

# MAKING THE GRADE

## Improving the Handling of Our Alfa Spider With Some Simple Bolt-Ons

STORY BY TIM SUDDARD  
PHOTOGRAPHY BY THE AUTHOR

**S**ports cars, by definition, should deliver exhilarating handling. That was not the case with our 1971 Alfa Romeo Spider. It sure looked athletic, but the actual driving experience was anything but.

We purchased this car, sight unseen, from a San Diego enthusiast. Our plan was simple: Fly in and then drive the car back home to our Florida base. The Alfa survived the entire cross-country journey, but once underway we quickly realized that there was work to be done.

We initially envisioned a stock rebuild—returning the car to original specs and enjoying it—but changed our minds once we encountered a guy named Robert. We met him via the Alfa Bulletin Board, and he was eager to clean out his garage. We, of course, were only too happy to help.

Part of his parts stash included an unused Shankle performance suspension kit that he was willing to sell for just a few hundred dollars. John Shankle was a well-respected racer and engineer from Southern California, and for years he designed and marketed Alfa Romeo speed parts—engine and suspension bits, mostly. He merged his business with Alfa Ricambi in 1991 before moving away from the scene.

For a second opinion, we called in Alfa expert Joe Cabibbo from Centerline International. He admitted that Shankle's concept of pairing relatively soft coil springs with rather stiff anti-roll bars front and rear was a legitimate way to make an Alfa like ours ride and handle nicely. But—and there's always one lurking—he prefers to run stiffer springs front and rear, along with stock anti-roll bars that have been fitted with urethane bushings.

Our car had other suspension issues, too, like dead shock absorbers and brakes that pulled to one side. Fortunately, we had our lift, access to fresh parts, and the time to make things right.



**Our Spider needed a complete suspension makeover. Once we drove our new purchase home from the other side of the country, we put it up on our Autolift and cleaned the underside with our Kärcher heated pressure washer.**



## PROJECT PLAN

*Elevating a flawed 1971 Alfa Romeo Spider from No. 4 to No. 3 condition.*

### ■ CHAPTER 1:

Evaluating our car and what it will take to upgrade its condition (**May 2018**).

### ■ CHAPTER 2:

Cleaning, repairing and detailing our way to No. 3 condition (**July 2018**).

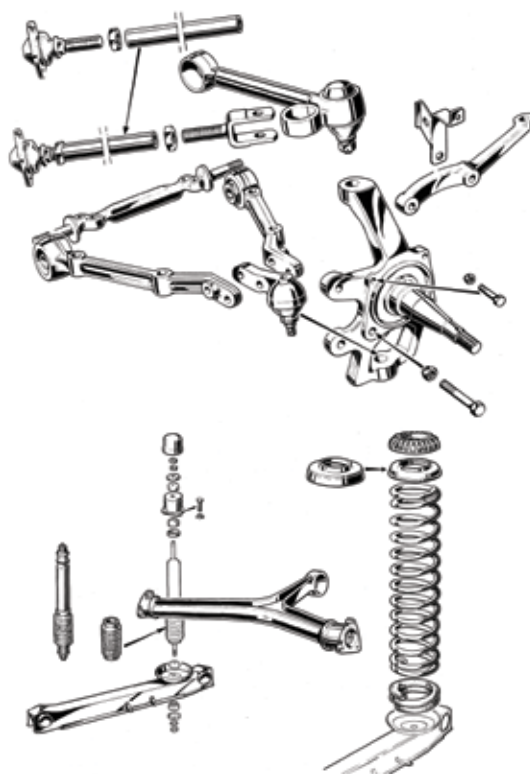
### ■ CHAPTER 3:

Improving the handling with bolt-on suspension upgrades (**this issue**).

## ALFA ANALYSIS

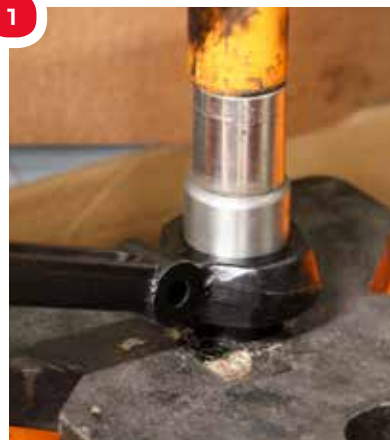
While most experts claim that real sports cars feature independent rear suspensions, they'd perhaps grudgingly admit that the 105- and 115-series Alfa Romeo sedans, spiders and coupes work quite well despite their live axles.

"The rear axle is live, but carefully controlled, and betrays its humble nature only during very hard starts or around sharp, rough corners. Under more common conditions, you'd never suspect," *Road & Track* reported in its road test of the 1971 Alfa Romeo 1750 Spider Veloce. "By using relatively soft springs and controlling body lean with anti-roll bars, the designers provided a comfortable controlled ride and lovely handling; soft tire pressures are part of the combination too, so cornering power is not high unless they're raised."



**Up Front:** The upper half of the A-arm layout is formed by two rods, both of which are adjustable.

**Out Back:** A live axle is suspended by coil springs that are mounted above a pair of trailing arms. The assembly is tied together by a trunnion bar that, like a Panhard rod, locates the rear end.



### 1

After removing all of the major suspension components from the car, we could start pulling out the old bushings with our Harbor Freight shop press. While Harbor Freight offers tools specifically designed to remove bushings, an old socket usually works just as well.

### 2

Always take notes and reference photos so you'll know how to reassemble things. The upper front control arms, for example, are mounted via a sequence of washers, spacers and bushings.

### 3

Removing the old trunnion bar bushings involved a bit of a struggle. We started the process by drilling out some of the bushing material.

4

Then, to provide a bit of leverage, we welded a small piece of bar stock to the old bushing sleeve.

5

Success! The old bushing (lower left) has been freed from the trunnion bar. Now we can prep the piece for the new polyurethane bushings from Powerflex's Heritage line. These units come in black and gray instead of the vivid purple used for the brand's more contemporary applications.

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The rear trailing arms required less work: We simply pressed out the old bushings.

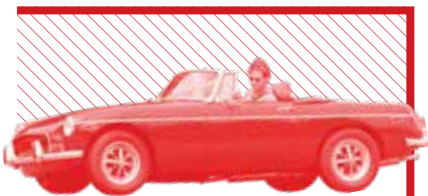
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## BUT WHAT ABOUT MY CAR?

Could your car also use some suspension help, but it's not an Alfa Romeo Spider? You're in luck. Just about any car out there will benefit from the basic formula used here: fresh dampers, new bushings, thicker anti-roll bars, quality tires and rebuilt brakes.



7

Before installing those new Powerflex bushings, we media-blasted all of the suspension components.

8

After blasting the suspension parts, we repainted them. We figured this was a chance to make things look new and perform a full inspection.

9

Our original trunnion bar bushings were badly worn, while the thrust washers at the rear of the bar were missing completely. The Powerflex replacements aren't like the bushings of the past. They're engineered to outperform the original pieces without killing the ride quality. Plus, if properly greased, they won't squeak. Centerline International carries all of the Powerflex suspension bushings needed to redo one of these cars; budget less than \$500 for the entire set.

10

All of the Powerflex bushings come with grease, but we used a different product after a reader contacted us claiming to know of the best bushing lube on the planet. It comes from PolyBushings.com and costs just \$4 per canister. Our initial impressions are positive, and we'll report back as we put some miles on the car.

11

The stock springs (on top) were allowing the Spider's tail to sag, so we planned to replace them with a set of Shankle springs. While the new springs are shorter, their thicker wire and higher number of coils deliver a stiffer rate.

*“The Shankle performance springs were originally red—a bit too racy for our tastes—so we painted them black.”*

## 12

Transforming our aftermarket springs into factory-looking pieces was quick and easy.

12



13



## 13

Those springs will be damped by Konis, a popular choice for decades. Centerline International sells them for \$122 each, making them a smart investment for any machine.

14



## 14, 15

Our haul also included a pair of Shankle anti-roll bars. These bars fit perfectly, though sadly they're no longer in production. We installed them along with new end links fitted with urethane bushings.

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While we had everything apart, we replaced the ball joints with new ones sourced from Centerline International. Their quality and fit seemed exemplary.

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17

We also rebuilt the brakes, taking the time to media-blast the calipers and spray them with high-temp paint. Centerline International had all the brake parts we needed, including civil, high-performance brake pads.

18



18

Old brake hoses can rot and collapse. Instead of replacing them with stock rubber lines, though, we generally upgrade to braided steel pieces. The result is increased brake feel and a bit more protection from debris.

19



***“We chose the sportiest tire option available in our desired size: 185/70R14 Michelin Defenders sourced from Tire Rack.”***

20



## 20

Makeover complete: Our finished car sits about an inch lower while also looking and handling so much better than before.

## REPORT CARD

Before tearing into our Alfa's suspension, we wondered: Could we improve the handling while retaining the comfortable ride quality? Well, the ride is now firmer, but the car still easily cruises over railroad tracks and rough roads. We call that a success.

In the corners, the Spider now delivers neutral handling without a trace of over- or understeer. Turn-in is immediate, and we can traverse tough switchbacks with complete confidence. The most improved element may be the braking: No more pulling to one side.

A few days in the shop and a little more than a grand in parts have totally transformed this car. We now have a perfect long-distance tourer—but if only we had more power. Don't worry, we'll tackle that soon.



## SOURCES

### Project Sponsor:

**Centerline International**  
(888) 750-ALFA  
centerlinealfa.com  
Parts, service, advice

**Alfa Romeo Bulletin Board & Forums**  
alfabb.com  
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After dominating in 1973, why didn't the 917/30 race in '74? Visit [grundy.com](http://grundy.com) and read the full story on our blog, Grundy Garage!

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