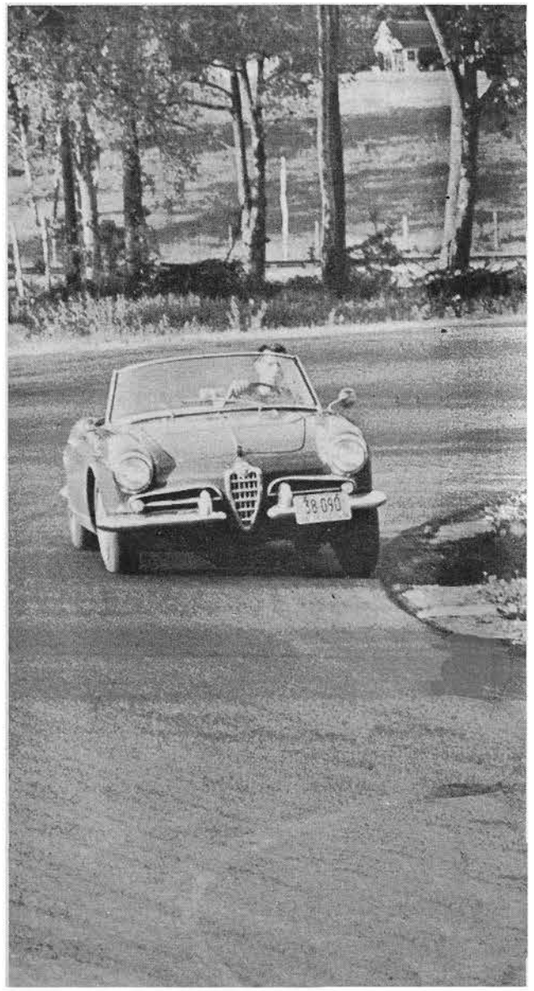
SCI ROAD TEST:

super spider

Photos by Don Typond



"OF COURSE it's a road machine. Alfas have a long racing history, true, but the factory also has to sell cars, and to do this we have to give customers a decent ride and enough power at the bottom end so they can handle traffic", said Karl Grassow, Service Director of Hoffman Motors. Later, Lou Comito (Huntington Imported Cars), owner and usual driver of our test car, added, "Karl is right. The car is a production car and is designed as a road car. This particular one was set up for *go;* but with a few simple detuning devices we use it in close traffic, too. And you wouldn't want a better machine to take to the corner drug store or around Lime Rock!" This about sums up our impressions of the Super Spider.

The term Super Spider is the terminology preferred by the factory. Actually, the SS is the newest, and by far the hottest, in the Veloce series. But let's take a look at Alfa offerings one at a time.

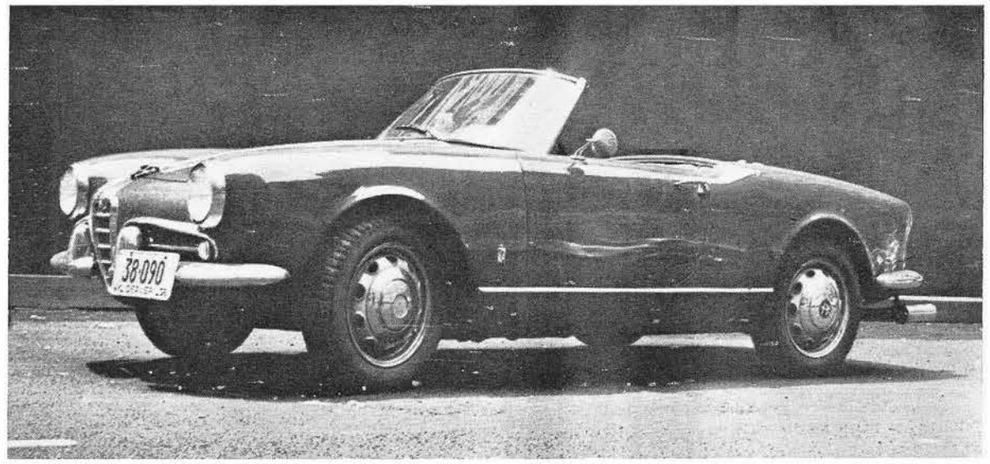
The production Giulietta Sprint engine is fitted with a single Solex two-stage carburetor, which with an 8.0 compression ratio produces 70 hp @ 6000, as it appears in the least expensive Spider. The other increment is the Veloce or Super engine with dual Webers and 9.1 CR producing 103 hp @ 6000 rpm, SAE (identical with the previously publicised 90 Italian). Our Alfa began to red line at 6700, which according to the factory is the absolute safe maximum; however Lou Comito said that for unsustained operation we could go as high as 7200 rpm.

Coming down the chute at Lime Rock and accelerating into the straight, it occurred to us that 1300 ccs unblown shouldn't go this fast, and certainly shouldn't accelerate so savagely. The Alfa Super Spider is by far the fastest 1300 the writer has driven, one of the sweetest handling, and the car in which he felt the most confident at high speed on the twisty Lime Rock bends. After a few careful laps, one pounds up to the corners and literally throws the car at them. The car will forgive you if you overextend; the "line" is not nearly so important as it is with less tolerant cars. To the onlooker, the car may appear dreadfully out of shape because of its heavy lean, but the driver is undisturbed by it and always feels that the car is completely the slave to his slightest whim, which it is.

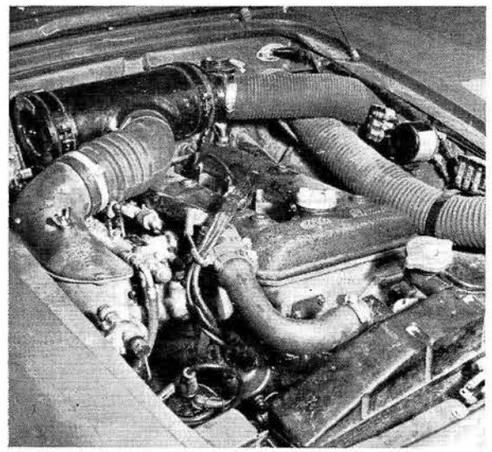
Once, roaring down the straight at one-hundred-plus, the writer "chickened-out", taking the escape road. The next time around, the approach was not much better, but a stab at the brake and a hard turn of the wheel threw the tail out to put the car into a perfect attitude for the sweeping right hander. Where it tightens up at the end, a dive into the apex gives the impression of extreme velocity, but an educated toe at work on the accelerator and hands that move quickly over but short distances on the wheel will seem to get one around any turn every time. As we said before, the lean, though appreciable, is imperceptable to the driver.

Lean, or body roll, has a bad reputation that it doesn't deserve. It is the result of phenomena that have certain very important advantages — among which is a gradualness in change of attitude. The Alfa rolls under really hard cornering, loading up the outside tires heavily. At the same time, the tail slides out gently, breaking the rear away so gradually that there is ample time to apply throttle and make steering corrections. In other words, you don't have to be a great driver to "press on" through a corner.

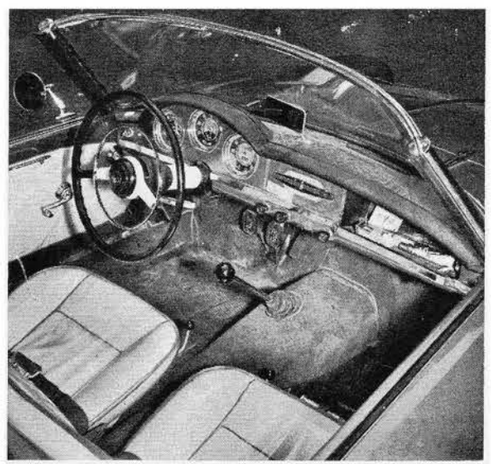
Diving into apex at speed, Super Spider leans heavily but doesn't worry the driver. Tail eases out gradually.



Graceful, elegant Farina body, the ideal compromise, blending road comfort, pride with racing functionality.



Engine is tilted a few degrees to make room for dual Webers. Collection box is fed through tubing over engine. Instrumented interior has quality tone about it.



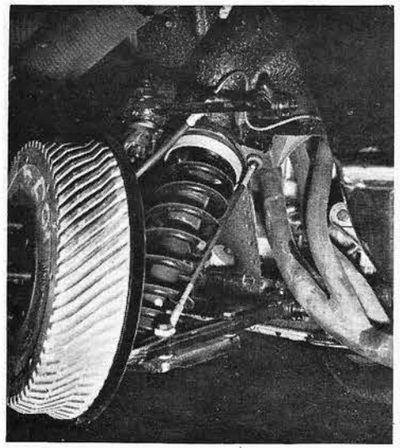
Now, let's take a look at the suspension that contributes to this excellent roadability. The front *ifs* is comprised of a lower wishbone with a single ball-jointed upper control arm. The bottom of the soft coil spring is based on the A-frame, the spring running diagonally upward and inward into a frame member. A tubular-type double-acting shock absorber is anchored inside the coils. Upward wheel travel is limited by the conventional rubber bumper; downward travel by a flexible cable anchored between the frame and the lower wishbone. Each front wheel is fitted with a monstrous aluminum-bonded diagonally-finned brake drum that almost completely fills the recess inside the wheel, which is vented to allow the passage of cooling air.

The rigid rear axle is anchored by two coil springs with concentric tubular double-acting shocks inside. Under extreme loading, the axle will bottom out against rubber bumpers, and two flexible metal straps limit the rebound. The axle is located by a radius rod on each side that attaches to a bracket on the underside of the axle, and anchors to the chassis at a forward point. For sideways location, there is a welded-tube triangular-shaped bracket located above the axle immediately to the left of the differential. This fastens to the frame at two points: the third point terminates at a ball joint attached to the axle housing. At either end of the axle, and nestling inside each vented wheel, is a large drum, slightly smaller than the front and vertically finned for cooling.

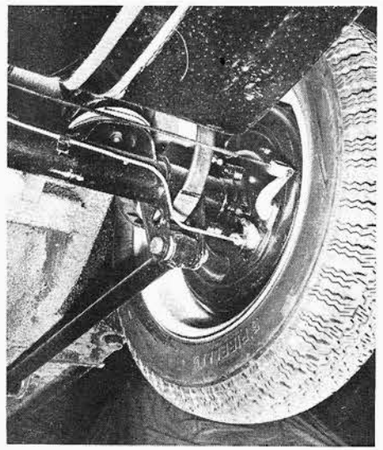
As may be expected from a car designed for competition, the brakes are impeccable. The writer made at least a dozen fast laps at Lime Rock, really boring into the corners before standing on the brake, often at 100 mph speeds, and there was never any indication that the brakes were being overworked. Fade was nil, and there was always the same constant high-decelleration with very little pressure on the pedal. The car is made to stop at whatever speed the engine will drive it.

Thirteen hundred cubic centimeters is not the displacement of a big engine. By American standards, it's about equal to the volume of *two cylinders* of a modern vee-eight; even by European standards the engine is on the small side

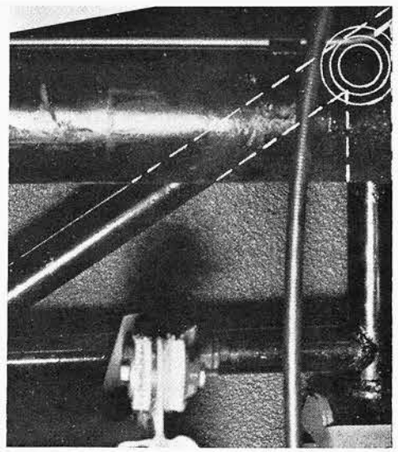
Most of the loading transfers to the outside tires, insuring lots of bite.



Left to right: Alfin drum, upper control arm, spring-shock, lower A-frame with flex rebound arrester, exhaust headers.



Rear live axle is suspended by soft coil springs, located by sturdy radius rods. Pirelli "Cinturato" tires are standard.



Side location of rear axle is controlled by triangular bracket that attaches to frame, ball jointed at axle (drawn).

Alfa Romeo Super Spider *Continued*

of average. How, then, can it develop 103 hp and move a full-sized sports car through violent acceleration to better than 100 mph speeds? Well, let's take a look at the engine.

The engine is an in-line four that is just about square, with an edge of a single millimeter going toward the stroke. Compression ratio is 9.1 to 1; but perhaps the 1.28 hp/cu. in. output is possible because of the double overhead chain-driven camshafts that give the engine what seems like unlimited rpm. Revs in any gear are limited only by the amount that the driver is willing to overrev. Stroke is approximately three inches; therefore the piston speed in ft/min numerically approximates one half the rpm.

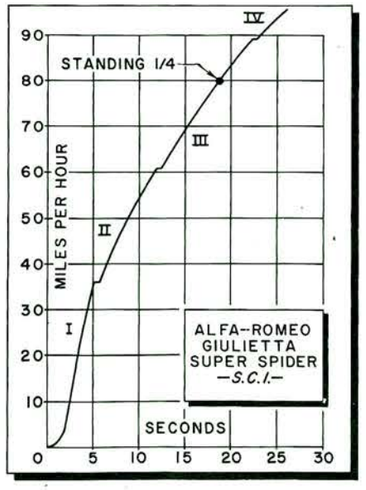
In the carburetion department, two dual-throat Webers sit on the right side of the engine, which is slightly angled to the left of the vertical to make room for the Webers. These carbs are attached by a small manifold that acts, in effect, as a spacer, and the carbs follow the tilt of the engine.

The jets in our test car were a bit too big; the engine would flood and choke up under 3000 revs, and on any sharp left hand turn. To accelerate cleanly out of the only left hander at Lime Rock, it was better to use 2nd gear so that the engine would clear as quickly as possible. Lou has since found the correct combination.

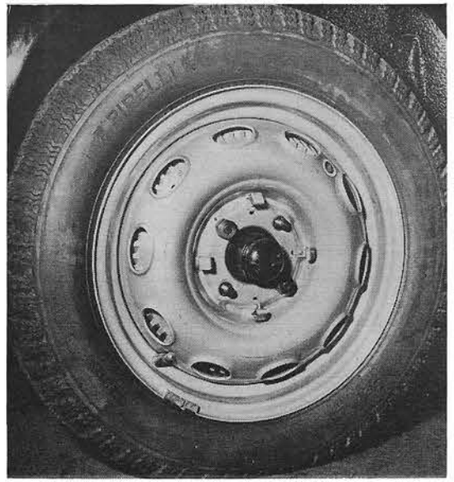
Fresh cool air is ducted from a scoop on the left through flex tubing into a large filter mounted atop the rear of the engine. Another flex tube feeds from the filter into a collection box closed over the air openings of the carbs, supplying cold air.

Exhaust is ducted from the bottom side of the tilted engine through headers that form into a four-into-two, two-into-one that leads into a small expansion chamber. Normally, another large chamber is located amidship, and there is a still smaller one immediately before the end of the pipe. It is a very efficient way to eliminate high back pressure at high revs without shattering the ear drums of the people in the cockpit. However, Lou's car is "SCCA-stock" which means straight pipes all the way. With the racket-buster off, the exhaust took on a beautiful hammering note up around 6000.

The driver sits in a spacious bucket seat with the shifting lever at the spot where his right hand would fall naturally



Huge diagonally-finned Alfin front drum almost completely fills inside wheel. Wheel dished, liberally vented, for air flow.



(The transmission is synchronized in all four forward gears). The instruments are hooded to prevent reflection on the windshield, and are contained within three circular faces. To the left are the small instruments – amps, heat, generator and fuel; center gauge is the tachometer; to the right the speedometer-odometer combination. Seats are fully adjustable fore and aft, and the windows are of the roll-up variety. Even though the car goes, it doesn't do so at the expense of road comfort.

The car is not without fault; no machine is. The one thing that impressed us is that this particular model is downright unhappy creeping through traffic unless it is detuned. The cam, carburetors, and clutch much prefer to be given their head. But to say that we liked the Super Spider is not enough; it is a truly marvelous machine. It has enough power on tap to sustain a drift: handling is superlative; predictable and forgiving. The interior has a quality tone about it, and the body, designed and built by Farina, has not sacrificed graceful elegance to the expediency of competition styling. It is unquestionably worth the moderate ($3685 POE N. Y.) asking price.

Len Griffing

ALFA ROMEO GIULIETTA "SUPER SPIDER"

Price	$3686
U.S. Importer	Hoffman 443 Park Ave., New York 22, N.Y. 9130 Wilshire Blvd., Beverly Hills, Calif.

PERFORMANCE

ACCELERATION:

From zero to	Seconds
30 mph	4.4
40 mph	6.5
50 mph	8.8
60 mph	11.7
70 mph	15.4
80 mph	18.8
90 mph	23.3
Standing ¼ mile	18.8
Speed at end of quarter	80 mph

SPEED RANGES IN GEARS: (2000-6800 rpm)

I	11-36 mph
II	18-61 mph
III	26-89 mph
IV	35-top

SPEEDOMETER CORRECTION:

Indicated Speed	Timed Speed
30	25
40	35
50	43
60	52
70	63
80	73

SPECIFICATIONS

POWER UNIT:

Giulietta	In-line four cylinder, water-cooled
Valve Operation	Double overhead cams, vee-inclined valves
Bore & Stroke	2.91 x 2.95 in (74 x 75 mm)
Stroke/Bore Ratio	1.01/1
Displacement	79 cu in (1290cc)
Compression Ratio	9.1/1
Carburetion by	Two Weber 40DCO3 twin choke side-drafts
Max Power	103 bhp (SAE) @ 6000 rpm (90 net bhp)
Idle Speed	1200 rpm

DRIVE TRAIN:

Transmission ratios	
I	3.31
II	1.96
III	1.35
IV	1.00
Final drive ratio	4.10 (4.55 optional)
Axle torque taken by	Radius rods upper A-frame
Platform frame	Welded to body panels
Wheelbase	86½ in
Tread, front and rear	50 in
Front suspension	Coils, lower wishbone, single upper arm, anti-roll bar
Rear suspension	Rigid axle, coil springs, lower radius rods, upper A-bracket
Shock absorbers	Girling telescopic
Steering type	ZF worm end roller
Steering wheel turns L to L	3
Turning diameter, curb to curb	33 ft
Brakes	Finned, bi-metallic drums, 2LS front
Brake lining area	139.5 sq in
Tire size (metric)	155 x 380 (equiv. to 5.60 x 15)

GENERAL:

Length	134 in
Width	61 in
Height	51 in
Fuel capacity	14 U.S. gallons

RATING FACTORS:

Specific Power Output (SAE)	1.34 bhp/cu in
Piston speed @ 60 mph	1765 ft/min
Speed @ 1000 rpm in top gear	17.7 mph