LOW BUDGET SCREAMER

Text and photos by Lee Kelley

The first part of our Olds F-85 project turns this sweetheart into a respected competitor . . . but look out for the next part

During the last few years there has emerged on the hot rodding scene an animal known as the "super-duper, extra-special, high-performance street machine," and it usually has a price tag to match its bloated name. At the start of the '68 campaign, several auto manufacturers decided to present a low-budget street package to the performance enthusiast who couldn't quite cut the expense of Detroit's "hot iron." One of the most heralded of these cars was Plymouth's Road Runner, and one of the least known of the pack is Oldsmobile's F-85. *Hot Rod* decided to grab one of Old's mini super cars and put it through a series of tests to see just how competitive it would be in the mighty world of the GTO, Chevelle and Street Hemi. We'll take the project in stages, similar to our presentation of Project Camaro last year.

After a couple of long distance calls to Lansing, Michigan, the home of Oldsmobile, we came up with a suitable project car. It was an Olds F-85 club coupe equipped with a police apprehender engine (310 hp, 350 cubic inches), an M21 Muncie close-ratio four-speed transmission, radio, heavy-duty radiator, heavy-duty performance axle package (3.91 gears) and highway patrol police apprehender equipment which consists of a special handling package and heavy-duty suspension. All this and our little yellow bomb with black interior (bench seats) had a retail price of just $2970.62. That's quite a bargain *if* the Olds can run with the big boys!

During the break-in period we familiarized ourselves with the F-85's handling characteristics and were quite impressed. Although our project car was a bit on the noisy side (all the sound-deadening material had been deleted), the little Olds handled quite well in all kinds of traffic. The suspension was very stiff, but it gave us the feeling that we were behind the wheel of a real car and not just a grocery-getter. In other words, the F-85 put fun back in our driving life. The one thing that was missing from our list of necessities was a tach. We quickly remedied the situation by installing a Stewart-Warner Model 970 tach (list price $60) on the steering column. Granted, this blocks the view of the speedometer, but the tach can always be swung out of the way if the need arises. We usually drive by the tach anyway, so there was no problem.

With the tach securely in place and just over 1000 miles on our car, we headed for San Fernando Raceway to see just what our F-85 could do under fire. We had "banged a few shifts" for practice and everything seemed to be in order, but the time slips would tell the tale. We made 10 hard runs on the Olds at 'Fernando and came up with a best e.t. of 15.50 seconds and a top speed of 93.07 mph. That's hardly anything to write home about, is it? We ran the car in stock trim with the street tires, and even left the spare in the trunk. Actually, the spare was a help because of severe traction problems out of the hole with the street tires. We had to feather the car out at just under 1000 rpm and then stand on it. Shifts were made under full power (that Hurst shifter worked so well it defied description, and it's standard equipment) at 5000 rpm, and we noticed a small hesitation around that point. More on that later. We were far from satisfied with the preliminary results, and we knew that our work was cut out for us if the Olds was going to compete with its bigger brothers.

Our first stop after the fiasco at the drag strip was Ak Miller's Garage in Pico Rivera, California, where we consulted Jack Lufkin on some possible tune-up ideas. The first thing that Jack suggested was that we modify the ignition so that we would get full advance around 2000 rpm. Jack put the new advance curve in our distributor, changed the points (which were badly pitted after only 1400 miles), and then we ran the Olds on the dyno to see what kind of horsepower we were producing. After a quick check to see that the timing was right (10 degrees in the distributor, 23 degrees total), Jack ran the Olds up to 5000 rpm on the Clayton dyno and came up with a horsepower reading of 175 at the rear wheels. Not bad, but not good either, so we hopped in our project car and headed for Belanger Headers in Covina, California, where Jerry Belanger advised us that he had just the cure for our "down on horsepower" Olds. Jerry installed a set of his four-tube headers on the 350 in record time. The headers were 1⅞-inch in diameter, 38 inches long and featured a 12-inch reverse-cone collector which contained a "bullet" at the intersection of the four tubes to smooth out the exhaust flow. Price on the headers was $125. Jerry warned us that the 350 would be super lean after the header installation, so we headed back to AK Miller's for some additional dyno work.

Fred Goeske, driver of the "Hemi Cuda" funny car, took our F-85 Olds on a couple of quarter-mile blasts and was quite impressed with the performance of the small-block stocker. "It's not as quick as my funny car, but it sure is a lot of fun to drive," he drawled. Jack Lufkin was also impressed with the performance and the potential of the 350. On the dyno at Ak Miller's Garage, Jack recorded 215 hp at the Olds' rear wheels!

Once again, Jack Lufkin ran the "yellow peril" on the dyno and he immediately noticed that we were down on power. The headers had leaned the 350 out so badly that it was actually putting out less horsepower than it had before their addition. If we had run the car at the track without first tuning for the headers, we would have very likely blamed the headers for our own ignorance. Does that sound like a familiar story? Jack disassembled our Rochester Quadrajet and drilled the primaries .002-inch. Then he removed the secondary metering rods and machined .003-inch off the ends. The Quadrajet does not have removable jets in the secondaries; therefore, it is necessary to either machine down the metering rods or take a chance on drilling the jets in the carburetor. If you make a mistake and go too big, you buy another Quadrajet. That's why we machined the metering rods! With the carburetor reassembled and back on the Olds, we were ready for some real horsepower readings and we got them! Would you believe 215 hp at 5000 rpm? The 350 would hold that reading steady as a rock for as long as we wanted to watch. Jerry's headers and the subsequent tuning had given us a 40-hp boost at the rear wheels. Maybe now we were ready to take home a little of the gold at the strip.

We had one more small addition to make to our car before we made it back to the strip. A call to Carl Schiefer at Schiefer Manufacturing Company garnered us an aluminum flywheel ($92.00 list), a riveted street/strip clutch disc ($28.00 list) and a 10½-inch "Rev-Lok" pressure plate ($96.00 list). Out came the stock clutch assembly (we hate to see clutch fragments flying around inside a car, especially when we're in it) and in went the new Schiefer unit. Now we felt a lot safer when we made those 5000 rpm power shifts, and the clutch seemed to hook up much faster. On our way to the strip, we stopped by a J. C. Penney Automotive Center and had four Foremost A F/X steel dish wheels installed on the Olds. These wheels were a handsome addition to our project car, and at four for $79.88 they won't exactly break the bank. We also picked up a set of Foremost A F/X cheater slicks (8.25-8.55 x 14, 27 inches tall, 6⅝ inches wide) and had them mounted on a pair of A F/X wheels. The cheater slicks list for $59.00 a pair.

Once at the strip (Irwindale Raceway drew our wrath this time), we just knew that we had all our problems solved.

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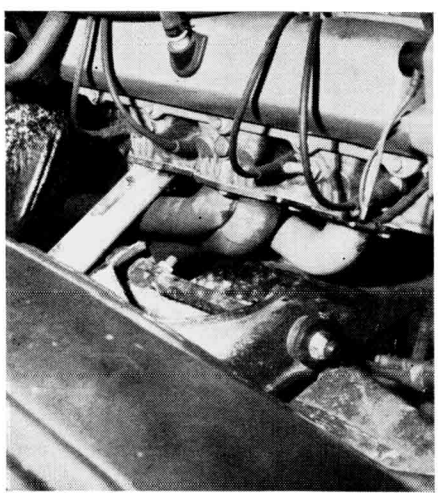

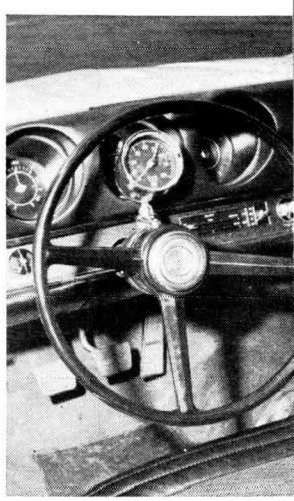

The addition of Belanger headers to our newest project car really did the trick in the horsepower department. The headers and subsequent tuning gave an additional 40 hp at the rear wheels. An 8000 rpm tach, one of Stewart-Warner's finest, allowed us to keep tabs on the 350's performance. J. C. Penney A F/X chrome steel wheels and cheater slicks helped both the appearance and the performance of the little Olds. Those slicks are unreal!

All things considered (including prices and performance options), the 310-hp F-85 Olds is a very competitive package that can hold its own with most of the so-called super cars roaming the streets. Just imagine how it'll perform when we slip in 325-350!

BUDGET SCREAMER

Didn't we have 215 hp at the rear wheels and didn't that engine really sing at around 5000 rpm? Yes, it did all that and more. Plenty more. Our first run was made with the street tires to see if we had made any improvement over the last session. We feathered the Olds off the line, watched the tach climb swiftly to 5000 and then banged the one-two shift hard. Nothing. That's what the car did. Nothing. It just quit, as if we had turned off the key. Then it caught again and we were off to the two-three shift which we promptly banged. Nothing. It quit again for an instant. It did the same thing on the three-four shift, and it followed the same routine on the next seven runs. We changed the fuel pump because we thought that it might be defective in the high rpm ranges. It didn't help. We changed the Quadrajet on the assumption that we had fouled it up during our modifications. No such luck. We checked the timing, but there was nothing wrong. That only left one possible avenue of hope. It must be valve float! We remembered that we had experienced similar difficulty during our first tests, but there had only been a tiny hint of hesitation at that time. But then it also dawned on us that we had changed flywheels in the meantime, substituting a lightweight aluminum unit for the stock cast unit. This would allow the engine to rev faster, and if we were on the verge of valve float before during a power shift, then the aluminum wheel would probably let us go further into valve float. No problem! We would just adjust the hydraulic lifters out until they were fully pumped up and this would allow us to bang away on the Hurst shifter. Or so we thought.

Upon taking off the valve covers, we noticed that the Olds 350 did not have any adjustment on the rockers to let out the lifters. What now, coach? Hmmm. Well, if we were at Bonneville and record runs were in one hour and we had to make do with what we had, why, by golly, we'd make some spacers to shim up the rockers so that the lifters would be pumped up. That's exactly what we did. We used some tiny shim washers. (.010-inch) to determine just how much the rockers needed to be raised. We did this by clamping a certain number of washers under the rocker and starting the engine. If the lifter didn't clatter, we didn't have enough washers under the rocker. When we finally got the lifter to sound off, we took one washer out so that it quietened down. Then we measured the thickness of the washers under the rocker. In our case, this thickness was .050-inch. We then found some .050-inch sheet aluminum and made 16 washers to shim the 16 rockers. After we had everything bolted down and secured, we were almost afraid to start the engine. Almost, but not quite. The engine sounded great, and what's even better, we cured our problem! We eased the Olds up to 5000 rpm, popped the one-two shift and were rewarded with a strong run. It's a real rewarding feeling to work on a problem of this nature and come up with a practical solution.

Now we were ready for some of those fat times that we knew the F-85 was capable of turning. Our first pass with street tires assured us that we should bolt on slicks. We turned a 14.90-second e.t. with a speed of 92.30 mph, but we were slipping and sliding all over the course. Our increased horsepower hadn't done anything to help our traction problem. On went the Foremost cheater slicks, and then the fun began. After a couple of small burnouts, we pulled to the line, staged carefully, brought the revs up to 3000, dumped the clutch and fell right on our face! Let's try it a little hotter — say 4000 rpm. No good. Okay, so let's bury the throttle as the tree comes down, side-step the clutch on the last yellow and make it. Does that work? Just barely. Dumping the clutch at over 5000 rpm, the engine still bogged to around 3000 rpm before it started picking up steam. Do those tires work? You've got to be kidding. If they were any stickier, you couldn't pick them up off the ground. These tires are definitely not for street use, but they're great for the strip. Our first full-out run netted us a 14.43 e.t. with a speed of 95.54 mph. Back in the pits we changed plugs, taking out the old AC 45S units and replacing them with a colder AC 42S. We kicked the timing up to 25 degrees total advance and went back for another assault on the quarter-mile. This time we ran a quicker 14.36 e.t. with the same speed, 95.54 mph. Later in the evening we picked up our best time slip of the day, a 14.27 e.t. at 96.15 mph. That's more like it. With the car turning in the low 14-second bracket, we can now compete with the majority of the street-driven super cars, at least through the first three gears.

Our Olds 310-hp F-85 weighs in at 3330 pounds with spare tire in place, and it falls into F/S under the National Hot Rod Association's '68 rules. Although we're quite a way from the record, we're far from finished with the project. We have a few more "speed secrets" that we want to try on this engine, and then we have another engine (a 325-hp super screamer) still in the crate just rarin' to take its turn at the competition. We think the future holds some pretty fair surprises for the big boys, such as low 13-second e.t.'s with speeds around 106, so watch for the next installment on our low-budget screamer. ■■