

# THE BIMOTA SB2

The SB2 is more than cleverly joined chrome moly steel, rampant, heaving fiberglass, zippy technical ornamentation and obsessive attention to detail. It is a ticket to a place you've never been before. This is what makes it, God help us all, worth the money.



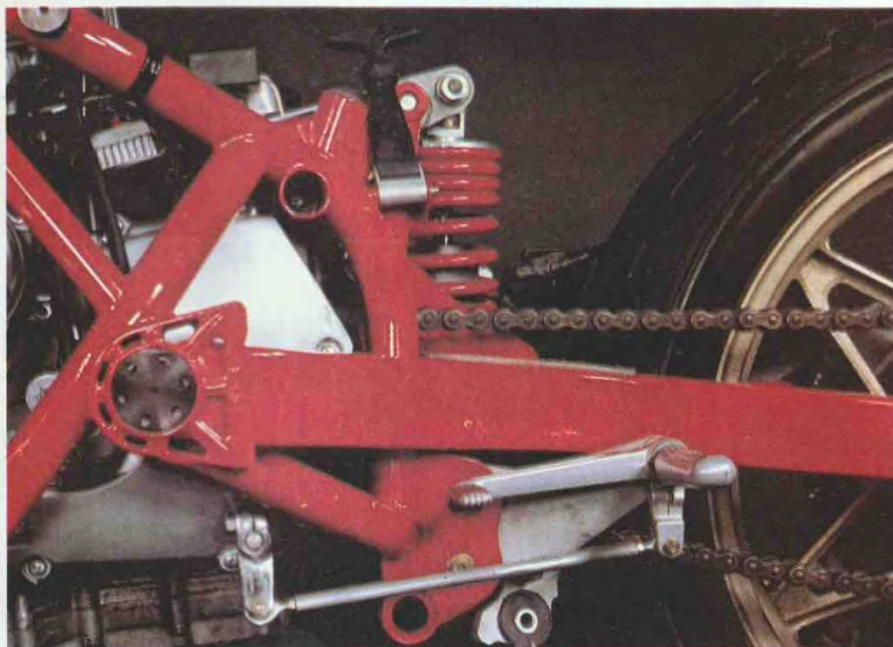




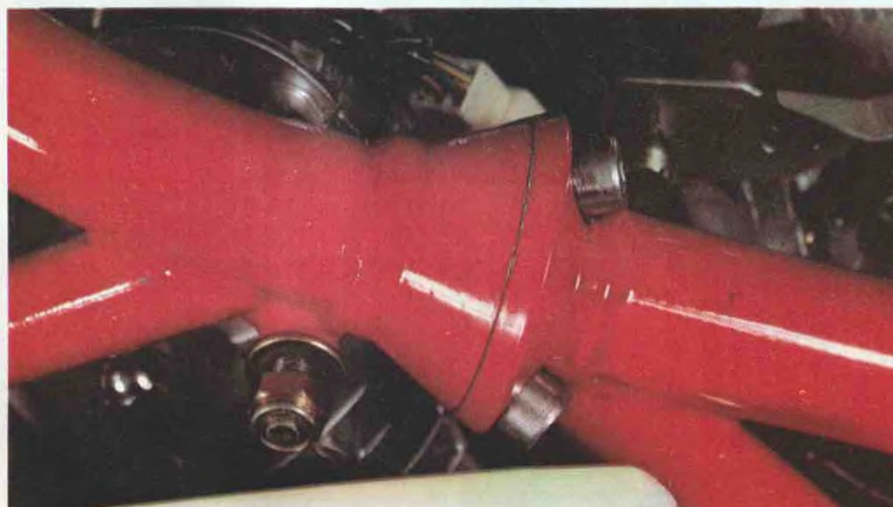


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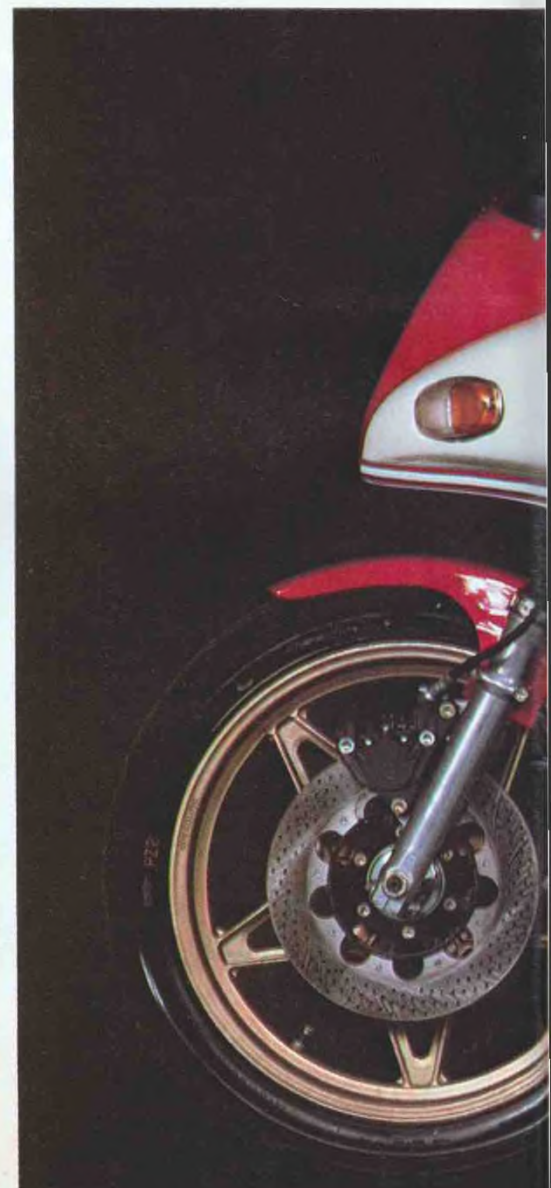
● IF YOU'RE LOOKING FOR REASONS TO BE suspicious of the Bimota Suzuki SB2 chassis kit, try these on for size: it costs \$6500, and you have to supply the engine and electrics; it replaces a chassis which for all intents and puposes is an excellent one and has been so lauded; its surface has been almost mortally overswooped, with broad black and red panels edged in contrasting pinstripes diving through and across enough formed fiberglass excursions and redoubts to wring a cry for mercy from the hardest-bitten Kalifornia Kustom Kar freak pancaking down Van Nuys Boulevard of a Wednesday evening; it has clip-on handlebars, rear-set footpegs and the most uncomfortable seat this side of the rail Jennings always claims they rode him out of town on the other night; and the frame, which is really what it's all about, is painted bright Italian racing red—a suspicious color, since it invariably appears on vehicles which have never



Swing arm pivots on outboard bearings located concentric to the countershaft; chain tension never varies.



Bimota's forward frame portion attaches to the rear assembly with a pair of aircraft-style conical joints.







Bottom of shock attaches directly to swing arm; the top is linked to it through an aluminum rocker arm.

been to Italy and would fall over dead if they ever set wheel on a race track.

These were the precise suspicions we harbored as Paul Puleo, owner of Moto Sport Inc. and the importer of the Bimota line for all of the United States and New Jersey, rolled the SB2 off the trailer and into the *Cycle* Magazine shop. There were chuckles of derision mingling with cat-calls of contempt, and this went on until we put the little Bimota on the scales. With 20 liters of gas in the tank (5.2 gallons) the SB2 weighed 472 pounds—fully 60 pounds lighter than a standard Suzuki GS750.

Hmmm, we thought. Out came the tape measure. The Bimota's wheelbase was 54.75 inches—4.25 inches shorter than the GS750's; its seat height was 1.75 inches lower, its fork assembly three inches shorter—but it carried its engine fully an inch higher off the ground than the stock GS.

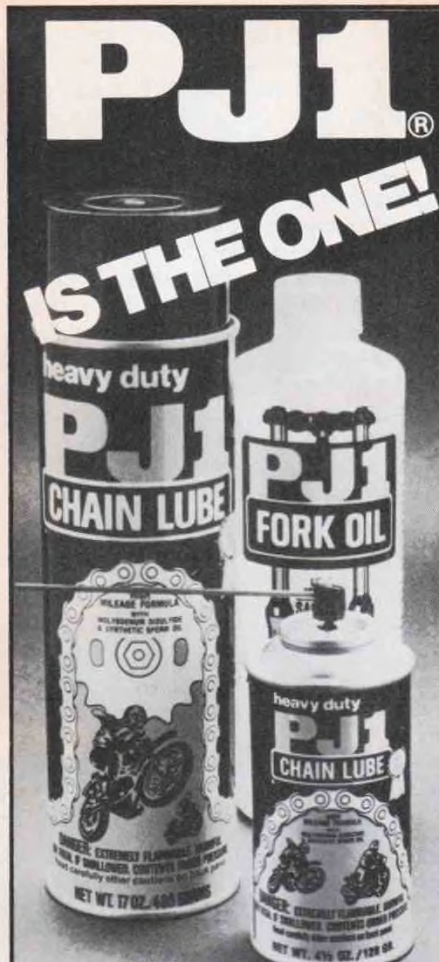
After these preliminary measurements we got down to some serious eyeballing. The SB2 is a monoshocker, with a single automotive racing shock mounted ver-

tically in front of the rear tire. The lower end of the shock connects directly to the swing arm, but the upper end attaches to the chassis with a centrally supported rocker arm. One end of the rocker locates the top of the shock while the other end connects to the front of the swing arm with a double-Heim-jointed link rod. The bike's rear wheel travel of 5.5 inches is almost matched by the front wheel's 4.5-inch travel dimension; likewise the rear suspension's trickery is almost matched by geometry jiggery-pokery at the front. On the Bimota, the steering head axis is 24 degrees from the vertical, while the fork pipes are carried at 28 degrees. Bimota gives as a reason for this, reduced trail change under severe braking. Also, the trail dimension can be adjusted to one of two settings—3.9 or 4.7 inches—by rotating eccentrics, secured by set screws, held in the triple clamps.

But the most beguiling aspect of the Bimota SB2 is its swing arm. Long (24 inches, almost half the wheelbase of the complete motorcycle), strong (box-sec-







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**BIMOTA SB2** ..... Continued from page 31  
tion steel, 1.1 x 2.1 inches) and beautifully  
gusseted, the swing arm pivots on tapered  
roller bearings supported on each side by three  
outrigger frame members. These bearings are  
concentric with the transmission countershaft;  
the result is that the final drive chain can  
operate at constant tension, which not only  
makes life easier for the chain but isolates the  
chassis from any influences the chain may  
ordinarily have on it.

By now we were becoming properly  
respectful. Most contrivances like this look  
better the farther away they are. The Bimota  
rewards close scrutiny, and the closer the  
better. Two examples: the chassis embraces  
the 750 Suzuki so tightly that there is no room  
for the four chrome-plated covers attached to  
the ends of the cam cover, and Bimota supplies  
a blueprint which highlights this detail; and  
instead of manufacturing, or having Brembo  
supply, a front brake line splitter to connect  
the single master cylinder to the two brake  
calipers, Bimota uses a special boss cast  
integrally with the lower triple clamp, thus  
saving weight, complication and expense. Triple  
clamps and footrest supports are milled from  
solid billets of aluminum; the footrests and  
foot control levers are forgings; and the WM3  
and WM6 wheels—Italian "Speedline"—are  
genuine magnesium.

Once you get beyond the bodywork's  
attempt to reproduce a Calder design for a  
Boeing 707, you notice one of the most  
surprising aspects of the Bimota: the quality  
of its fiberglass. Strong, clean and symmetrical,  
the glass work is a match for anything we've  
seen anywhere—and infinitely superior to the  
scabby, warped and tormented fiberglass that  
normally comes from Italy.

Bimota is a small (20-man) organization  
in Rimini owned and directed by Massimo  
Tamburini and Giuseppe Morri, who started  
the company essentially as a hobby six years  
ago. Walter Villa and Franco Uncini at one  
time used Bimota chassis on their GP Harley-  
Davidsons, and Johnny Cecotto's world  
championship-winning Yamaha 350 (1975) was  
also Bimota-equipped.

Certainly the SB2 chassis is up to—if not  
substantially beyond—road racing quality.  
If you were an inspired welder, a superlative  
machinist and a brilliant designer and loved  
motorcycles more than anything else, the  
Bimota chassis is what you'd hope to build  
for yourself. It's light—just over 20 pounds—  
and it gives every impression of being terribly  
strong. Made of thin-wall chrome-moly steel  
tubing of differing diameters, the chassis  
uses the engine as an integral load-carrying  
member. Twelve separate tubes converge on,  
and locate, the steering head; eight members  
comprise the chassis' aft section. All but six  
of these twenty chassis tubes are straight,  
which is the way tubes like to be if they are  
to resist deflection. The main

tubes which connect the top of the steering  
head with the bridgework supporting the top  
of the rear shock absorber are connected in  
pairs with conical joints. Each joint is  
secured with three Allen-head bolts. These  
are the only points at which the front  
segment of the Bimota chassis is directly in  
contact with the rear. The engine—which as  
a chassis member has far more strength and  
integrity than any amount of frame tubing—  
forms the primary bridge between steering  
head and swing-arm pivot structure. The  
chassis' front part uses the forward motor  
mount bosses; the rear part bolts up to the  
back of the engine.

The main bodywork item, that part which  
accommodates the fuel tank and seat, is  
supported on four individual prongs, two  
horizontal at the front and two vertical at the  
rear, which engage four rubber-bushed  
receptacles welded to the chassis. Disconnect  
two battery lead junctions and one gang plug,  
release the two rubber securing straps in front  
of and below the seat, disconnect the fuel line,  
and the entire upper body lifts off—revealing  
what has to be the most rigorously gusseted  
steering head in all of motorcycling, a rack  
of air-cleanerless standard Mikuni carburetors,  
an electrical junction complex (supplied in  
the kit), the top part of the Suzuki engine,  
and all the craftsmanship, ingenuity and  
quality which make the Bimota worth the  
money.

It wouldn't be worth dime one if it didn't  
work out on Racer Road—and boy, does it  
ever work. Granted, the SB2 is hardly the  
most comfortable motorcycle ever created—the  
seat is the pits, the clip-on angles are fouled  
up, the shift lever pitch is wrong, and the  
suspension contributes a whole new dimension  
to the practice of self-abuse—but the bike can  
get into, around and out of corners like only  
one other motorcycle we've ever ridden: the  
Suzuki RG500 square four GP road racer. The  
Ducati GT750 and 900 and 750 Super Sports  
are as stable at high speeds, but their wheelbase  
length (about 60 inches), cornering clearance  
limitations and rather extreme front-end  
geometry make them less than nimble. The  
Bimota is far heavier than the RG500, and it  
carries its center of gravity significantly higher  
since the 750 engine is much wider than the  
500. But it generates the same feeling of  
absolute solidarity at high speeds and through  
all kinds of camber changes and surface  
irregularities, remaining all the while willing  
to change direction, attitude and speed. Our  
only handling complaint—which really is more  
of an observation—concerns using the front  
brake going into a decreasing radius corner.  
Do so and you can feel the bike's front end  
wanting to return to a vertical attitude, a  
characteristic hardly unique to bikes with  
high centers of gravity and forward-mounted  
calipers. The bike does nothing else which  
can be described as "needing im-

(Continued on page 119)



provement." It has handling integrity the limits of which cannot be explored on the street, no matter how much of a Harry Hotspur you consider yourself to be. Its tires (a matched set of late-model Michels, only one of which is, to our knowledge, DOT-approved), its suspension settings, its weight distribution, its geometry, its wheelbase length, its cornering clearance and the strength of its frame all work together to provide handling response and stability that's beyond our critical expertise. As hard as we could ride it, on the fastest, meanest roads we could find, it remained at the end what all of its technical ornamentation promised at the beginning: perfect.

Which, when you get right down to it, it damn well ought to be, considering the price. This raises an interesting question: does the SB2 really belong on the street? There are those who feel that motorcycles which cost close to \$8000 complete, and can do what the SB2 can do, belong only one place: the racetrack, where they can knock heads against other \$8000 motorcycles, carry riders who are worthy of the motorcycles' designers and builders and live life at the edge. The bike has been built for absolute, maximum speed. For it to be happy there, its creators have made it their business to do perfectly those things which are important at the limit,

and only at the limit. This is what makes the bike so expensive: a dime buys you 20 mph, but high style at 130 costs quite a bit more.

You can spend the money it takes to own a Bimota, all right—the folks at Moto Sport will be only too glad to help you—and you can own the Bimota chassis, and the Bimota fiberglass, and the Bimota suspension, and that obsessive Bimota attention to the infinitesimal. But unless you ride the bike hard, you've bought Bimota parts without having achieved ownership of the real thing. Going faster than you've ever gone before, and feeling safer than you've ever felt doing it, is what justifies spending \$6500 for some fiberglass, tires, wheels and cleverly welded chrome-moly. The racetrack is the only rational place to do that sort of thing—and purists would argue that the racetrack is where the Bimota belongs.

Others, less doctrinaire and less pure, would disagree. Motorcycling, they would say, is for fun; owning something like the Bimota, even if it never turns a Michelin in anger, would be wonderful fun. To be close to that kind of conceptualization; to possess the product of detail work bordering on the microscopic; and to have in your very own garage a motorcycle that can do what the Bimota can do—that's fun, on or off the racetrack. ●

## PIPELINE ..... Continued from page 16

passenger to enter and find his kart-type bucket seat forward of the engine.

Once seated, Biland's passenger, Ken Williams of England, assumes a passive state of coexistence, able only to waggle his head from side to side and lacking freedom to perform feats of acrobatic daring. It was Williams' inactive role that sparked the "Ban Biland" clamor from a section of the sidecar competition. The Beo would, the opponents cried, strip sidecar racing of its essential spectacle, alienate spectators and present Biland with an unfair advantage—when he won. In fact, the anger may have been contrived, for anyone looking ahead might well have conceived of the Beo—or something similar—appearing on the horizon.

When Eric Oliver unwrapped his Norton-Watsonian "kneeler" in 1954, he started one thing that led to another. The machines became lower and lower as mini-car racing wheels and tires took over. In time, some brave souls started to experiment with wild adaptations of car suspensions with variable results, usually discouraging. But later on, hub-center steering and transverse suspension were developed to the point where they superceded leading-link forks and rear swing arms, which had been the rage for years. And throughout the process of experiment, more and more passengers found they could spend longer in the chair than out, especially when stability was im-

proved with a steerable third wheel.

Since 1966 it has been fairly obvious that someone would eventually get a "three-wheeled car" as right as it could ever be and would therefore create a sidecar racing revolution. At the moment, the thing is Biland's dreaded Beo, although, significantly, the Swiss transports a back-up conventional machine to the GP circuits "just in case."

The most unreal thing about the Beo is its price. Reputedly it cost \$19,000 to put the three wheels on the tracks. That seems like a disproportionately high investment to win a relatively unimportant world championship. But cost and controversy are well down Biland's list of priorities; his main concern is the need to win, and apparently there are enough sponsors of like mind to turn his ambition into reality.

With three sidecar GPs over, and Biland victorious in all three of them (one win was on his conventional rig), the FIM is being urged to cool the controversy by ruling on the Beo. If they find in its favor, they'll make lots of enemies among the sidecar crews. If they attempt to qualify their own rules and pronounce the Beo illegal, Biland will be proved guilty only of the crime of winning.

A cynic might say that since the so-called sidecars have no obvious connections with motorcycles—what the hell are they doing in motorcycle racing anyway?

—Jim Greening

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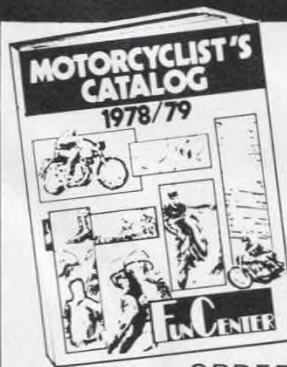
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