

## LATE NEWS FROM BMW:

Since we received this exclusive factory coverage from our European Correspondent, we've been alerted by the Hoffman Motor Car Co. that great things are happening. Full production and active retailing of the 507 model will bring the price down to \$4,988 FOB New York, complete with heater and leather upholstery. The whole effort of the Hoffman sales organization will be placed behind this car, and there should be pilot models at selected sub-distributors across the country, by the time you read this. By July they should be coming in off the Munich line, side-by-side with plenty of spare parts.

At the same time some detail changes have been announced.

The interior has been widened slightly, by altering the door trimming, and the dash has been changed once and will be redesigned again to eliminate traces of "cheapness" in appearance. Shifting the fuel tank back next to the low-placed spare has opened up some storage space behind the seats. Up front, a higher compression ratio and a switch to SAE rating brought the engine output to 205 bhp. This change, and the resulting new performance figures, are reflected in our specification chart but not in the text. Very much later this year, if all goes well, 507's should be seen in SCCA Production competition, with the aim of publicizing and improving the breed.

## Beauty From Bavaria



Italianesque styling of 507 has been talk of sports car world since car was introduced well over a year ago. Hardtop can be bolted on without removing cloth top. Power has now been stepped up to match looks and handling, which are tops.

By **JESSE ALEXANDER**

**B**ESIDES being the home of the best beer in the world (Milwaukee notwithstanding) Munich, Germany has other attractions. Churches and museums for those who like that kind of entertainment, a Bohemian area of town that rivals anything to be found anywhere else in the world, and for the lover of fine automobiles, Munich is the home of BMW, Bayerische Motoren Werke, which when simply translated means Bavarian Engine Factory.

Aside from making the Isetta, BMW is turning out a luxury line of passenger cars that rival the best made anywhere in the world. This manufacturing program consists of the Model 501 2 liter, 6 cylinder sedan, and the Model 502, which is available with either a 2.6 or a 3.2 liter V-8. The Model 505 is a special long-chassis job made for a seven-passenger limousine body built outside the factory. But as of the 1955 German Automobile Show at Frankfurt, two new models were added to the BMW line: the exciting Models 503 and 507 were the hit of the show, and the former has gone into production. It's a four-place luxury type of

sports-touring car that comes either as a hard top or as a convertible. It is a truly lovely automobile but expensive.

Actually, any BMW lover will give you ten good reasons why BMW build nothing but the best. They have to be good if for no other reason but that otherwise they are way overpriced. For instance, the six cylinder four door sedan is almost a thousand dollars more than its biggest competitor, the Mercedes-Benz 220S.

There is a drive from certain quarters inside the factory to get back into automobile racing, and with a large and well organized motorcycle racing department run by Alex Von Falkenhausen, BMW could have the basis for a first-class racing organization. At the present time a lack of money is holding things up. They have a design for a two liter sports car, but it is extremely doubtful if it will ever appear on the track.

The closest that BMW has yet come to building a competition car is the new Type 507 "Touring-Sport Wagen" which is the subject of this report. When you bring up the

### FACTORY TEST DATA TEST CAR: BMW 507 CONVERTIBLE

## TEST CONDITIONS:

Number aboard	Two
Top position	Up
Temperature	60°F, dry concrete surface
	Wind 10 mph.

## PERFORMANCE

## TOP SPEED:

	1956	1957
Two-way average	127 mph.	139 mph.

## ACCELERATION:

	Seconds	Seconds
From zero to		
30 mph	3.1	2.9
40 mph	4.4	4.2
50 mph	5.6	5.5
60 mph	7.2	7.0
70 mph	10.6	9.4
80 mph	14.3	12.3
90 mph	18.3	15.6
100 mph	23.0	19.4

## HILL CLIMBING ABILITY:

2nd gear	33% at 43.4 mph
3rd gear	19% at 62.1 mph
4th gear	11% at 86.9 mph

## SPEEDS IN GEARS; AT 6000 RPM:

I	37.9
II	62.1
III	94.4
IV	128.5

## SPEEDOMETER CORRECTION:

## CORRECT THROUGH RANGE

## FUEL CONSUMPTION:

Average driving (under 60 mph) . . . 25 mpg

## BRAKING EFFECTIVENESS:

Pounds Pedal Pressure	
10	7%
20	36%
30	61%
40	76%
50	86%
60	89%
70	90%
80	90%

## SPECIFICATIONS

## POWER UNIT:

Type	90° V-8
Valve Arrangement	Overhead in-line, pushrod
Bore & Stroke (Engl. & Met.)	3.23 x 2.96 ins (82 x 75 mm)
Stroke/Bore Ratio	0.92/1
Displacement (Engl. & Met.)	193.2 cu. ins (3168 cc)
Compression Ratio	8.2/1
Carburetion by	2 Zenith 32 NDIX downdraft
Max. bhp @ rpm	SAE 205 @ 5700
Max. Torque, lb ft @ rpm	174.2 @ 4000

## DRIVE TRAIN:

Transmission ratios	
I	3.39
II	2.07
III	1.36
IV	1
Final drive ratio (test car)	3.7
Other available final drive ratio	3.42, 3.89
Axle torque taken by	Link to housing

## CHASSIS:

Wheelbase	94.4 ins.
Front tread	52.2 ins.
Rear Tread	55.8 ins.
Suspension, front	Parallel wishbones, torsion bars
Suspension, rear	Torsion bars, links to rigid axle
Shock absorbers	Koni adjustable tubular
Steering type	Pinion and sector
Turning diameter	36.5 ft.
Brake type	2 LS front, Alfin drums, Hydrovac booster
Brake lining area	198 sq. ins.
Tire size	600 x 16

## GENERAL:

Length	172½ ins.
Width	65 ins.
Height	49½ ins.
Weight, test car	3173 lbs.
Fuel capacity—U. S. gallons	25

## RATING FACTORS:

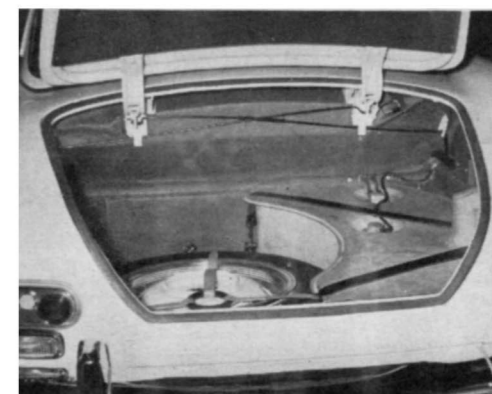
Bhp per cu. in.	1.06
Bhp per sq. in. piston area	3.13
Torque (lb-ft) per cu. in.	0.90
Pounds per bhp—test car	15.5
Piston speed @ 60 mph	1380 fpm
Piston speed @ max bhp	2460 fpm
Brake lining area per ton (test car)	125 sq. ins.



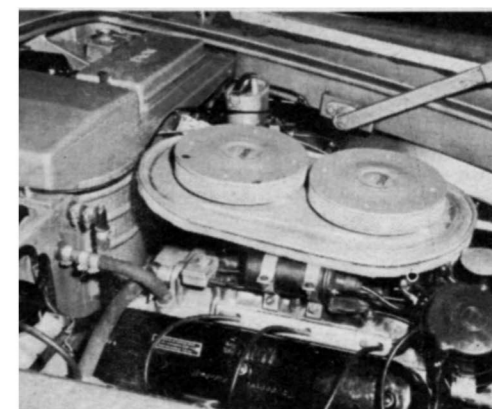
European Editor and factory man sling 507 through tight bend near works. Supple suspension gave good traction on bumpy roads.



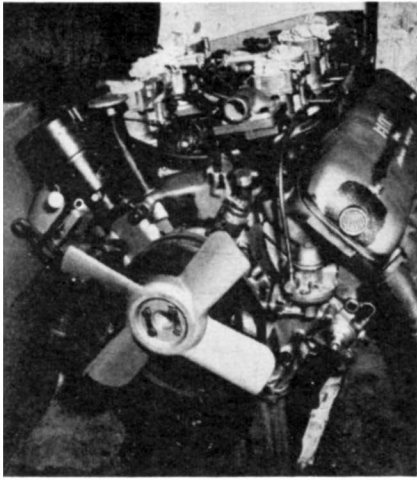
This is latest interior, which will be revised more before production. Seating position is tops, though gear lever could be moved back.



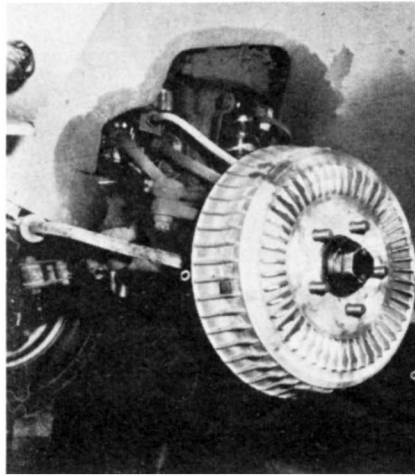
Fuel tank has been moved to right rear, to clear space behind seats for added luggage. Trimmed floor covers tank and spare wheel.



Engine room is tidy, housing Europe's only large-production V-8. At top is big, quick-opening brake fluid reservoir, near tool box.



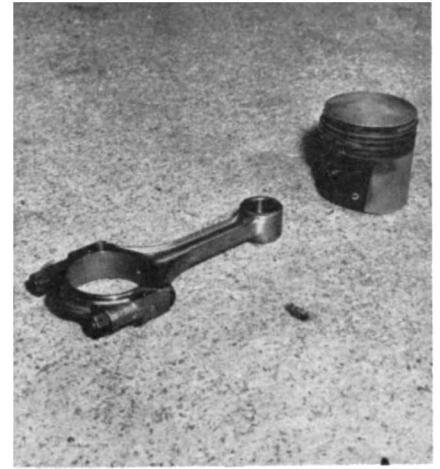
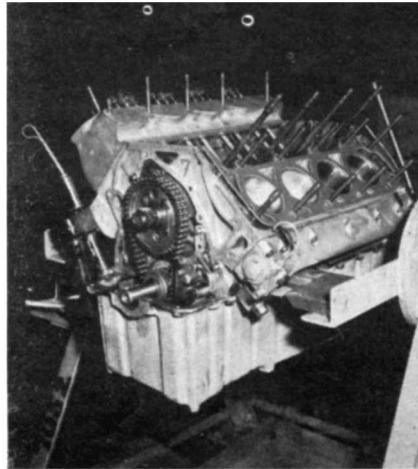
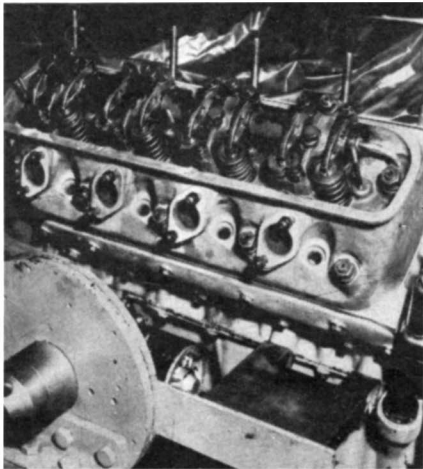
*Bypassed experimental engine for 507 had four dual-throat Solex carbs, on manifolds feeding pushrod operated valves, hemispherical heads.*



*Well-finned brakes match boosted engine power. Suspension is simple, forged wishbones; steering box is integrated with supporting pillar.*



*Five-bearing crank is husky forging, ample journal overlap. Counterweights are big, drilled for balance. Sprocket is for roller timing chain.*



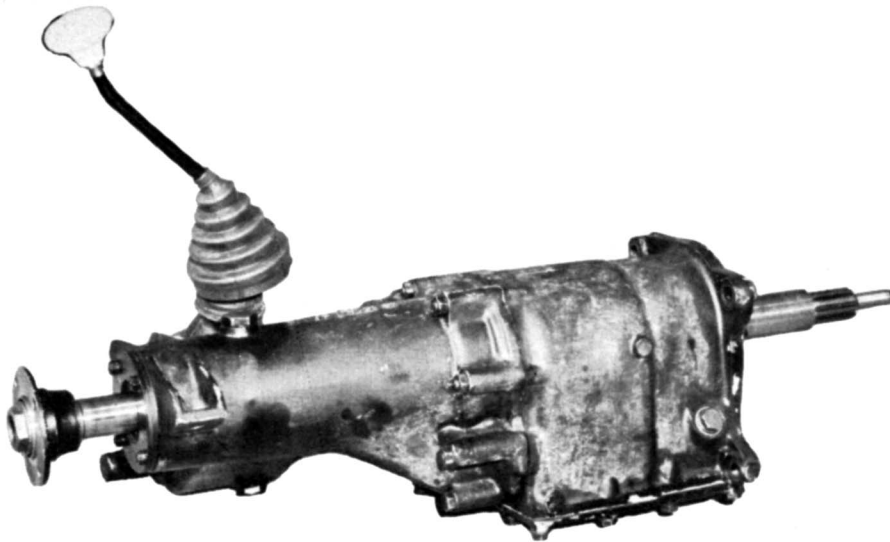
*LEFT: Rocker-box rig will be old story to users of US V-8's, but workmanship is something new. Oil feed is direct to big rocker shaft; four-port exhaust is ideal for tuning. CENTER: Block under assembly reveals cam drive and deep, stiff oil pan. At left is combination dipstick housing and crankcase breather. Oil-water exchanger is on right. RIGHT: Rod shank is slim, drilled for oil to wrist pins, but has massive big end. Bolts are big, distribute stress well around bearing shells. Piston carries four rings.*

subject of the 507, someone immediately begins to compare it with the 300 SL, so let's do that. It is by no means as fast as the SL, but it is, on the other hand, a much more practical car, having adequate luggage space, easier entrance and exit, and is a good deal easier to service.

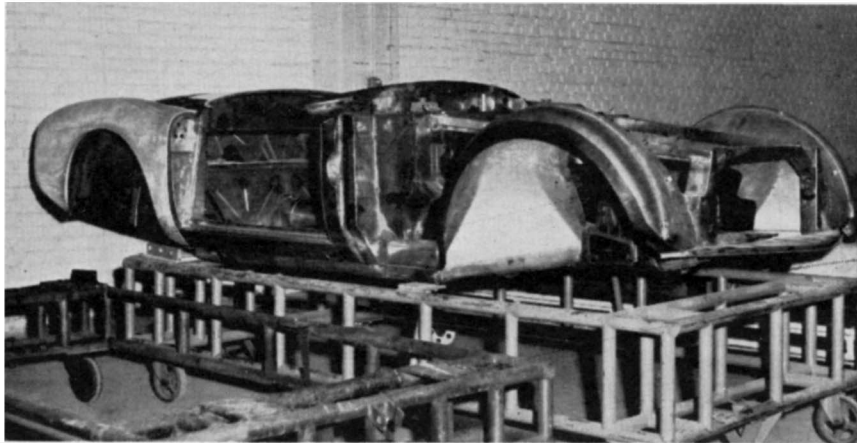
The BMW is available either as a closed or open car, with a light metal detachable hard top available at extra cost. Other extras include a metal tonneau cover, knock-off

wheels and aero screens for competition.

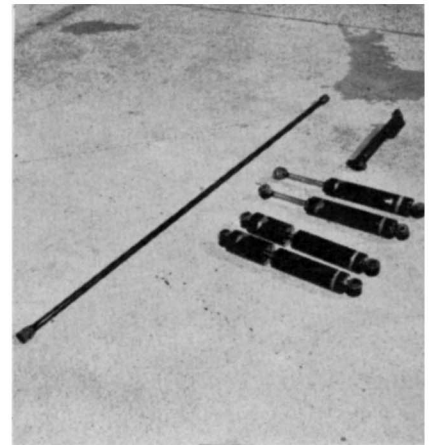
The 507 is powered by a modified 3.2 V-8 engine that is basically out of the 502. The difference is in the carburetion, the dual exhaust system, the aluminum alloy heads and the increased horsepower. Factory figures give the 507 150 bhp at 5000 rpm. When first announced last year, only 140 were quoted but now through higher valve lift ten extra horses are being found. For short periods 162 bhp



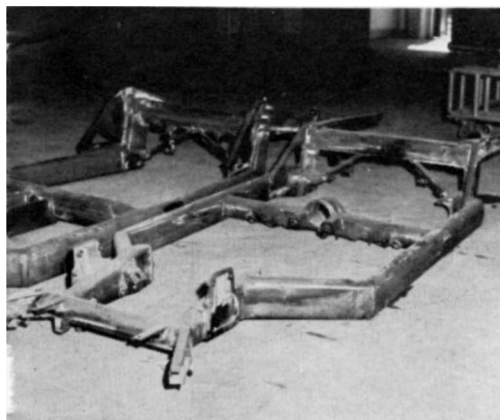
Four-speed close-ratio box, with remote control linkage on left, is built by ZF for BMW. Mounting pad at left braces engine-gearbox group.



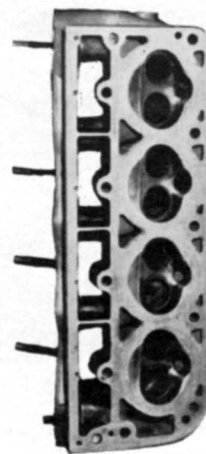
Assembly of prototype 507 shows integration of chassis with bodywork, rugged bracing from front suspension points back to cowl.



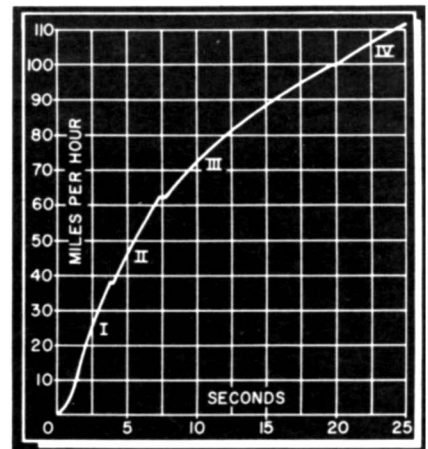
Shocks are Dutch Koni tubulars, have proven well. At top is damper for steering, rear torsion bar left.



507 chassis, seen in front of 503 unit, is lightest and simplest built by BMW. Oval tubing has high beam strength.



Studs are few, but well spaced. Shaped chambers have gouged sides to avoid valve shrouding.



can be reached at 5500 rpm. This may not seem much for this size, but extracting more power would undoubtedly introduce the problem of reliability, and BMW does not want to have service difficulties with these cars. Torque characteristics of the engine are good, maximum of 174.2 lb. ft. coming in at 4000 rpm. Dual Zenith downdraught carburetors are standard equipment. Compression ratio is 7.6:1, certainly modest by American standards. Valves are overhead, pushrod oper-

ated while the pistons are aluminum and the crankshaft rides on English Vandervell bearings.

The one thing that is unique with this lone German V-8 is the presence of wet cylinder liners. The clutch is hydraulically operated and drives a beautiful ZF four speed close-ratio gearbox. Brakes are top quality; two leading shoes at the front. The drums are light metal Alfin of generous size, and braking is assisted by the ATE "Hydrovac" booster.

Front suspension is via normal wishbones hitched to longi-

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MAY '57

## Maserati

(Continued from page 15)

Another of the little things that count is the rigid footrest for the left or clutch foot, a hallmark of the Italian competition car. What it does is let you maintain balance while steering through turns. During hard cornering a seat belt is not enough to anchor you and you have to use the steering wheel for an anchor as well as for directing the car. The Italian "dead pedal" puts the left leg to work when it's idle, stiff-legging you into the seat and leaving your arms free to concentrate upon steering alone. Some cars have a natural footrest like this. Those that don't would do well to adopt the dead pedal.

The 200 SI's steering is precise, of course, and it's perfectly mated to the car's wheelbase and power. The transmission (Porsche patent) is full synchro and one of the world's very best. It has a ball-and-socket in place of the traditional Italian gate, but the advantage of the latter's positiveness is matched by the reckless way you can sling the Porsche-type lever anywhere. It pops silently into any cog and you can yank it into First without qualms.

The 200 SI is in between the small and the big car. It has been laid out for drivers of "average size"—no taller than about five feet eleven. Anyone much taller would have some trouble getting into it. It's designed for straight-arm steering, which is very comfortable. There's lots of room between the pedals and the shift lever is perfectly at hand. The firewall is well sealed and air from the engine space is vented from the body sides in such a way that we observed no heating of the cockpit area.

The Maserati's bodywork is beautiful. Our test car had been pushed a great deal in and out of showrooms and on and off trailers. Its aluminum panelling was flawless, without a ripple. This degree of quality is unusual for Italian racing machinery, but frugality was evident elsewhere in the 200 SI. Where the body supports are welded to the frame, for ex-

ample, the welds are rough and hastily done. But the frame welds themselves (where strength really counts) are done smoothly and with great care.

Front suspension is by coil springs and wishbones and includes an anti-roll bar. Rear suspension utilizes a de Dion layout with transverse spring and a light-alloy center section.

The engine is a dohc four with two valves per cylinder in hemispherical combustion chambers. The cams, blunt as broom handles, are driven by a gear train and act against roller tappets or cam followers. These are easily adjustable, and each roller runs on 24 needle bearings. The automatically-rotated valves are inclined in the light alloy head at an included angle of 80 degrees, and each valve is closed by a pair of hairpin springs giving a closed pressure of 33 pounds, and 193 when open. Both the intake and exhaust ports are choked down to form rather tight venturis just outside the valve guides. The valve timing, with 80 degrees of overlap, is:

Intake opens 45° BTC  
closes 75° ABC  
Exhaust opens 75° BBC  
closes 35° ATC

The phenomenal output of modern racing engines is not often obtained without recourse to elaborate scientific techniques as well as trial-and-error experiment.

The 200 SI's block is of light alloy with wet liners, there are five main bearings, and the short con rods are of a broad I-section. There are two spark plugs per cylinder fed by two distributors driven by the cam-drive gear tower. Carburetion is by a pair of dual-throat 45DC03 Webbers, giving a one-carb-per-cylinder effect. All the main organs are force-lubed by means of a three-element pump which has two scavenging components and one for feed. The dry-sump system draws from a two-gallon reservoir at the rear of the car and includes an oil radiator at the front. In the tradition of the marque, this Maserati has an abundance of external oil lines. Structurally, the 200 SI is a lot like the 300S six with two cylinders lopped off.

Warren Olson, who now services our test car in Beverly Hills, describes it as a completely straightforward machine. There's nothing strikingly radical about it, nothing tricky—except for the absence of timing marks on the flywheel. To time

it you must use a degree wheel; identical timing for each cylinder is achieved by the well-known technique of juggling tappet clearance. Small nuts and bolts can be frustrating too, often lacking lead threads and differing in size.

Our test car is slated to run at Sebring with Reventlow and Pollack co-driving, as part of the factory team which will also include Fangio, Behra, Shelby and perhaps Moss. After Sebring the car will go back to Modena for servicing, and then Lance will drive it in whatever competition the European gasoline shortage permits; he has just been invited to drive in the Mille Miglia. In the eastern U.S., Bill Wonder will be running a twin to the Nürburgring car, with the latest 200 SI engine. With his excellent preparation, it should show well in SCCA events.

The availability picture for Maserati cars in the U. S. has undergone profound change in the last few months as a result of the Orsi brothers' (they own the firm and are financially famous) plan to greatly expand their production and their market. Their two-liter *gran turismo* cars now are reaching this country in substantial quantity. Competition machines, once made in such limited numbers that they were doled out only to top drivers, now are much easier to come by in one-five, two, and three-liter form. Tremendous touring machine developments are under way. A 3.5-liter Frua-bodied convertible is about to be introduced. AND a 1.5 Maserati spyder, a mass-produced car very much a match for the Giulietta, already has been shown in prototype form. They'll be made mainly for the U. S. market in lots of 1000 and promise to be one of the year's major sports car developments.

Maserati sales and service facilities are at least 1000 per cent better than they've ever been in the U. S. On the east coast there's the Maserati Corporation of America, headed by Serge Toumaniantz at Westbury, Long Island. On the other coast there's Charles Rezzaghi's excellently-equipped Mille Miglia Motors in San Francisco. And in North Hollywood there's Phil Rauch's dynamic Maserati Southwest Distributors. Heading this last operation is Harold F. Coole, who master-minded another great marque's penetration of the western U.S. It appears that men, machines and service now are available to make Maserati cars a familiar sight on American streets and road courses.

Griff Borgeson

## BMW 507

(Continued from page 21)

tudinal torsion bars, one on each side of the car. The rear end is straightforward, with a rigid axle which is located at three points: the torsion bars on either side and to the frame in the middle. Though the rear end is not a quick-change type, the ratios can be altered within an hour's time. Four adjustable telescopic shock absorbers are fitted as standard. These are the new Dutch "Koni" shocks, and BMW

seems to be completely satisfied with them.

The accompanying test data is taken from actual factory-conducted tests on the Model 507 in convertible trim. Acceleration data, top speed and braking efficiency have been made available to SCI by Mr. Von Falkenhausen, chief of research and of racing with BMW. Actually these reports tell their own tale, but the reader's attention is drawn to two acceleration times (0-60 mph in 7.2 seconds, 0-100 in 23.0 seconds), and to the maximum speed of the car. There is a difference of almost 10 mph in maximum speed when the car is equipped with a 3.42 rear axle ratio; this version

with a hard top reached 136 mph on the autobahn. This is quite good, with the weight of the car exceeding 3100 pounds fully loaded.

There is no reason at all to doubt these figures, for German automakers are famous for their accuracy and modesty in evaluating their products. SCI hopes to get a test car of the Type 507 shortly, so that a complete assessment of the car's handling qualities and overall performance can be drawn up. Until that time scrutinize the factory data closely; it's a fantastic example of thoroughness and impartiality.

Jesse Alexander