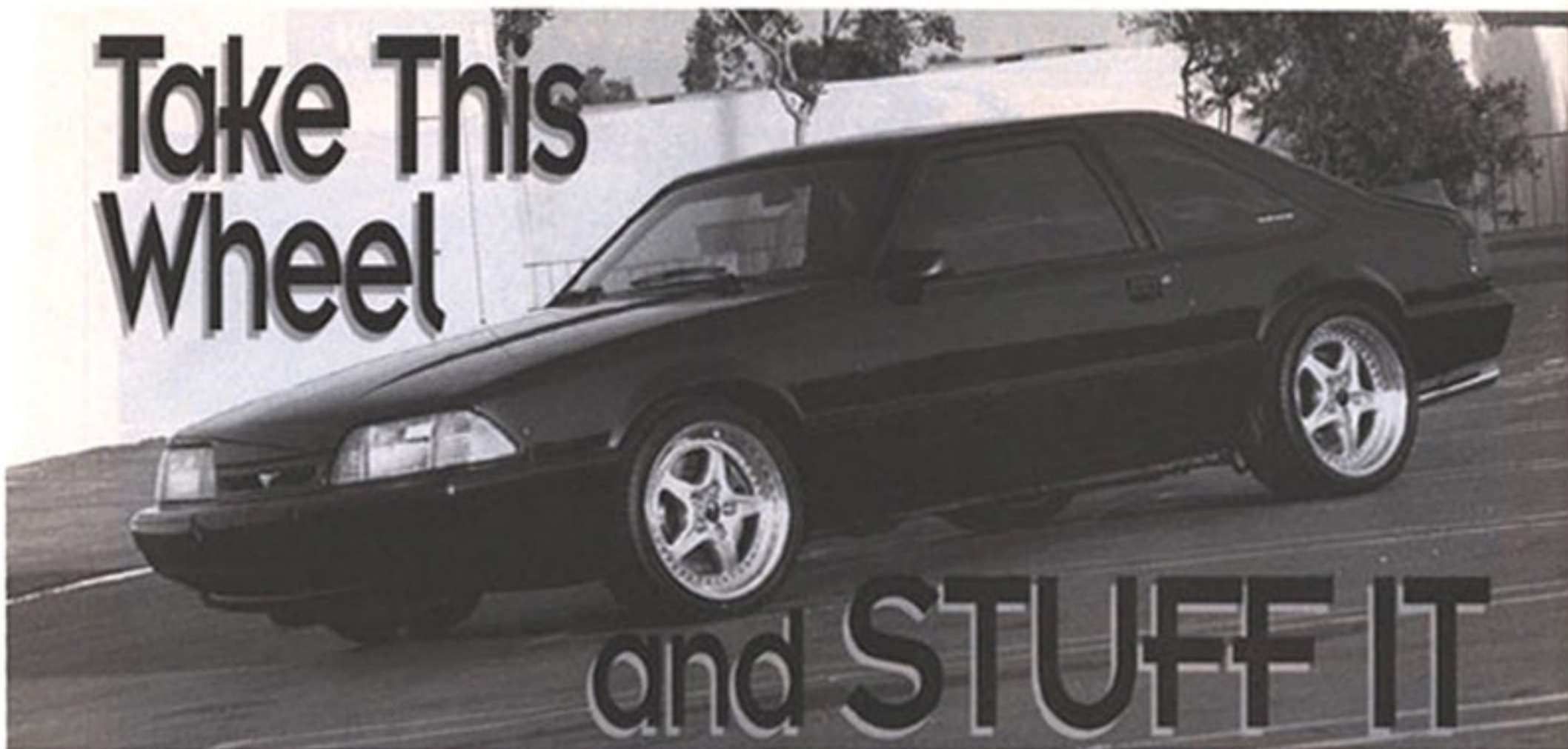


# Take This Wheel



## and STUFF IT

### 18-Inch Wheels Love Their '93 LX Host

Text & Photography by Brendan Maze

**"**I'm tellin' ya, they ain't gonna fit!" Mr. Know-It-All from the local car show circuit (we suspect you know him) was sure; he'd read all the mags, owned a clean '90 himself, and laughed at our desired goal: to fill a '93 LX full of 18-inch aluminum and rubber and achieve a "street-car-named-desire" effect. We were determined to show him that it could be done (and besides, we'd seen it before, so we knew it was possible).

After slowly shaking our heads and smiling wryly, we walked away from Mr. Know-It-All and set to work. To assist us, we hooked up with Umberto Gizzi at GRC Performance in somewhat-nearby Mission Viejo, California, and contacted Barry Bass at Specialized Automotive Components, suppliers in America of those gorgeous Italian-fabbed Speedline wheels. Umberto gave his own car up for the demonstration, a lightly modified black LX sitting  $\frac{1}{2}$ -inch lower than stock in the front and an inch lower in back with Racecraft springs and the SVO Cobra M2300K brake kit.

Our first concern was the overall diameter of the wheel and tires we'd be using. The largest diameter that will fit without fender interference is considered 26 inches. Knowing this fact, and that the rim diameter would be 18 inches, we needed to deter-



*The attractive Speedline SL978 three-piece wheels were delivered with Dunlop SP 8000s, the same tires used by Saleen to achieve the high cornering forces generated by his race-winning 'Stangs.*



*For the front wheels, the outer flange depth came out to be 2 $\frac{1}{4}$  inches...*



*...while the backspacing came out to be 6 inches.*

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mine what the sidewall height would be to fit within that 26-inch overall diameter. To start, we subtracted 18 inches of rim from 26, which equals 8. Since there are two sidewall heights (one at the top of the wheel and one at the bottom), we divided 8 by 2 to get a sidewall height of 4 inches. This was the "tallest" sidewall we could go with.

Great, we knew that, but then what?



An unfortunate error in measuring the location of the front brake caliper led to an interference problem that remained even after Speedline beveled the outer spider section ring, seen here (arrows). The most annoying thing was just how close it was to fitting!



Rather than sending the wheel back to Speedline yet again for further modification, Umberto decided to file down the outer edge of the caliper, slowly but surely removing just enough material for clearance. A smooth beveling doesn't reduce the caliper's strength.



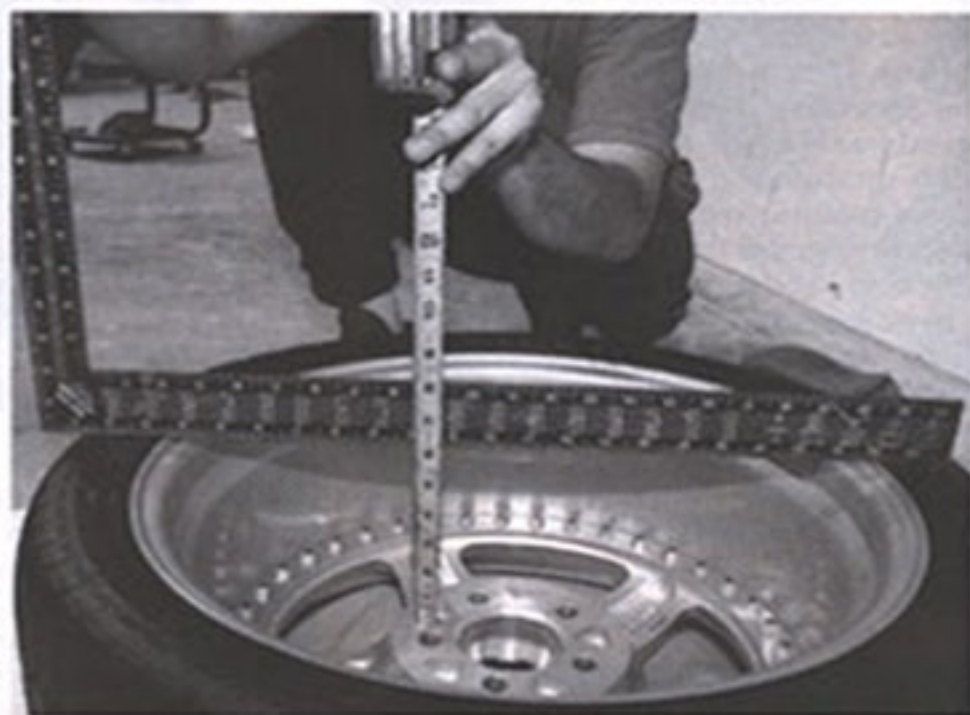
He used a permanent marker to color the filed section and remounted the wheel, spinning it to check for fit. Any interference shows up as bare metal where the marking was worn away by metal-to-metal contact.



After one final spin, with the caliper pulled outboard as far as possible, we achieve clearance!



Note the tight fit, which actually looks really cool. We ended up with .13 inches of clearance, which is plenty; further driving and some high-speed cornering abuse and braking has not caused any problems.



The rear wheel came with 6 1/4 inches of backspacing...

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...and an outer flange depth of  $2\frac{1}{4}$  inches.

We needed to find what aspect ratio on which tire width would provide us that 4 inches. Umberto wanted to stick with a 235mm width up front and a 265mm width out back, which made deciding the aspect ratio easy indeed. In standard tire nomenclature, the first number is the tread width, the second is the aspect ratio, and the third is the wheel diameter. The aspect ratio expresses the sidewall height as a percentage of the tire width, so on a 225/55R16, the aspect ratio "55" means the sidewall height is 55 percent of 225 mm, or 123.75 mm.

For this LX, we knew the sidewall height could not be greater than 4 inches. To convert inches to millimeters, we multiplied 4 by 25, which gave us 100mm. Since we knew we wanted 235mm wide tires up front, we simply divided 100 by 235, which gave us .42 (or 42 percent), which is the aspect ratio we had to pick. Since there is no such thing as a 235/42R18, we went with the closest size, 235/40R18. This tire easily fits within the 26-inch total wheel and tire diameter limit, which also happens to be the same figure for the stock 225/55R16 wheels and tires found on the stock 5.0 LX.

Out back, we knew we wanted a 265mm tire, so we used the same deductive reasoning to come up with the final tire size of 265/35R18. We knew what tires to use, but what of the wheels themselves? Well, we've always been fans of the Speedline wheels found on Saleen's steeds and knew that their incredible high quality and strength (along with sheer beauty) were the reasons Steve Saleen selected them in the first place. Umberto liked the SL978 model the best, a five-spoke three-piece design. The best thing about three-piece wheels is that getting the correct backspacing and offsets is easier, because the wheel is composed of the center spider section (the hub and spokes), an outer wheel flange, and an inner wheel flange.

With such a design, both the outer and inner flanges can be made in half-inch-wider increments, and backspacing and offset can be fully adjusted. Backspacing is the distance from the

axle mounting face of the spider section to the inboard wheel-flange lip, while offset is the distance between the axle mounting face to the true midpoint of the wheel's width. Umberto made detailed measurements of the wheelwell lips, the axle mounting flange locations, and the Cobra caliper locations, and Barry Bass came up with the following measurements for our combo:

### FRONT

Offset: 30 mm (1.2 inches)

Backspacing: 6 inches

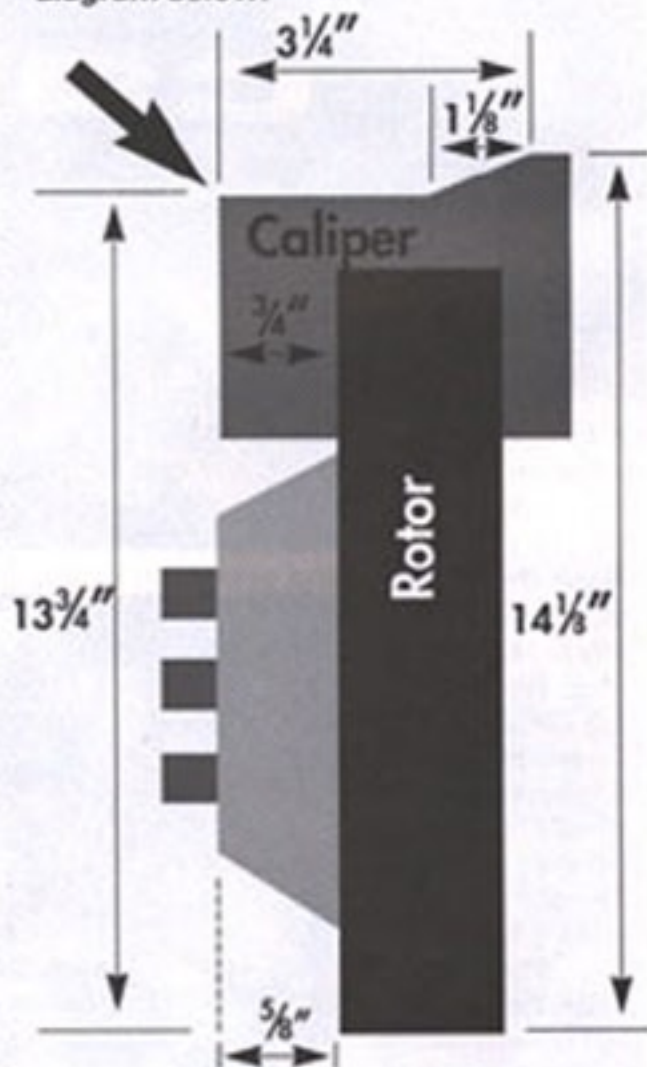
### REAR

Offset: 25mm (1 inch)

Backspacing: 6.13 inches

The wheels were delivered, but a small error in the measurements of the front caliper location caused the front offset to be too small, and the outer ring of the spider section came into contact with the rotor. Check out this diagram we made of the fit:

*Our interference point was at the outer edge of the caliper (large arrow) in the diagram below.*



Even after that outer ring was beveled by Speedline, there was still a slight amount of interference, so we decided to bevel the edges of the aluminum calipers, removing just enough to fit. After all that, everything went smoothly! Hah! Read along and weep.



Checking for the typical interference points out back—the tailpipes and quad shocks (arrows)—we see that we have plenty of room for side-to-side movement of the rear axle. In cars not equipped with a panhard bar or Watt's linkage to eliminate such movement, it's best to leave about 1 inch between the wheel/tire and these two points to prevent damage and equipment failure.



The final product transforms the looks of this LX, creating the illusion that it's been dropped an extra full inch or so when all we've really done is increase the wheel size. Oh, by the way, it handles a ton better with sharp turn-in, quick steering response, and lighter steering effort at speed. The rear axle is more connected to the seat of the pants as well. 5.0

### SOURCES

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