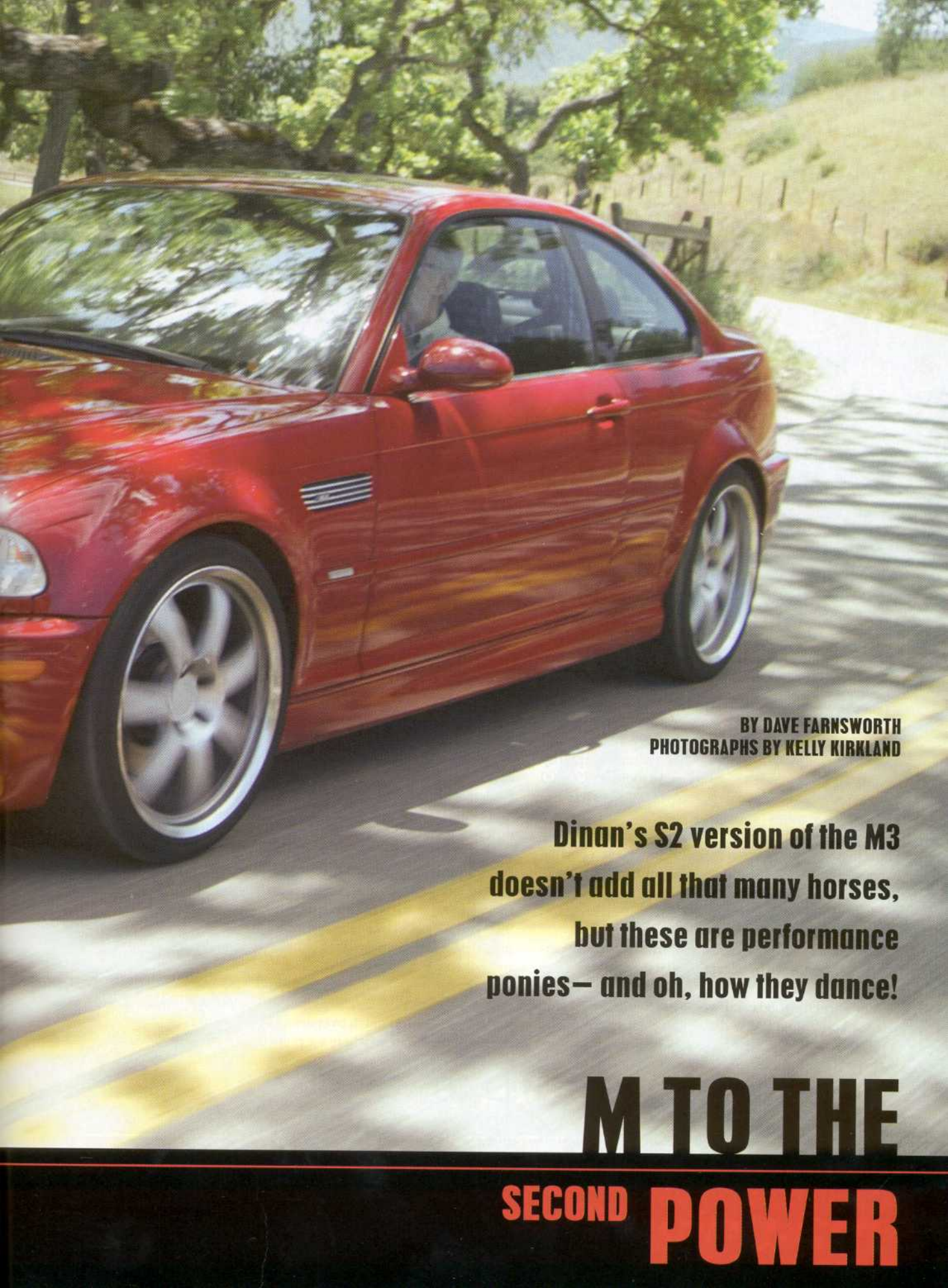




The road snakes ahead, clinging to the rolling hillside like overcooked pasta. It's the kind of road that raises little tingles in the nerve endings like a spider's touch, rivets the eyes like an evolving accident, and taunts you with a real-world test of your faith in the vehicle under you. Can you squeeze the right pedal a little more and go for the E-ticket ride without getting spit into oblivion, or should you back out a bit and rejoin the world of the sane, the secure, the dull?

Depends. What if we modify the equation, putting you behind the wheel of the Dinan S2 M3?

When you're piloting a BMW, you know the safety/performance/comfort limit is north of most rides, but even then there are compromises. And for some of us, the line of demarcation between everyday utility and the single purpose of covering as much real estate as possible in the shortest amount of time has moved beyond even BMW's fairly aggressive interpretation of practicality. If you're the kind of driver who buys a set of R compound tires for the street every spring and trashes them by fall, just because you like blurring the reflectors on your favorite exit ramp, this may be your next ride.



BY DAVE FARNSWORTH  
PHOTOGRAPHS BY KELLY KIRKLAND

**Dinan's S2 version of the M3  
doesn't add all that many horses,  
but these are performance  
ponies— and oh, how they dance!**

**M TO THE  
SECOND POWER**



The Dinan S2 M3 is the latest in a line of modified BMWs from America's premier BMW tuner. Like its predecessors, it comes with a few items standard: solid research and development, top-line materials, quality engineering, bulletproof reliability, and a four-year/50,000-mile warranty—features rare to non-existent in the rapidly growing tuner market. The modifications on this car are not haphazard, off-the-rack “one size fits all” items. You know that drill: lower the car, get bigger wheels, open the exhaust, stick in a chip, stiffen the shocks, yadda, yadda, yadda. And you’ve seen the consequences: buckboard ride, quirky handling, choppy idle, weird fuel-mapping gaps, and a car you wouldn’t take over sixty.

The Dinan team approaches a car from a different perspective. They begin by accepting that the vast resources of BMW AG—in both talent and Deutschmarks—will produce a pretty good car. If you want to improve it, you have to know what BMW did within each system—and why. Then you have to reverse-engineer the car before you start tinkering. Finally, you want to make sure that every piece fits like it came out of Munich. Every Dinan piece is designed from the ground up to at least match OEM quality in design, materials, durability, and appearance. If you have the opportunity before your Dinan bits disappear deep into the innards of your car, we’d encourage you to really look at them. Run your fingers over the welds, let your eyes drift over the exquisitely machined parts, revel in the Dinan logo laser-etched into each throttle butterfly. This is first-class work.

In the Dinan lexicon, “S3” means supercharged, while

Dinan S2 cars are naturally aspirated, an enhanced version of the status quo with a more modest gain in raw horsepower than the steroidal S3 supercharged cars—the classic example of “more is better” on a direct collision course with the law of diminishing returns. While there are remarkably few modifications in the Dinan S2 iteration of the E46 M3, they add up to a vehicle with a subtly different personality. The most noticeable improvement from the stock version is the taming of the understeer ogre. Understeer is designed into every vehicle since the demise of the Corvair because it is inherently safer; overcook a turn and the car starts to slide straight, triggering, in about 99.9% of the population, the immediate urge to get off the gas, maybe even hit the brakes—the appropriate response to understeer. The E46 M3 is no different—BMW has lawyers, too—but it’s an incredibly annoying characteristic for drivers who can... well... drive. We don’t like understeer—or too much oversteer, for that matter—we just want the car to go where we point it.

Part of the stock M3’s problem lies in the suspension design, but part of it lies with the narrow—okay, relatively narrow—225/45 footprint of the stock front tires. The Dinan S2 wears 275/30-19 Michelin Sport tires, adding a full four inches of additional front rubber, and the extra bite is evident from the first turn-in. These tires are wrapped around some very elegantly designed Dinan wheels, 19x9.5” at the front, 19x10” at the rear (wearing 285/30-19 shoes), weighing a mere twenty pounds each to keep the unsprung weight as low as possible. Suspen-

The new Dinan S2 M3 puts its modest power increase to the pavement with a 3.91 differential.



sion modifications tame the remaining push via camber plates, sway bars, springs, and adjustable Koni shocks.

The development of the shock absorbers is particularly illustrative of the Dinan methodology. One of the criticisms of the E46 M3 has been its roughness over real-world roads; that characteristic led to a rare loss for BMW in a recent comparison test of ultra-high-performance sport sedans. When the engineering staff at Dinan began to plot the shock absorber rebound and compression characteristics, it occurred to them that it might be possible to tame the roughness while actually increasing stability. This involved dismantling the shocks, redesigning the valving, and even changing the materials used in the construction, rebuilding them to different specifications. Even the rebound rubber came under close scrutiny and modification. The end result is impressive, a rare combination of improved, softer ride and a car that tracks like a hunting cheetah.

In the drivetrain, modifications began with the air intake. Air flow had to be increased, but simply enlarging the inlet and the air box created extreme variations in laminar air flow, which were picked up by the air-flow sensors and translated into weird surging, most notably at idle, as the car's computer vainly sought to balance the conflicting inputs. The final version of the air box now contains internal diffusers to provide a smoother—as well as greater-volume—air flow. A little further downstream, the throttle bodies are enlarged to take advantage of the increased volume of available air. Electronics are upgraded also, removing the top-speed limiter and raising the rev limiter to 8,200. The chip in the Dinan S2 can be programmed at your local BMW-Dinan dealer for whatever level of modification you have; if you choose to add only the air box, the chip will get the maximum out of that modification. If you later add the bigger throttle bodies, no problem: The chip can be re-programmed for those two modifications right at the

dealer. There's never a need to buy a new chip, no matter what piece of Dinan equipment you add.

The engine block itself is left stock, and the next addition is the muffler, which is a heavily reworked version of the stock BMW piece. The OEM muffler with its M-exclusive quad pipes takes the exhaust from the left side of the car—this is an in-line six, after all, so the exhaust headers don't conveniently place themselves on opposite sides of the vehicle—and lets some of it out the relatively straightforward right-side pipes, but forces the remainder into a chamber that reverses directions 180 degrees to exit via the left-side pipes. After a lot of thought—and trials—the Dinan solution is to exit the exhaust through the right side only, decreasing back pressure 82% and losing fifteen pounds of muffler weight, while leaving the now-non-functional left-side pipes in place for aesthetic balance. And the stainless-steel exhaust tips are black ceramic-coated to avoid the inevitable difference in color that would develop between the functional right side and the nonfunctional left. The end result is a very mellow sound, a further bump up in horsepower and torque, and an almost sinister Darth Vader look to the M3's stern. These modifications yield a total increase in horsepower from a stock 333 at 7,900 rpm to 361 at 7,900 rpm and an increase in torque from 262 foot-pounds at 4,900 to 282 at five grand.

But horsepower and torque are meaningless without some way to get the power to the asphalt. With six speeds available, Dinan swaps differentials to get a lower cog, the stock ratio of 3.64 changed to 3.91, giving a noticeable boost in acceleration without undue sacrifice at the top end—the same tactic used by BMW AG in the 330i Performance Package. Indeed, in the S2 M3, sixth becomes a useful gear, with “passing gear” available just by lowering the right foot and hanging on.

But the real test of any road machine is the *road*; handling balance has always been the forte of BMW, and

DINAN S2 M3	
MSRP	
(including delivery)	\$47,195
Gas-puzzler tax (estimated)	\$1,000
DINAN OPTIONS	
Engine:	
High-flow cold-air intake/air-mass meter assembly	\$1,499
High-flow throttle bodies	\$899
Free-flow exhaust	\$1,599
Stage 4 performance engine software	\$699
Driveline:	
3.91 limited-slip differential	\$1,999
Suspension:	
Stage 3 (performance spring set, Koni adjustable struts and shocks, adjustable front anti-roll bar, front camber plates)	\$1,615
Front Wheels/Tires:	
19x5 5" lightweight forged performance wheels (pair)	\$2,598
275/30-19 Michelin Pilot Sport tires (pair)	\$756
Rear Wheels/Tires:	
19x10" lightweight forged performance wheels (pair)	\$2,698
285/30-19 Michelin Pilot Sport tires (pair)	\$756
Accessories:	
Dinan M3 deck lid badge	Included
Serial-numbered Dinan S2 badge	Included
Dinan embroidered floor mats	\$199
Parts kit	\$15,517
Labor, 27.6 hours (estimated)	\$3,500
Price as tested	\$66,220



The Dinan S2 wears 275/30-19 Michelin Pilot Sport tires on lightweight Dinan forged alloy wheels.

upsetting that balance has always been the trap waiting for the indiscriminate modifier. Never mind the dyno read-outs, the computer predictions, and the engineering calculations, how does this latest offering from Dinan actually work in the real world?

In a word, awesome.

As we point the Dinan S2 M3 down the winding two-lane road and really lean on the loud pedal for the first time, the car squirts forward, pushing us firmly into the comforting grip of cloth-and-suede M3 seats—we'd



suggest avoiding the more slippery leather in a car with these dancing capabilities. The rumble of the exhaust rises quickly to a melodic roar, the tach spins clockwise, and yeeee-haaaa! We's movin'! And move we do, the engine spinning merrily up, requiring a quick shift to third and then fourth to avoid the rev limiter that intrudes on the unwary even with an extra 400 rpm on tap.

Turn-in is crisp with nary a hint of understeer, and the Imola Red coupe tracks wherever we want—right now—not abruptly, but assuredly. The big 275/30 front tires grab the pavement like R-compound gumballs, and the car whispers, "Is that all you want? Give me something tough. Come on, try me." So we do, and it just keeps coming, waves of acceleration, lift for a turn—no need to brake, it's deeply cambered—and back on the throttle, with instant response, and we're climbing to the next turn like a viscerally enhanced video game. No need to check the speedo, the car tells us everything we need to know. And, oh yes, no need to check the mirror.

We're gaining on some sport bikers who are leaning heavily into the turns, not used to seeing a four-wheeler filling their mirrors. We back down—hey, we were bikers in a long-distant past—and just keep the pace. At a wide spot in the road they get tired of scraping their foot pegs trying to lose us and pull to the right, waving us by. We drop the hammer and we're gone in a heartbeat.

We crest a hill and the road stretches before us, a straight maybe a mile and a half or two long, with nothing on either side but northern California chaparral fading into undulating foothills—without another vehicle in sight. The M3 rockets forward, sucking up real estate at a prodigious rate. Redline in fifth, go for sixth, and the surge keeps coming. The straight dissolves before us like cotton candy, at a ton and change over the limit.

The stock E46 M3 is an inspiring ride—quick, quiet, supremely confident, a decathlete on wheels. On the street, driven with a modicum of sanity, it's a great car, willing to do anything you ask, pretty much immediately. At a driving school, however, another side emerges: The car is preternaturally fast, but as you push it harder you notice that it can isolate you a little from what's going on. Oh, it's still precise, feeds back information to the driver, but it's almost spooky in the way it masks the velocity it's capable of. You know the brakes are there, the suspension is working, the steering is sending signals—but this knowledge becomes an intellectual rather than a sensory recognition. You trust that it's there, you just don't actually feel it; it's like the difference between an E30 and an E36 M3, but at a significantly higher speed.

The S2 M3, on the other hand, never lets you forget that you're moving very, very quickly. It demands that you pay attention, while rewarding you with unshakable stability—stability that does not come at the price of isolation. As you push the car it sends you a signal that says *I can do what you want—but you'd better pay attention, because we're flying*. It's an E30 M3, all grown up but still carefree, and with a definite wild side just waiting to be tapped.

The Dinan S2 M3 is one exquisitely competent vehicle, capable of feats of automotive agility far beyond the average driver—but then, the average driver won't be buying one, and that's somehow as it should be. Puttering around town in this car, while easily doable, would be a crime against the automotive gods—like taking the freeway and wasting a mountain road. ♦