

UNLIKELY RIVALS?

Unlikely Rivals

Cadillac STS, Mercedes E500, Acura RL, Cadillac CTS-V, Jaguar S Type R, Jaguar XJ8, BMW 530i Sport, Audi S4, BMW 545i Sport.

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These are strange times for midrange (\$50k-\$60k) sports sedans. Over the last 10 years, SUVs have steadily encroached on the turf once reserved pretty much exclusively for "luxury" sedans (which almost always hailed from Germany or Britain). During this same period, the Japanese, especially Toyota's Lexus division, have demonstrated that high prices and advanced gadgets are

not the sole birthright of the European makes. These two trends have given Detroit hope that it too can sell cars, as well as trucks, in the premium price ranges, with the attendant high profit levels. All this change has raised some serious questions about what buyers really want in premium sedans. If a large part of the buying public wants tall, heavy, inefficient, macho, five-passenger

vehicles, what is the role of the sedan?

Some of the answer comes from plain old physics. SUVs, of course, have significantly higher roll centers, all but eliminating "sports car-like" handling from the agenda. And most SUVs in this price range would need some intensive time on Atkins before their weight-to-power ratio would be competitive for either the drag strip or the twisties.

Consider:

Sport Sedan Power and Torque Ratios			
Model	Weight (Lb)	Weight-to-Power (Lb/HP)	Weight-to-Torque (Lb/ft-lb)
Acura RL	3,984	13.3	15.3
Audi S4	3,825	11.3	12.7
BMW 530i	3,483	15.5	16.3
BMW 545i	3,748	11.5	11.4
Cadillac CTS-V	3,949	9.9	10.0
Cadillac STS	4,026	12.6	12.8
Jaguar S Type R	3,969	10.2	9.9
Jaguar XJ8	3,726	12.7	12.3
Mercedes E500	3,812	12.6	11.2
Reference Vehicles			
BMW M5	3,800	9.5	10.3
Porsche Cayenne Turbo	5,192	11.5	11.3
Lincoln Navigator	5,714	19.0	16.1
Hummer H2	6,400	19.7	17.5
BMW X5 4.8is	4,927	15.6	15.2
Porsche Boxster	2,811	12.5	14.6

You will note that the least powerful car on test here has about the same weight-to-power and weight-to-torque ratios as high-end SUVs. You have to move up to the most powerful SUV, the Porsche Cayenne Turbo to get middle-of-the-pack weight-to-power ratios for these sedans.

Of course, from a Winding Road perspective, the role of the midrange sports sedan is pretty easy to define. Midrange sedans should be able to offer a superb balance of handling and thrust,

while offering a modicum of practicality. The previous-generation (E39) BMW M5, while originally outside of our slightly arbitrary price range, has carried this torch for years in the minds of enthusiasts (see sidebar). So we know this class of car can be great. With that in mind, we gathered nine of the latest sedans with sporting pretensions to see what you can get from this new generation for \$50k–\$60k. This price range should get you more refinement and space than you

get in the hotly contested \$30k class. And speaking of hotly contested, six of our test group have been introduced in the last year, including entries from BMW, Cadillac (!), Acura, and Jaguar.

When the dust and rubber settled, we were surprised at what we found. The cars that we thought would challenge the M5 didn't. The differences between cars were enormous, not subtle. And a few of this new generation really excel.

On to the players.



You have to admire Cadillac for its revitalization over the past few years. To move from building gold-encrusted Chevy Caprices to competing at Le Mans and seriously attacking the Speed World

Just How Good Was the M5?

With skidpad and straight line performance in Porsche 911 territory, the 1999–2004 M5 seemed the perfect “have your cake and eat it too” machine. It had 400 bhp, a breakthrough power level for a sedan before Mercedes went on a quest for horsepower without a mission. And BMW tweaked its already superb E39 chassis for superb handling. But looking back on it, how good was the M5? We borrowed a low mileage 2003 M5 from a cooperative owner to find out.

First off, the M5 motor is simply great. It has ample low-end torque, and the massaging done by the M

Division means it pulls hard all the way to the redline. Because it is normally aspirated, power comes on linearly, and throttle response is near-instantaneous while being easily modulated. An important note, though, is that this engine has only modestly more torque (369 ft-lb vs. 330 ft-lb) than the new and superb 4.4 liter V-8 in the 545i.

The M5 six-speed manual is a serviceable but not great gearbox. Throws are relatively long and the feel is a tad notchy. It doesn't snuff out the fun, but it could be better.

The M5 suspension is firm, with

relatively low body roll, and a classic BMW balanced feel. It does tend toward mild understeer as you push it, but for a sedan it is very good. The steering on the other hand, like the transmission, is acceptable but not great. The V8-powered E39 BMWs have recirculating ball steering and you can feel it. On center, things are a bit wobbly, though feel is better than expected.

Overall, the M5 feels old, but in a good way. The suspension doesn't filter out the road, so you could call it coarse, but you also need to call it connected. The transmission and steering, while far from state of the

art, are quite mechanical. Even the dashboard design, while plain, seems classic. In the end, the integrity of the M5 gets you away from picky analysis because it is a blast to drive.

Currently, you can readily find moderate-mileage M5s for under \$60k. Sure, there's warranty difference, but with depreciation on the M5 likely to be lower, we think this is an intriguing alternative to the best of this roundup.

Challenge GT division is a good sign. The Cadillac 16 show car that we saw at NAIAS 18 months ago was impressive (build it!). Even better, the actual production cars are aimed more at enthusiasts than at your grandma.

Caddy's latest spin on the CTS platform is the STS. Slightly larger than the CTS, the STS is aimed squarely at the BMW 5 series and the Mercedes E Class, among others. Unfortunately, the base car, which may be tuned to retain some of the grandma group, is disappointing. The suspension seems a bit unsure of its role. On initial turn-in, the car offers some compliance and a bit of body roll, typical of suspensions aimed at isolation more than handling fun. Before things get too nautical, the anti-roll bars kick in and the car



stabilizes. That sounds good, and it is better than the alternative, but the suspension doesn't feel composed. You sense the weight of the car being redirected unwillingly by the suspension. This lack of composure is amplified when bumps enter the picture. The STS seems to move around at a different frequency than the bumps themselves, which is neither particularly comfortable nor confidence-inspiring. Clearly, Cadillac aimed more for softness than a feeling of connection to the road.

The drivetrain suffers a similar fate. The Northstar V-8 is a fine piece of machinery, with ample power and torque. It feels a little slower than the Jag XJ8 or the Mercedes E500, but it

moves along pretty well. However, the five-speed auto downshifts a bit too readily with small part-throttle requests from the helm. Around town, or on the highway, a big V-8 should allow a sense of wafting forward without effort. In a car of this class, it is unnecessary for moderate acceleration to be accompanied by some of the high-rev discomfort and jerkiness that you'd expect in a Kia Rio. All the inputs, in fact seem a bit too eager and unrefined, as if establishing a sense of faux responsiveness was almost as good as careful control engineering. It isn't.

The STS doesn't offer spectacular room or accommodations, either. Rear-seat headroom suffers because the stylists decided they had to drop the roof line just where you head wants to reside. Odd, to say the least, in one of the most creased and box-like designs to come along in a decade. Interior materials aren't up to European standards, either. It isn't bad, in fact it is impressive for a Cadillac. Overall, we couldn't help thinking that perhaps Bob Lutz asked his designers to emulate Japanese interiors (which are hardly world-class) and his engineers to use Japanese driving dynamics as a reference.



There's just no other way to say it: This car is disappointing. With Cadillac, you're tempted to overlook some small foibles just because Lutz and co. have come so far. With Mercedes, there is the temptation to be overly harsh because the fall has been so precipitous



and from such a lofty perch. But even bending over backwards to be fair, the E500 impresses only with its carefully crafted insipidness. This is the car for people who don't like cars, but feel the need for a blue chip brand.

How do I hate thee? Let me count the ways. The E500's suspension offers enough roll to feel unsporting, particularly on initial turn-in. Even when tracking straight, the E500 doesn't feel particularly planted. The steering doesn't help matters any, being rather numb. All of this makes for a handling package that feels quite disconnected and anesthetized. To be sure, body motions are better controlled than they are on the base STS, and the car hunkers down near the limit fairly well. This chassis isn't uncomfortable, it's bored.

The engine is similarly uncooperative. When you jump on it, the Mercedes V-8 can provide gobs of torque and a muted Detroit muscle-car soundtrack. While the latter seems a bit out of place in a Merc, it could be fun. But in this application, the transmission and throttle mapping make the big motor feel like an unwilling and unwanted partner.

The E500 comes from the new-era Daimler-Benz. When you consider this car together with the S500, you get the feeling that all the changes to electronic controls, software-based user interfaces, and cost-reduced parts were just a bit overwhelming even to the Mercedes-Benz engineering team. Over time, the S500 has proven a most unsporting vehicle and is a repair nightmare. The E500 seems destined to

at least partially follow this unattractive course. Let's hope the boys in Stuttgart realize this isn't the way to the future.



Acura has a history of building some excellent cars when it puts its corporate mind to it — the NSX and TSX (maybe there's a code?) come to mind. And parent Honda certainly has a distinguished history in Formula 1, as well as with cars like the S2000. We were hopeful, then, when we saw that the new RL had something called Super Handling All Wheel Drive and had received a healthy 60 bhp bump in power.

Super Handling All Wheel Drive is a way for a company like Honda to deal with the dreaded FWD problem. Having committed to front wheel drive for packaging reasons, Honda and others find themselves in a world that values rear wheel drive handling dynamics and is happy with electronic aids to address slippery surfaces. SHAWD allows as much as 70% of the car's torque to be sent via the rear wheels and makes the weight distribution of the car a little more balanced.



This sounds very nifty and has the right vibe to it. Unfortunately, suspension tuning is still required, and the RL is set up more as a luxury car than a driver's car. Sure, it is a big step up on the previous Lexus wannabe RL, but for driver accolades, it has a long way to go in this group. Despite the fancy drivetrain, this car likes to understeer. The RL suspension isn't hugely imbalanced, but the bias is to load up the front tires, which is a deterrent to sporting driving to say the least. The RL also feels heavy. It is in fact the second heaviest car in this test, but we find that suspension tuning has as much to do with this sensation as actual weight. If you're looking for the feeling that your hard-earned dollars bought you some serious mass, this is the car for you.

The RL steering fits in well with the luxury motif. It is solidly isolated from the road, refusing to communicate any more nastiness than might be disturbing the front wheels and tires. To be fair, the RL suspension does feel nicely controlled. Unlike the STS, the RL isn't thrown around by bumps, its dampers being on the taut side. And despite the RL's luxury tuning bias, this damping does communicate more than the average number of bumps (but not vibration) into the cabin. Acura shows that good engineering can deliver both better handling and a better ride.

The engine is adequate for the luxury market, but it is asking a lot of 300 hp and 260 ft-lb of torque to move 4,000 lb. with alacrity. When you combine this with a transmission that wants the engine to stay unstressed, the RL feels rather sluggish. Acura provides very nice paddle shifters, which might be a way around this problem, but the engine really isn't up to it.

Maybe we shouldn't have been surprised or disappointed with the RL. Acura has had an identity-crisis for years, not knowing whether it wants to be Lexus or BMW when it grows up, or maybe it just wants to build a full range of big Accords? The RL comes from this

identity crisis part of the company, and in the end is typical Honda — pretty good but not great at anything, except value.



400 horsepower, 395 ft-lb of torque, manual transmission, suspension tuned at the Nurburgring, and a racing version that actually wins races. Talk about a serious move to improve a stodgy image. You have to love the intent behind the new Cadillac as represented by the CTS-V. And unlike a lot of other one-off, half-hearted brand revival attempts (Marauder, SHO) by Detroit, this one seems to be part of a larger long-term plan with some real chance of success.

To us, this new Cadillac is quite like the enticing new restaurant down the block — best to wait a few months 'til they iron out the kinks. What kinks? Well, the same drivetrain that promises so much is a letdown in reality. Now elevated to competing with some serious Euro engineering, the Z06 setup from last year's Corvette is out of its league. A fair share of the problem falls on the shoulders of the Tremec six-speed, which is clunky, heavy, and slow. The reason to have a manual in the first place is feel: brake, pull it down into second, roll the power on at the apex, grab third, and feel the shove in the back. This manual just isn't interested. The C6 got a new manual to fix this problem, and Cadillac can't move fast enough to get it into the CTS-V.

The engine doesn't compensate much for the problems with the transmission. To be blunt, it just doesn't feel that fast.

The CTS-V and the Jag S-Type R have essentially the same weight-to-torque ratio, but you wouldn't know it from a back-to-back drive. The Jag is all about midrange thrust. You really have to hammer the CTS-V to achieve a sense of pace. At the dragstrip numbers don't lie, and the CTS-V is competitive. But that's not where you'll be driving. In the real world, you want your big V-8 to push you forward from low and middle rpm at part throttle with a sense of responsiveness, not lethargy. Flat-out testing at the 'Ring can only go so far in developing great cars.

The CTS-V suspension on the other hand, while not a work of art, is pretty well balanced. The ride can be a bit harsh, but that's a price you pay for great handling in the 911 or the



Modena too. The biggest drawback to the handling is simply that the CTS-V feels big. Turn-in is accompanied by some sense of reluctance, and the ride motions keep you aware that large quantities of metal are being turned. The sense of size is amplified by the cocooned view from the slab-sided body and the vast acreage of cheap dark plastic in the interior. Technically the CTS-V may come close to sports car handling, but your nervous system won't be fooled.



After the CTS-V, we were getting a bit worried. What if both of our cars in the 400 hp class struck out? Five minutes into the Jag S-Type R, and we relaxed a bit. The engine in this car is fantastic. Put your foot into it halfway and a sense of near-limitless thrust emerges as the car gathers speed without fuss. Tip it in toward, and more of the same. No wailing, no lurching, just a big push, a bit of supercharger whine. The Queen meets Vin Diesel. Weird but wonderful.

Too bad about the suspension. While stiffened up, the R version feels for all the world like an ill-handling luxury sedan that has been tweaked a bit, but just doesn't have the goods to feel spirited. You can only perfume the pig so much. The problem is the omnipresent sense of understeer. The Jag just prefers to go straight. You can wrestle it around a corner, and while it never feels out of sorts or badly damped, the engineers tuned it to dig in front first. Not our cup of tea.

The accommodations in the Jag are nice (compared with the CTS-V, you can see where the extra \$10k goes), but cramped to say the least. You may think



of the S Type as bigger than the Audi S4, but your rear seat passengers won't. The front seats are a bit confining as well, though some might view this as being cosseted. In any event, the interior is full of Jagness, but you pay for it.



This is a really well thought-out car, that aims to be something different than what we would look for, but it is admirable nonetheless. It is a good all-rounder, and as such is a difficult beast to get really passionate about. But when you look back on the driving experience you keep thinking "that was really nice."

First, because physics matters, let's set the record straight. The XJ8 is a much roomier car than the S Type R (especially in L guise), and feels as spacious as any car in our test. Yet the XJ8, with its extensive aluminum construction, weighs 242 lb less than the S Type R. That's a good thing and shows that Ford and Jaguar are making real progress.

This fresh Jaguar engineering shows up



immediately in the XJ8's handling. For a decade or more, Jags have had a consistent approach to suspension tuning: relatively soft springs, good damping, and plenty of anti-roll. This gives the sense of a magic carpet ride and keeps things pretty entertaining in the corners. A nice trick, which the XJ8 retains. The XJ8 exhibits a minor amount of roll, and this only when pushed some. Even better, the XJ8 is tuned to be very balanced front-to-rear in corners. This gave us a real sense of confidence to push harder and harder.

At the same time, the XJ8 is smooth and creamy. Impact jolt is minimal, something the best handling cars can't pull off. Moderate bumps are smoothed out nicely too. The sense of decorum is only interrupted when attacking large swales. Then the soft suspension loses a bit of control at the rear.

When you add Jag's well-connected steering, you get a package that is both comfortable and engaging. The XJ8 is a driver's car, but with small compromises for luxury.

The engine fits right into this mold. It has plenty of power, though it isn't cut from the infinite thrust model of the S Type R or the M5. It sounds good, too, while remaining properly in the background. All in all, while the S Type R or the CTS-V look much better on paper, the XJ8 is actually more fun to drive.

you feel like you've moved forward by five years in automotive engineering.

So why treat the two Bimmers separately? Not to be repetitious, but we have just one word to say to you: "physics." The 530i weighs 276 lb less than the 545i. This has a significant effect on the feel of the two cars. Not to mention the roughly \$8,000 price difference between the two cars.

We took the 530i around our standard handling loop, but even before we got to the interesting parts, we could sense a big difference between this suspension and steering setup and the more conventional approach of the other cars in the test. First of all, turn-in feels amazingly quick for a big car at street speeds. The 530i's active steering is reminiscent of the Mitsubishi Evo VIII which we've enjoyed so much. The Mitsu has a very quick steering ratio, as does the 530i at low speeds, so this shouldn't be a surprise. Unlike the Evo, the 530i never feels darty, just wonderfully responsive. This car wants to turn, it feels light and nimble, but it isn't edgy. The 530i's sense of responsiveness continues up to extra-legal speeds, too, so it isn't some quirky phenomenon. The steering is just responsive and balanced.

For a bit more reference, the steering on the M3 feels slower and has no more feel than the 530i's. The 530i

does give up some feel on turn-in and at the limit if you compare it to the 911. But so does almost every other car. Equally, the 530i doesn't have the "front wheels are connected to my brain" sensibility that the Ferrari 360 offers at high speeds. But again, practically nothing else does either.

The suspension matches the steering in overall sensibility. With active anti-roll, the cornering on this car is flat. You push it harder, and it stays flat. After 30 minutes or so, you notice that even cars like the M5 have more noticeable roll. The 530i approach is hugely entertaining, not to mention confidence inspiring. You have the feeling that you know what the suspension will do, and it consistently delivers. The only time this isn't true occurs on initial turn-in, particularly in common street cornering, below about 0.3 g. There is a bit of initial roll, followed by that uncanny flat stance. We suspect that it takes a few milliseconds for the active system to kick in and you subconsciously sense the initial roll which signals "understeer." By doing this, BMW can have softer springs and a nominally better ride, but we'd prefer a slightly stiffer setup.

That said, the BMW, like many BMWs of the past, offers a stunning mix of ride and handling. Sure you can get more isolation, but it is often accompanied by unpleasant ride motions and much



Might as well say it straight off, this is one phenomenal car. If you jump from any car in this test to either of the BMWs,



wimpier handling. Sure, you can almost equal the flat, well-balanced handling, but almost always with greater ride harshness. The 530i seems a bit magical in offering the best of both worlds, not a compromise. This car doesn't telegraph everything going on, but it nevertheless feels amazing and engaging.

The engine is a slightly different story, and may or may not be your cup of tea. The famous BMW six is an eager, revvy partner, coupled with either the very slick auto or the nice if not exceptional six-speed (forget the SMG 'box, which shows promise but ultimately gets annoying). The car moves well and certainly feels much faster than the Acura, which has better paper numbers. The six, though not the most refined or interesting sounding (try the Acura NSX), provides an enjoyable soundtrack for those who like to hear what's going on under the hood. The main problem is that a 15:1 weight-to-power or weight-to-torque ratio just doesn't provide much punch when you really want to move. The 530i accelerates pretty quickly, but the feel is smooth and linear, rather than potent or explosive.

The 530i drivetrain has another

A Word of Caution About iDrive

A Word of Caution About iDrive. We've lived with it, and it isn't that bad. First off, this isn't the iDrive from the 7 Series, which really does have a strong flavor of "bad answers to questions no one asked." For example, the 5 has a conventional shift mechanism, rather than the annoying steering wheel stalk of the 7. On the 5, most of the controls you want to operate every day are straightforward buttons, knobs, or stalks. The two sources of most commentary seem to be the radio and the turn signals. Despite writings to the contrary, the radio can in fact be tuned without using the iDrive controller — you just have to load in presets (not a

completely intuitive task, but more or less a one-time event). The turn signal stalk provides three flashes with a light touch and then stays on with a stronger touch. If you happen to accidentally engage the latter mode, you cancel with a soft touch. This takes some adjustment, but again contrary to rumors, you learn it in about a day at which point it seems fairly useful. iDrive does clear up the dashboard somewhat relative to the wall of buttons approach used, for example, by Mercedes. We wouldn't say one is hands down better than the other, but we certainly wouldn't avoid iDrive for fear of its user interface.

enticing characteristic: gas mileage. Our automatic tester consistently delivered 35 mpg in 75 mph highway driving. For a car this quick and enticing, we were more than pleasantly surprised. We still think BMW should bring in the 535d twin sequential turbo diesel as soon as it can, both for our environmental sensibilities and (mostly) because we want to see what over 400 ft-lb of torque feels like with this chassis.

Audi S4



If you really wanted to buy the Boxster, but just had to have four seats, or you liked the Evo or STi, but needed a little more refinement (and less boy-racer look), we have the car for you. The S4 combines a punchy motor, the joys of manual shifting, and a willing, agile chassis.

The engine is the centerpiece of this package. While the spec on paper isn't that impressive (weight-to-torque is middle of the pack), the S4 achieves some threshold levels of power, gearing, and throttle response that make it seem quick. It moves off the line with a level of urgency that, say, the Cadillac CTS-V can only hope for. Another apt comparison might be with the BMW M3, and we



have to say that in the midrange the S4 feels so much more willing that it is hard to chalk it up to 30 more ft-lb of torque. All-wheel drive isn't the whole answer either, though coming hard out of a corner it helps. This drivetrain is just plain well-tuned for the real world.

The six-speed manual enhances the S4's responsiveness. It isn't a great shifter, but it is good enough that it doesn't get in the way. Slightly better than the BMW six-speed. Sure, it is a little rubbery, and throws are a bit long, but you can feel the mechanics. And with this motor, the control you get with a manual is critical to the overall sensibility of the car.

The S4 chassis fits right into this picture. The S4 loves to carve. Audi's engineers have provided enough roll stiffness to make street handling a blast. Audi engineers have been working to dial in more steering feel and they've succeeded enough to make the S4 pleasurable. The engineers have also been fighting Audi's historical weight distribution problems (Audi engines hang over the front axle) long enough that the chassis is nicely balanced. Sort of like a 911 in reverse. In moderately hard corners, the S4 wants to understeer, but a little encouragement from the throttle balances things out nicely. The S4 isn't graceful or race-car planted, but like the 911, enticing turn-in coupled with a gritty, connected feel invite you to work at getting it right.

On the practical side, ride quality suffers some from all the suspension tweaking. The benefit of this comes in a sense of what is going on with springs, dampers, wheels and tires. You may like this, you may not, but we think it is desirable. With the S4 the only drawback is that you can also tell that there's a lot of hardware down below moving around. We've had this sense with every AWD car we've driven, so it seems to come with the territory.

Also on the practical side, this is the only car in this test that is available as a wagon (next year the 5 Series will have a wagon variant). If you want your hauler to haul, this is a great choice. In fact, it is a great choice all around.



The 545i addresses most of the issues of the 530i, though as you might expect there are tradeoffs. While the two are obviously cut from the same cloth, the 545i feels different in some subtle, but important, ways. The extra weight of the big V-8 necessitates stiffer

springs. This helps offset the very slight sense of initial understeer that we noticed with the 530i. On the other hand, the added mass can clearly be felt, and the 545i doesn't feel quite so much like a sports car. BMW has taken advantage of this by tuning the 545i suspension to deliver a sense of road-crushing competence more than agility. Don't get us wrong: The 545i positively flies over bumps and powers through corners, but it steers and corners with unfussy grace and assurance. The magic, flat handling and responsive steering are still there. The 545i feels like the older, more confident brother of the 530i.

The drivetrain fits perfectly with this scenario. This latest BMW V-8 has enough power to qualify for "serious thrust" designation. Hammer the throttle and the 545i really moves, and the engine breathes well enough that the power at times seems limitless. At part throttle, the BMW automatic is smart enough to avoid unnecessary downshifts, so the gravitas of the whole experience proceeds without interruption or disturbance. The six-speed can be equally fun, though it is a trifle clunky. More than that though, you have to decide the personality you want. If you enjoy wafting as much as full-on power slides, the auto will be your choice. If the joys of shifting for yourself are paramount, go with the six-speed, particularly if you enjoy the responsive but unperturbed feel of the chassis. If you want to shift for yourself and you want the chassis to communicate more of what is going on down at road level, check out the Audi.

We thoroughly enjoyed the 545i. It feels special, competent, fast, and comfortable. While it isn't the most connected car in this test, we kept going back to it because it feels so different and so good. <<<

