang V-8 gets the Fairlane middle size unit with a ring gear diameter of 8.00-in. It follows that big car gears (and ratios) will not fit. However, ratios of 3.50, 3.89 and even 4.11 are available. The 3.50 would be ample.

Smoke Signals

My Ford XL convertible has the 390-cu. in. engine. The problem is a big white smoke puff comes out by the fume pipe.

Could you tell me what wrong is in the engine and if the engine can run a long time in this condition. There is only 8000 miles on the car.

Quebec, Canada

Come Valiquette

White smoke coming from the tailpipe is usually considered to be due to oil getting into the combustion chamber, or steam. Because you say nothing of engine heating or water loss, oil burning may be the trouble.

There are six ways oil can pass from crankcase into the combustion chambers.

1) Through vacuum booster pump diaphragm.

2) Through a defective mechanical crankcase ventilating valve.

3) Through the valve guides.

4) Through a leak past the intake manifold gasket where the manifold covers the tappet chamber.

5) Through a leak past the head gasket, separating an oil passage from a cylinder at the top of the block.

6) Past the piston rings.

Your letter does not give very much to go on. If you do only short trips with a cold engine most of the time you may have a sludged up rocker arm compartment.

If you have driven only slow and easy for the 8000 miles, perhaps your rings are not well seated. Sometimes rings will not set with a heavy-duty detergent oil used for break in. You asked if this smoke will hurt the engine. Yes, if you are burning several quarts per 1000 miles. No, if the oil consumption is only a quart per 500 miles. You need the help of a good garage to solve your problem.

