

# Project

# GTV-6



## Part 3: Wheel and Tire Upgrade

by Paul Mitchell

PHOTOS BY PAUL MITCHELL AND BRENDAN LOPEZ



The search for increased cornering ability through fitting larger wheels and tires is an easy task for the owners of most cars. Usually the hardest part is deciding on a wheel style and whether to go to a Plus 1 or Plus 2 size.

Not so for the owners of any of Alfa Romeo V-6 coupes or sedans, as we found out with our project car, a 1983 GTV-6. After our previous articles in which we performed reliability and performance upgrades to both the engine and suspension, it was now time to bring the part of the car that meets the road up to the capabilities of the chassis.

Though many owners of these popular Alfas choose to undertake the previous modifications, and the parts are readily available through several aftermarket sources, finding performance wheels in the size, bolt pattern and style needed proved to be a challenge greater than anticipated.

To begin with, there's the bolt pattern: five on 98 mm. Except for Lancia (which is no longer available in the U.S., if you haven't noticed), and several off-brand ox carts from the Far East, no one uses this bolt pattern. I know. I've checked it out.

Our task was made more difficult by the fact that I decided that what I needed was a modular forged wheel in 16x7 or 16x7.5

in a style congruent and period correct for the GTV-6. The 16-in. diameter would be a Plus 1 over the standard 15x6 Campagnolo wheels fitted by the factory. With the proper 50 series tires mounted, they would provide approximately the same outside diameter as the original 195/60-15 Pirelli P6 tires.

To those readers who may not be as concerned as I was about this, I recommend staying with the factory Campagnolos. They are truly light and strong wheels and will accept 205-60 or 50 series tires, which should be enough rubber for all but the most stringent track use. Also an option are the factory supplied wheels for the 3.0-liter Milano. Though also 15x6, they have a more positive offset, which will widen the car's track, offering improved handling. Check with your Alfa dealer or AR Ricambi for these.

After many phone calls, much nail biting, hair pulling and a few false starts, we managed to compile a list of wheels in 15- and 16-in. sizes that were available for the Alfa V-6s.

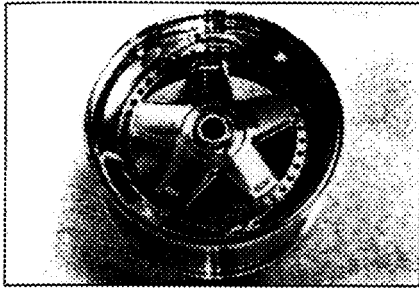
With the expert advise of Alan Baylis at Topline Motorsports, we chose a set of

Etoile 16x7.5-in. wheels with an offset of 34 mm. Of modular construction with forged outers, they are manufactured in France to exacting standards and can be found on many competitor cars at most race tracks. Topline Motorsports should be familiar to most readers as the importer and distributor of Etoile wheels, Koenig seats and Stand 21 racing gear.

The wheels chosen are the M-16 style and are quite in keeping with the Giugiaro styling of the GTV-6. This size and offset provide ample clearance of all suspension components and body work.

Alan at Topline is also able to build any wheel size up to 17 in. diameter and 14 in. wide and is able to accommodate almost any bolt pattern. Etoile also has a very aggressive mesh-type modular wheel which would look very good on the Alfa Romeo Milano, which has always been a difficult car to find appropriate wheels to complement its unique styling.

And now that we had our wheels, what should they roll on? There are several hot tires that are very trendy now, and they are all good, but being an ex-racer, I felt disposed to rely on the experience of a very successful current racer, Rex Chalmers of



Omega Motorsports in Culver City, California. Anyone who followed last year's Porsche-Alfa Challenge at Willow Springs Raceway, or most VARA races, will recognize his 1965 Giulia TI as having dominated the D production class.

After having experimented on track with several different brands of tires on his prepared GTV-6, he found that the Z-rated B.F. Goodrich Comp T/A 3 delivered lap times within 1.5 seconds of his 1.41 average in his TI on shaved racing tires. This revelation, coupled with my own test drive, confirmed these tires as an excellent choice.

If it's of any interest to you (personally, I find this type of gibberish and governmental drivel nonsensical), the B.F. Goodrich ZR T/A 3 has a tread wear rating of 220, a temperature rating of A and a traction rating of A. These tires are available in a full range of aspect ratios, widths and diameters.

Having selected the tires, all that remained was to find a size that wouldn't hang-up on the body work, and find a distributor whose prices would fit within our budget. We were fortunate enough to settle both matters with one call to Tire Rack. Tire Rack has a software system which contains Plus-1, Plus-2, Plus-3 and standard diameter fitments in all widths and aspect ratios for almost every vehicle. Access to this information is available to any Tire Rack customer and is a great help in trying to determine a proper wheel and tire combination which will fit your car without interfering with the bodywork. After settling on a size, Tire Rack had our tires to us in two days.

The size we chose to cover the 16x7.5 wheels was 205/55-16. The reason we selected a 55 as opposed to a 40 series tire, other than the wish to maintain standard overall final drive ratio, is that in widths narrower than 235, a 40 series tire presents such a small side wall that the slip angle generated is minuscule, almost imperceptible. In sportswear racing, a general rule of thumb is that you want a slip angle of at least 3 degrees. Of course, too much is none too good either, but too little makes the car difficult to drive consistently at the

limit of adhesion for extended periods of time. The lack of a perceptible slip angle causes the tires to give less warning as they lose lateral adhesion. A short excursion to the race track will bear this out, as 50 series tires will be in great force, and a surprising number of 60 series, too. (Although at this time, several manufacturers have been busy developing 40 series tires with better slip angle characteristics in narrower widths, or so they are saying.)

After having these alleged performance tires mounted on our almost unobtainable wheels, and in turn mounting these on the car, it was finally time to find the limits of our newly modified chassis. All of the effort put into measuring clearances (OK, calling Tire Rack) was well spent, as nothing rubs during full suspension compression and through the full arc of steering, allowing full-out cornering over rough surfaces with impunity. The B.F. Goodrich radials show very little tread squirm for new tires. Turn-in, previously quite precise, is now scalpel-like. Likewise, transitional handling is substantially improved, encouraging one on to bolder maneuvers. With the larger contact patches of the 205s, turning the wheel at low speeds or while stopped requires some increased effort. But if you're more concerned about parallel parking than performance, you're reading the wrong magazine.

The lateral g rating has been substantially increased, to a degree that rivals the transformation that took place with the installation of just the Shankle springs, sway-bars, and Koni shocks. But if you want a precise figure, you'll have to wait until the end of the series, when we'll present the dyno figures, skid pad results and braking results. In our next article we'll be upgrading the GTV-6 brakes, so look for us next month. ❧

#### **Topline Motorsports**

2872 Walnut Ave. Ste. A  
Tustin, CA 92680  
**(714) 838-7021**

#### **Tire Rack**

771 W. Chippewa Ave.  
South Bend, IN 46614  
**(800) 428-8355**

#### **Omega Motorsports**

3822 Clarington Ave.  
Culver City, CA 90232  
**(310) 836-3160**