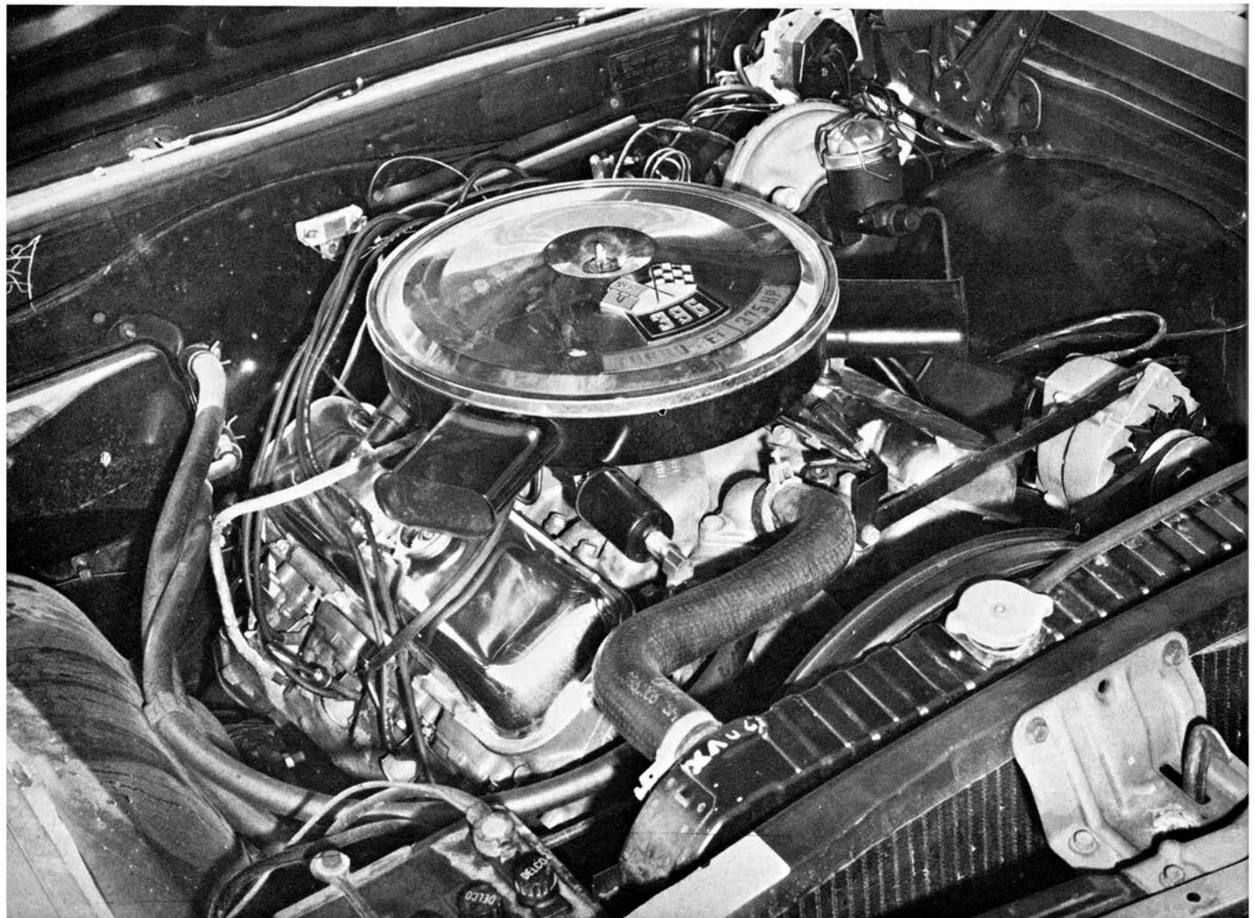
FIRST PERFORMANCE TEST–

396 INCH BIG CHEVY V-8 IN A CHEVELLE!

Here's an Accurate First Performance Test of Chevrolet's Hot 396-Chevelle S/S

By George Elliott



New 396 powerplant really fills the engine compartment. Test car had 375-hp version that produces 420 foot-pounds of torque.

The name Chevrolet has been a seldom talked about subject during the 1965 drag racing season. Since the big 409-cubic-inch power plants, Chevy has not done much to stimulate the racers into competing against the big Mopars and the Fords. However, during various times this year, we have commented on Chevies big comeback expected for the late '65 season. Now the new GM product is here. The combination – a Chevelle Malibu S/S with the 396-cubic-inch engine putting out 375 hp.

This engine is the combination of a single four-throat Holly carburetor with a hydraulic lifter camshaft lifting the exhaust valves .5000 inch and the intakes .4614 of-an-inch.

Compression ratio for the 375-hp mill is 11-to-1 which is obtained from a 4.094 bore and domed pistons.

For running gear our test car was equipped with the standard four speed transmission using a 2.56-to-1 low gear. This proved to be a good ratio to bring the 115-inch wheelbase S/S off the line.

The clutch is a diaphragm bent finger design with the effective pressure of 2300-2600 pounds. We've heard some early rumors that a few people had some trouble with the clutches claiming that they were a little weak. We can't back this statement however, since making over a dozen drag strip runs along with driving several hundred miles of city stop-and-go traffic, we didn't ever encounter the feeling that the clutch was not doing its job fully.

The rear end is a non-limited slip unit with a 3.31 gear ratio. The 3.31 ratio at the present time is all that is listed for this model. As for the non-limited slip differential, we would say that the racer will have to modify this himself since there isn't a posi-traction or limited slip offered. The car still has some good racing features, however. The weight distribution for instance shows that the front end handles 38 per cent of the total weight and the rear end carries 62 per cent. Using the Lions drag strip scales, the Chevelle registered in at 3700 pounds. It had power windows, steering and brakes.

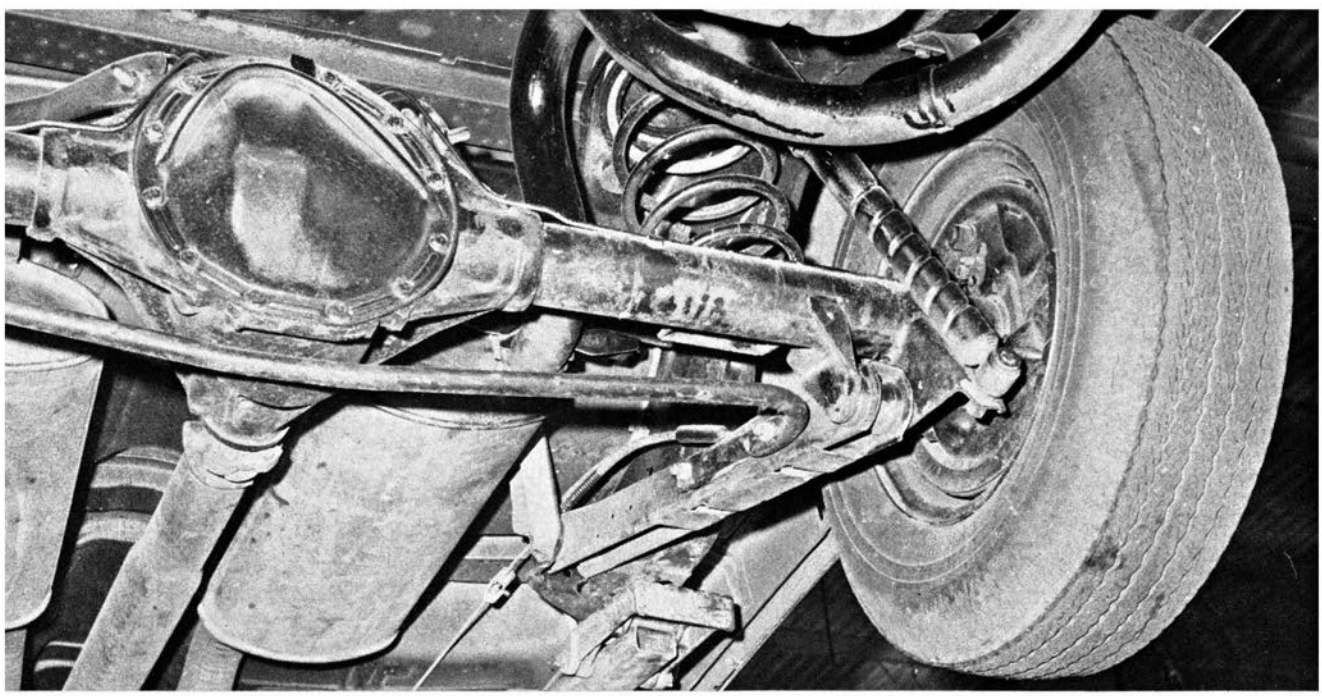
Power steering is a standard feature of the car which makes it quick to respond to any slight movement of the steering wheel. As for disconnecting it for racing, you had better have a strong arm. We

The 327-inch engine which equips most Chevelles now has quite an airy appearance after viewing 396.

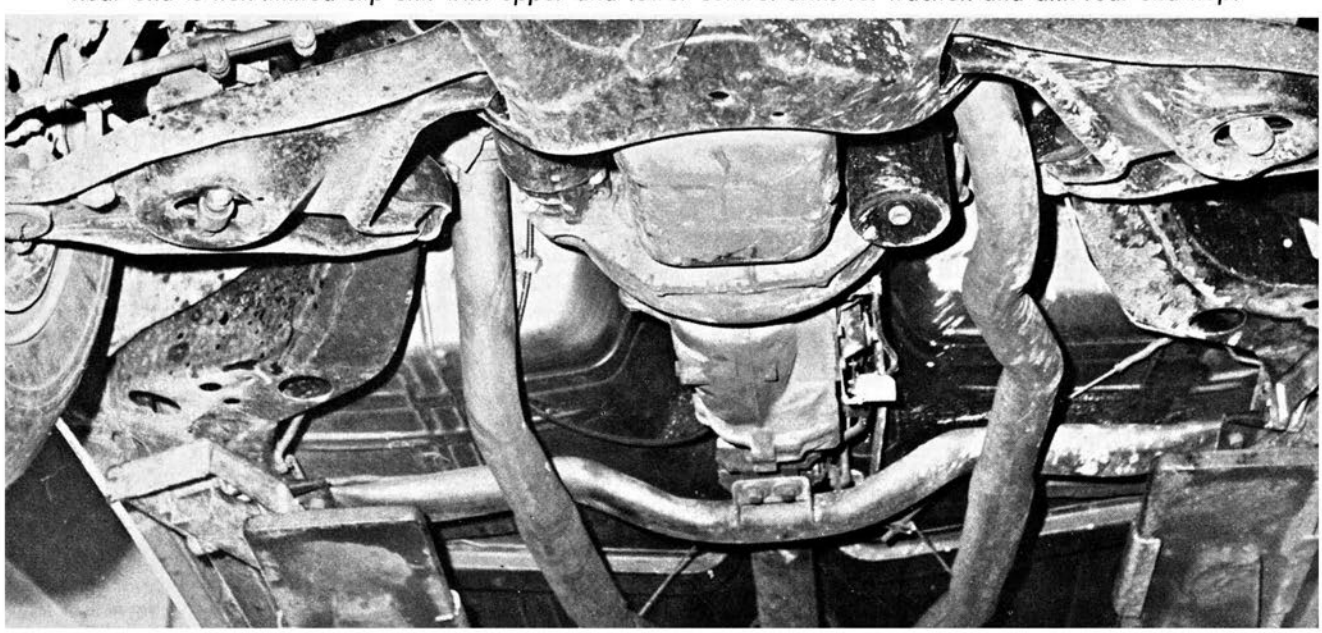
never did disconnect the unit, but during decelleration we turned the engine off to see how the car acted without the equipment operating, and found it to take a little effort to turn the steeriing wheel.

The actual drag test took place at the Lions Drag Strip in Long Beach, California. A surprising amount of attention was drawn by this hot compact. One thing that wasn't done in order to give an accurate picture of what the car will do off the showroom floor, and that was super tune or release the load off of any power or normal operating equipment. In fact the biggest change during all the runs consisted of merely the removing of the air cleaner only to find that we lost one mile-per-hour. The total odometer mileage at the time of the drag test was 1500 miles. To our knowledge the original plugs and equipment were still in the engine.

For the first couple of runs we were concerned as how to get off the line with



Rear end is non-limited slip unit with upper and lower control arms for traction and anti-rear-end hop.



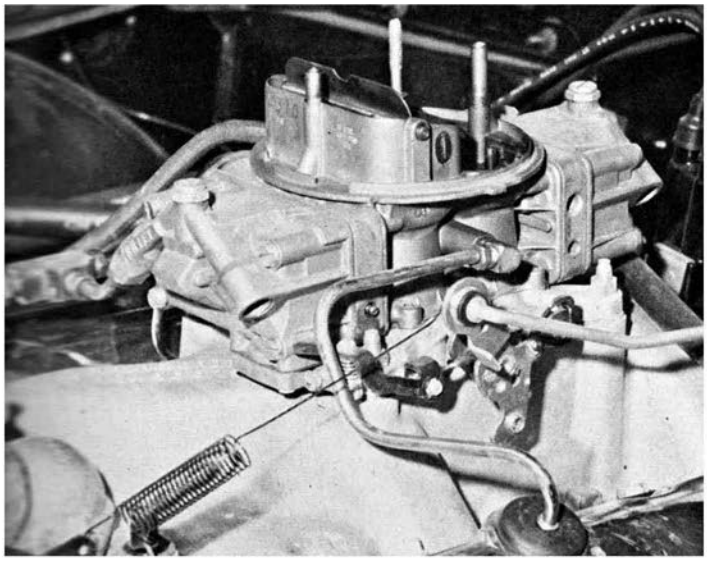
Four-speed transmission rests on a bolted-in tubular rear crossmember. Trans has 2.56 first, 1.91 second, 1.48 third and 1.00 fourth gear ratio.

the non-limited slip rear end and get down the quarter without wasting a lot of time breaking loose. Several methods were tried from driving off as you would on the street to coming out with a lot of throttle. The best combination seemed to be with the engine at 2,000 rpm while waiting for the green light and then "sliding" the clutch so not to get the tires burning too hard. Once the car started to gain traction we placed the throttle on the carpets. From there through mid-second gear the tires would be breaking traction yet they were biting enough to set you in the seat feeling the acceleration. Once total traction was gained you're in for a strong ride.

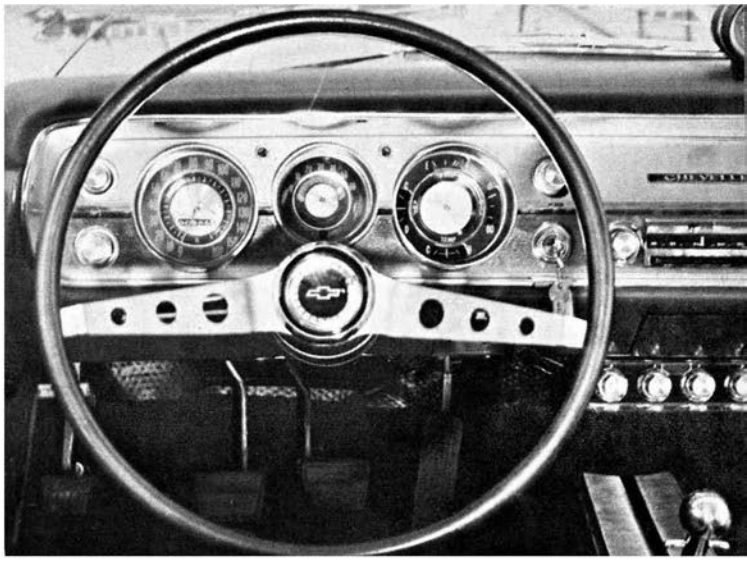
Shifting was also tried at various rpm's using the factory "red lines" on some runs and our own during the others. The factory red line is indicated at 5,800 rpm. Using this as a shifting point, the best time that we received was 98.25 mph indicating 4,200 rpm's through the lights. By raising these marks to 6,100 in first, 6,000 in second and 5,900 in third we immediately jump to a time of 100 mph flat with a 14.60 ET. Remember that all equipment was operating and there are no cheater slicks or limited slip rear end.

It is safe to say that this car will turn 105 with low 13 second ET's by incorporating some of the standard drag strip tuning tricks such as slicks, jetting, header and lower rear end gears.

AHRA classes the car as a B/S and NHRA uses the A/Stock class. This means that it will be in competition with the 442's and GTO's. It's very possible it will reign over them too and establish Chevrolet's top name in drag racing again.



Holly four-barrel carb has same size primary and secondary barrels. A paper mesh air cleaner filters air.



A great improvement from Chevy was the mounting of the tach in the center of the instrument panel.

Car felt a little light on front end although it still handled exceptionally well.