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Staying  
earthbound:  
how wings and  
spoilers work

Soccer,  
that other  
athletic  
import

Behind the  
scenes  
in Munich:  
BMW Styling

Summer  
skiing  
on the  
Continent









FOR 15 YEARS  
ALPINA HAS MEANT  
BMW'S TUNED  
AND TRIMMED  
FOR MAXIMUM  
PERFORMANCE.  
NOW THE  
SPECIALISTS  
FROM BAVARIA'S  
ALLGÄU REGION  
ARE TURNING OUT  
THEIR OWN  
CUSTOM-TAILORED  
BMW MODELS FOR  
EUROPEAN  
CONNOISSEURS  
OF FOUR-WHEELED  
DELICACIES

# Gourmet delights from Upper Bavaria

**P**ut yourself in this place, dear reader. The gourmet, and a hungry one at that, visits a Michelin-starred restaurant. Is shown the menu. The chef explains how that truffled pâté is prepared, just how the wine sauce for the coquilles St. Jacques is seasoned. Catches the scent of fresh French bread being baked before lunchtime. Sees the bottles of Bordeaux and Burgundy in the wine cellar.

And then has to leave for an appointment, skipping lunch.

Not that I'm literally that gourmet. But when it comes to cars, I consider myself something of one. So I go out to Buchloe, out on the edge of the Bavarian Alps, to visit the good people at Alpina, take the keys to one each of their three new supercars, venture forth on roads still wet and mushy from winter runoff and salt.

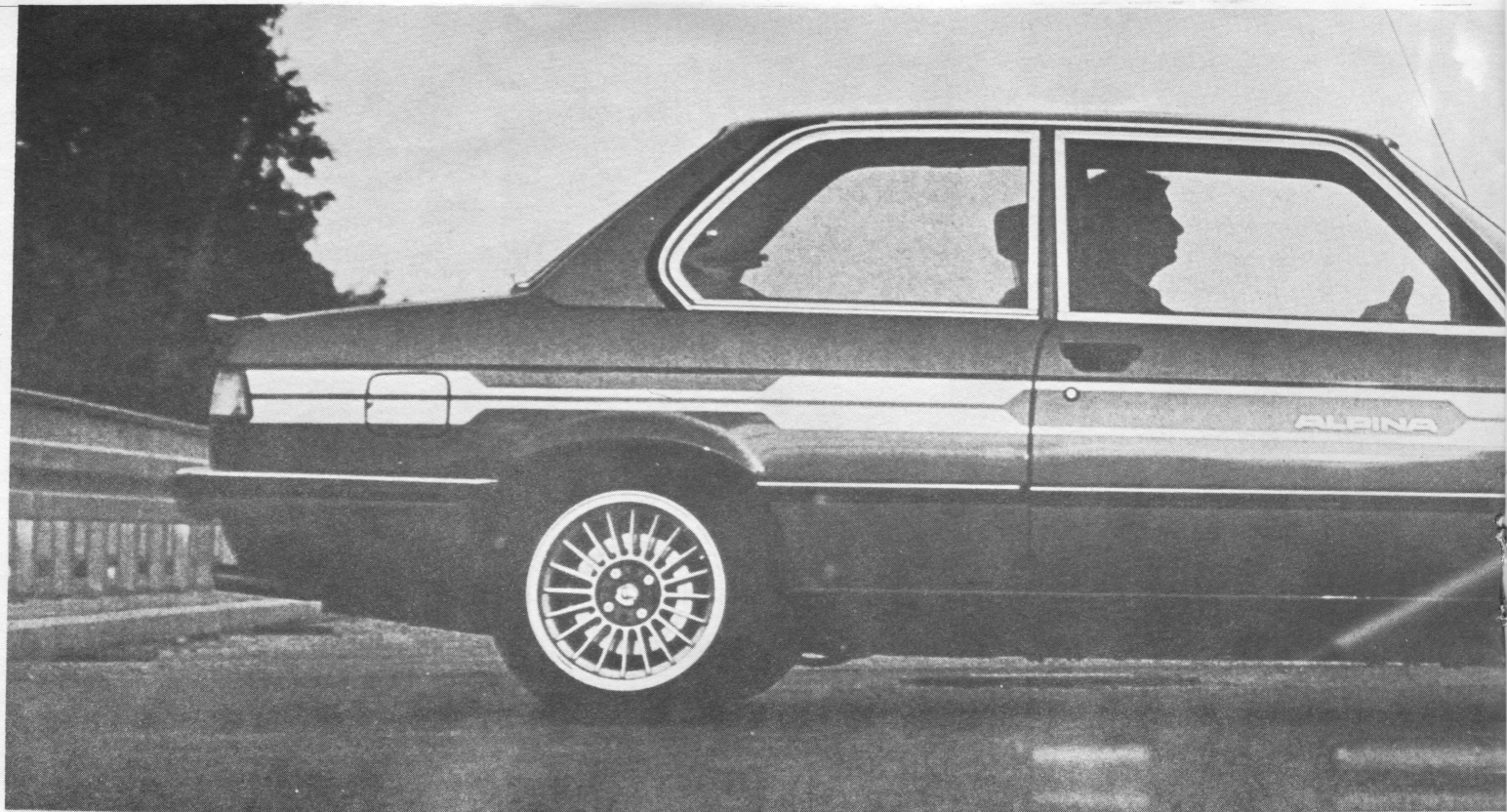
I find that those supercars are just as much at home in the slush as on a nice dry *Autobahn*. Find that, no, I can't rationalize them away with the notion that they're no good for daily use. Yes, I could enjoy even commuting to work in one of them daily. Even with all that performance at beck and call.

But, because of the weather, the worst kind of spring road conditions, there's no chance to unleash it all. At the end of the day, a creeping frustration prevails. The capabilities of these cars were waved before my nose, without my being able to savor them to the full. I have to return to Munich.

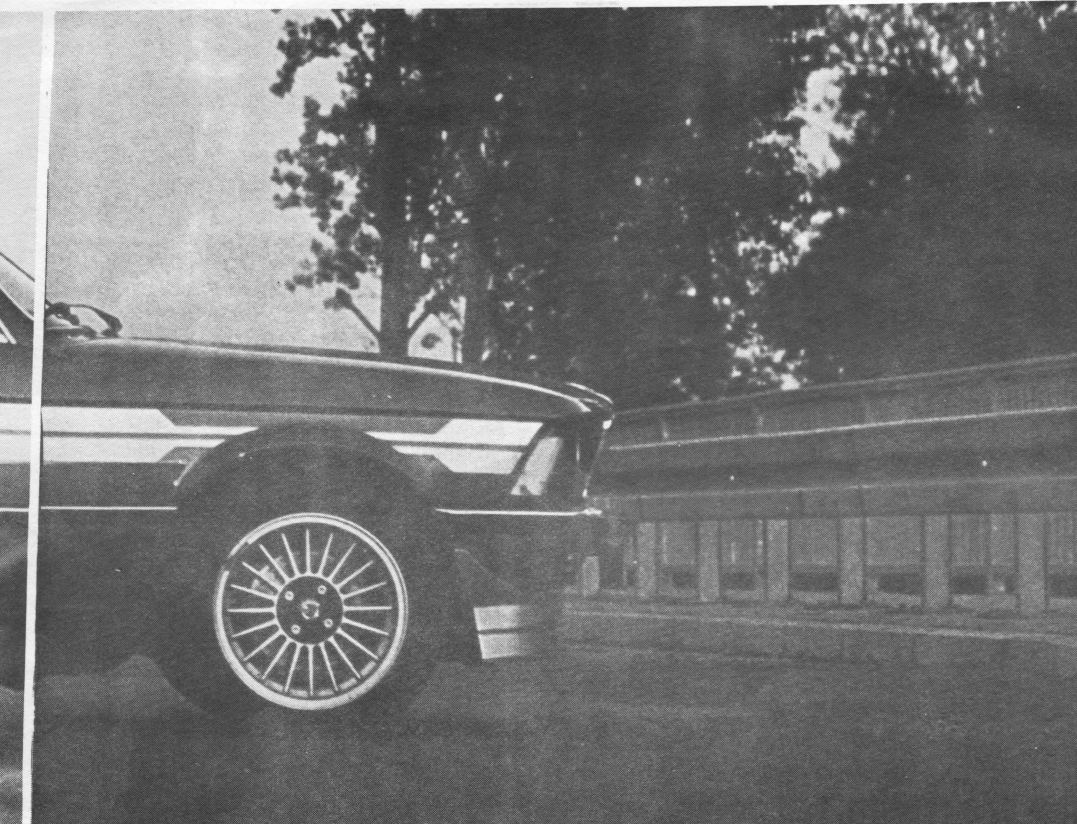
"All that performance" quantified: Alpina's three models, all based on standard production BMWs, are among the world's fastest road cars. And the world's safest. They forgive a driver's mistakes, although they might not forgive character flaws . . .

The gourmet parallel is not out of place. Burkard Bovensiepen, founder and head of Alpina (full name: Alpina Burkard Bovensiepen KG), is a connoisseur, a gourmet. When the journalist pays a call, tries one or more of his cars, Bovensiepen likes to divide the day in two with lunch at the Hotel zur Post in Biessenhofen, whose restaurant boasts one of Germany's rare Michelin stars. Here Bovensiepen is likely to wax just as enthusiastic over a cranberry soufflé as he did an hour earlier over a nickel-chromium-silicon



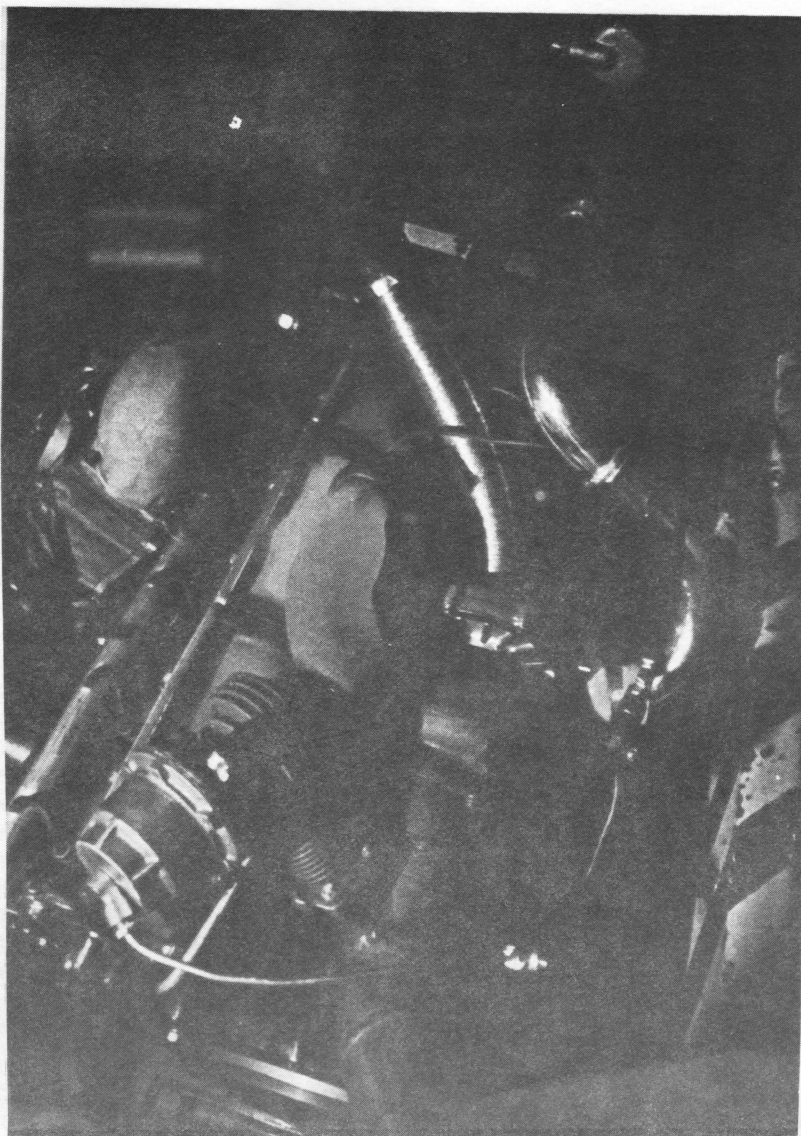






Luxury and high performance are blended to perfection by Alpina in the B6, based on the 3-Series BMW but powered by the six-cylinder 528i engine. The compact rocket is pictured above

Nothing wrong here: when it's working hard the 300-hp turbocharged engine of the Alpina-BMW B7 Turbo will naturally have glowing exhaust headers. The coupe at left is one of the two models it powers



alloy used in one of his precision Alpina components. In fact, he seems to be fascinated by virtually anything that approaches perfection in its own particular way. And not just as a connoisseur: he is an excellent cook and photographer.

No wonder, then, that not just superlative automobiles figure in Alpina's business: exclusive Italian wines are now offered by the company as well. It is worth the trouble to study this man, his countless caprices, the outstanding team of people he has put together, the premium products he and they create.

For 15 years Bovensiepen has been creating special cars, starting with BMWs and transforming them in lesser or greater degrees to their owners' specialized tastes. Offering specific Alpina models, however, was something new for the company when in 1978 Bovensiepen revealed three cars, to be offered as small-production series models. As usual, they were based on BMWs:

● B6-2.8: Bovensiepen describes it as "the most efficient luxury sedan in the world, but also one of the fastest and sportiest." It is a 3-Series BMW, fitted with the 2.8-liter six-cylinder engine normally found only in larger BMWs.

● B7 Turbo: "the fastest production four-door sedan in the world." A turbocharged 530i.

● B7 Turbo Coupe: "in its combination of equipment, performance, active safety, comfort, quietness and efficiency an absolute standard for the perfect automobile." A turbocharged 630 CSi, though Alpina starts with a 635 CSi.

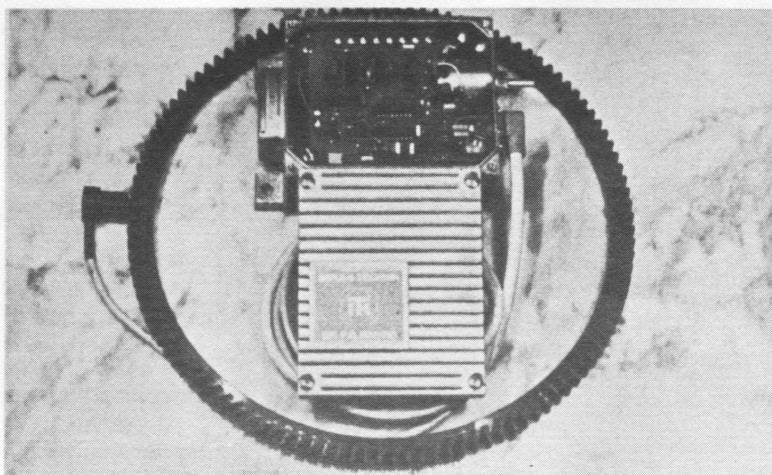
You realize, dear reader, that paper is patient, forgiving. No problem at all to tout one's products in press releases or advertising, make them sound like what one wishes they were.

And, to be sure, Bovensiepen is good with words. But then he happens to be right this time—about all three cars. Every expert I know who has tried the new Alpina trio from "Bubo," as Burkard Bovensiepen's friends and foes alike call him, will confirm without hesitation: plenty expensive, but almost incredibly good.

Which, in view of Bubo's tendencies, is no wonder either. For Alpina is concerned with the core



**Ignition system of the future? Alpina chose the fully computerized, super-expensive Hartig equipment**



**Spoilers front and rear are more than appearance accessories here: at the speeds Alpina cars will be driven in Europe they improve stability and cut fuel consumption**



of things, not the surface. For proof, look at the pictures. The visual differences between Alpina's cars and their stock BMW counterparts are subtle, for the most part functional. But wait until you get under their skin. Remember the nickel-chromium-silicon alloy? That was the material for some bolts that hold the exhaust system in place on the Turbo models. They're not decorative, believe me.

"With this turbocharged engine, we're getting into temperatures in the neighborhood of 1000 degrees Celsius, and that means the best material is just good enough," ventured Dr. Fritz Indra, chief engineer at Alpina when the engine was developed but no longer with the company. Same theme in the vicinity of the cylinder head: "At these temperatures the production exhaust headers expand a good 2.5 millimeters at the head—and no ordinary gasket or stud is going to take that. So we make a three-piece header system, tied together with stainless steel bel-

lows. It works—so well that it outdoes anything we've ever used for this purpose."

No false modesty at Alpina, and yet one doesn't get the feeling of being sold a bill of goods. Not at all. They're self-confident here, and apparently with good reason. They even believe they build the best cars in the world!

Bovensiepen and Indra were ready with an explanation for that too. "We have the advantage of small numbers. It's not just a question of ability, but also one of maneuverability. Any number of engineers at BMW could have done the same thing with no problem, but cars like this are pretty much out of the question for normal production quantities." So says Bovensiepen.

"We run a sort of Mecca for automotive gourmets here," continues Bovensiepen. "There will always be people who are ready to pay a lot to eat especially well, and this is akin to our function with automobiles." Dr. Indra adds, "our small production quantity (300 per

year), the compactness of our operation and the unbureaucratic way we work are exclusive in their own way; it all guarantees exclusivity for our products."

The Alpina people, however, haven't saved all the praise for themselves and their way of doing things. "We are also in the fortunate position of having found a partner in BMW, one that delivers us the basic product. Large reserves of capability in the cars, useable basic components and strength throughout are all characteristics that make our transformations possible," adds Bovensiepen.

But what do the people in Munich have to say about what Alpina does with their cars? "We consider the new products of Alpina a positive image factor for BMW," says Dr. Karlheinz Radermacher, Director of Engineering. When Dr. Radermacher speaks of "products," he means those three models mentioned earlier, the B6, B7 Turbo and B7 Turbo Coupe.

Prices for the trio begin with about 45,000 Deutsche Marks for the B6 and range upwards to nearly 80,000 DM for the B7 Turbo Coupe — from \$23,700 to \$42,100 U.S. at the presstime exchange rate. Not exactly pocket money, especially for cars that look pretty much like production Bavarian machinery costing a lot less.

But then Bovensiepen has an explanation for that too: "After all, a diamond doesn't show its full value until it's been polished." It could be, just could be, that the self-confident tone in Buchloe and those prices might put off normal human beings. But those are not the people for whom Alpina is building cars. Alpina's customers are the ones who will be merely satisfied to know that the stereo system they get is the same one used by Rolls-Royce. What else? "We thought this system was good enough for our cars."

The philosophy goes on to encompass Pirelli's most expensive tires, the best gas-filled shock absorbers from Bilstein, and new types of fuel injection and ignition not used on any other production cars. But there are still other reasons why Alpina's cars are so expensive:

"For one thing," explains the Alpina chief, "We start with good material. We buy complete BMWs



—323i, 528i and 635 CSi—as our starting points. As you know, BMW is not known for particularly inexpensive cars, but rather for particularly good ones.”

“Second, our engineering costs are similar to those of a large manufacturer—but we have the disadvantage of having a much smaller number of cars over which to spread them. And third, we have chosen to use state-of-the-art components, such as the fully electronic ignition system of Dr. Hartig. This is the ultimate in ignition, but it costs about ten times as much as an ordinary system would.”

The system Bovensiepen is describing is indeed state-of-the-art, brand-new and not yet produced in sufficient quantity to bring its price into competition with even the most modern of “normal” ignition concepts. It is fully maintenance-free, not influenced by temperature, extremely durable and capable of tailoring the timing of sparks more precisely to an engine’s needs than any other on the market. A computer determines everything, and partly because of the Hartig ignition the turbocharged, 300-horsepower BMW-Alpina 3-liter engine is one of the world’s cleanest-running, most efficient super-performance powerplants. Dr. Indra chose another system not in general use, the Pierburg (Zenith DL) fuel-injection unit, because it best suited Alpina’s aims with the turbocharged engine — and never mind the cost.

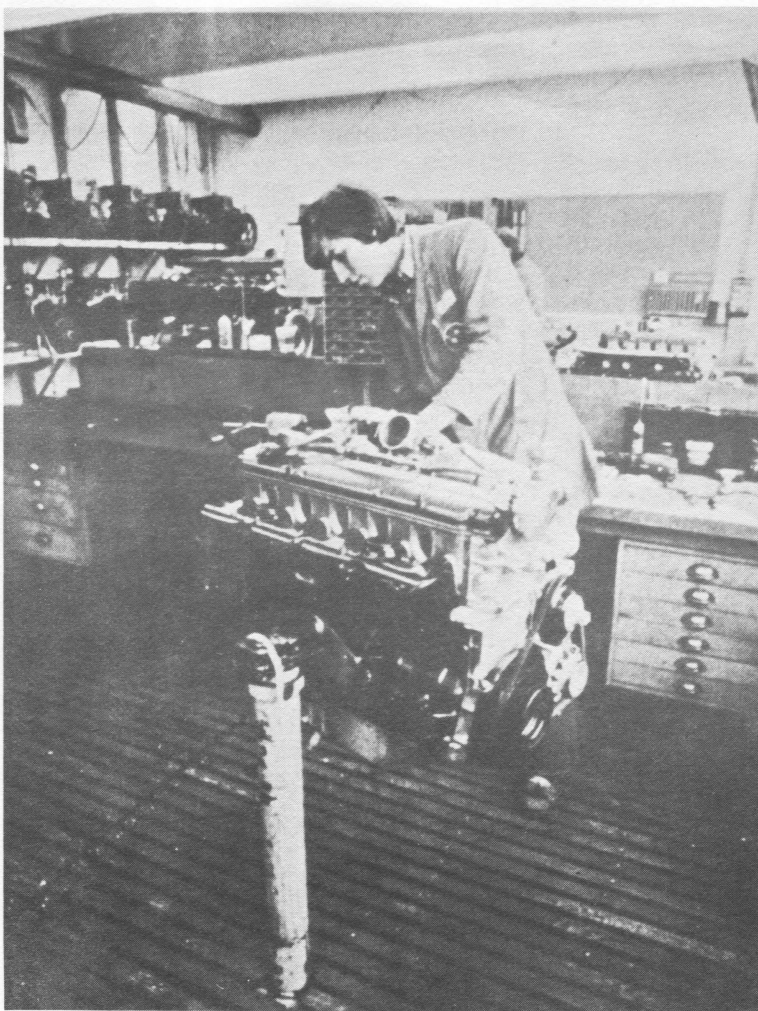
Fortunately for the Bovensiepen clan’s credibility, not just the people behind the cars rave about them. All one has to do is get in behind the custom Alpina steering wheel, adjust the driving position to an ideal one and turn the key. After this, raving is about as certain as the throaty growl of the powerful six-cylinder engine.

Throaty growl. But not, repeat not, anything more obtrusive. Part of the Alpina philosophy also happens to be performance with utter refinement. The smooth authority prevailing in lower speed ranges becomes haughty authority in the upper—and yet the unleashed 300 horses deliver their power with acoustic restraint. In fact, all three Alpina BMWs are actually more cultivated, quieter than the series cars from which they’re derived—despite the pleasant purr heard

from their exhaust pipes if the windows happen to be down.

That pleasant purr is heard from all three Alpina-BMWs. Although the 200-hp, 2.8-liter engine of the B6—developed from the familiar 528i unit—is not turbocharged, it turns the compact 3-Series sedan into a gentle stormer, weighing a mere 1200 kilograms (2645 pounds) complete with its Pioneer quadraphonic sound system. At a steady 150 km/h (93 mph) it sips fuel at the miserly rate of 11.5 liters per 100 kilometers, which works out to 20.4 miles per U.S. gallon, and if that isn’t economical enough, it can be idled along at 100 km/h (62 mph) for the almost indecent figure of 7.5 l/100 km (31.3 mpg). Mind you, this is in fifth gear, we’re talking of premium fuel and the car is in no way tuned to meet U.S. emission regulations—but it’s still an impressive show of efficiency.

The B6, of course, was built with fairly modest goals in mind—“only” 225 km/h or 140 mph. The other two Alpinas, with the turbo-



**“Polishing the diamond”:** an Alpina craftsman extracting something extra from a BMW six-cylinder engine

Photos: Ron Wakefield



**Burkard Bovensiepen** with an armful of newspaper and magazine reports about his new Alpina-BMW models



charged 3-liter engine, were developed for ultimate performance. And yet their steady-speed fuel economy is impressive enough too.

Which says something for Alpina's approach in designing this ultra-high-performance pair, the 5-Series B7 Turbo and 6-Series B7 Turbo Coupe. For most of those 15 years Alpina has pursued the "classical" methods of getting more performance from production engines: modified camshafts, multiple carburetion, freer "breathing" and other changes that typically improve performance at the top end of the speed range, cut into power and smoothness at the bottom end, and increase both fuel consumption and emissions. Though the B6's 2.8-liter engine is boosted a little (from 184 hp for the European 528i to 200 hp) by such means, Alpina had to keep its work within the bounds of European emissions and noise regulations.

For the B7 cars, the performance goal was a magic number: 300 hp.

Indra and Bovensiepen chose the BMW 3-liter engine for its favorable ratio of stroke to bore, smooth running characteristics and structural reserves. A Kühnle, Kopp & Kausch turbocharger, "ram" intake pipes, the Hartig ignition system and the Zenith fuel injection helped meet that goal; but behind this simplified ticking-off of recognizable externals lay a long stretch of detail engineering work which, among other things, led to the use of an air-to-air inter-cooler for the turbocharger.

Five-speed gearboxes are standard in all three Alpinas, a limited-slip differential in the two Turbos. Alpina drills the four-wheel disc brakes for extra ventilation, lowers the suspension and tunes it for improved handling (at the expense of some comfort), adds fuel capacity for the reality of high fuel consumption when the per-

formance is called into play, enhances high-speed stability with front and rear spoilers of its own design. Details like Scheel seats, extra instrumentation, Pirelli P7 tires and (for the B7s) a pump-and-cooler system for differential oil help explain the high cost.

To which the following caveat must perforce be added: These Upper Bavarian machines are not for the having outside Europe. Indra and Bovensiepen engineered them for the European Economic Community's relatively liberal emissions regulations, and the bumpers you see wouldn't come close to meeting United States government standards.

That is not to say, however, that the owner of a 3-, 5- or 6-Series BMW in lands distant from Germany cannot turn to Alpina for some of the modifications involved. To be considered in any case: the BMW warranty and local rules and regulations. For readers in the U.S. there are two official outlets for Alpina products—among them the "chassis kit" used on the B7 models. In the east it is Miller & Norburn, Inc. of Durham, North Carolina; in the west Dietel Enterprises, Inc. of Mission Viejo, California.

Just how much of the Alpina feel you can experience in your BMW, then, depends on where you are. And to be clear: the Alpina feel is not for every BMW owner anyway. Some of the classic compromises are there: one trades off a measure of comfort for a measure of sports-car handling, a measure of practicality if (for instance) that front spoiler is too low for one's driveway. Engine modifications, even of the expensive and sophisticated kind done to these cars, do put emissions out of bounds, and if the extra performance is used, fuel consumption can skyrocket.

What is so fascinating about Alpina's cars, though, is that with only minor deviation from basic BMW concepts, cars of exotic performance and handling have been developed. Cars that challenge the "true" exotics in every way but wild styling—and are far easier to service. As Burkard Bovensiepen likes to say, they're for people "who wear their fur coats inside out." Another way of describing understatement.

*Kalli Hufstadt / Ron Wakfield*

