

# Shifting Gears

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## Two for the Road: The Hybrid and the Sports Sedan

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**By Roger Witherspoon**

There are some songs which seem made for road trips.

The sun was high, the road was dry and, at 120 miles per hour, the Connecticut landscape was a kaleidoscope of spring floral prints which seemed to throb in time with the bass line of the Temptations' *Runaway Child* pounding from the 15 speakers in the Harmon-Kardon sound system.

It was warm enough to have the windows down and the panoramic sunroof fully open, yet the air flow around the sleek silhouette of the Mercedes S-550 kept enough of the wind noise out of the car that I could pretend I was a teenager again and sing loudly off key along with the storied Motown group.

Back in the mid-60s, of course, I was driving a Nash Rambler with red bucket seats. Forty-five years later I could hardly fit into trim seats like that and, fortunately, I didn't have to. The 2010 S-550 has the ultimate in adjustable seating. Drivers and front passenger have a choice of massage settings, heating or cooling, seat lengths, lumbar supports, and side supports, all at the touch of door-mounted buttons. In addition, every time the car goes into a turn, the side of the chair opposite the turn inflates to keep you firmly in your seat like a parent cradling a child. It is surprising at first, as if there is an unseen presence in the car reaching out to you. But you get used to it really fast.

The passengers in the back seats don't have all those bells and whistles. But their seats can be heated or air cooled and recline. And to make up for the lack of personal massagers, each rear passenger has a personal DVD screen built into the back of the front seats and wireless headsets and controls for personal viewing. And if it's a really sunny day the driver, at the push of a button, rolls a sunscreen across the back windshield. Each of the rear

passengers controls their own window screen.

The S-550 is near the top of the Mercedes luxury line, offering modest speed – it tops out at 130 miles per hour – with its trademark sleek styling and handling. It looks and feels like a car costing \$120,000.

It's propelled by a V-8 engine cranking out a respectable 382 horsepower, and is mated to a seven-speed transmission which shifts seamlessly in automatic mode or manual utilizing the paddle shifts behind the steering wheel. As you might expect, a car like this comes with a \$1,000 gas guzzler tax. The EPA estimates the car gets just 14 miles per gallon in city driving and 21 MPG on the highway. The test car had a mixed average of 15 MPG – which means in mostly city driving the sedan was hanging close to single digits.



If you want the same car with better mileage and no sacrifice in amenities or performance, Mercedes has the S-400H, its first luxury hybrid. According to the EPA, the S-400H gets 19 city, and 26 highway miles per gallon – which is respectable for a large sedan. In addition, the hybrid costs \$10,000 *less* than the standard model, the S-550. That is an unusual price switch which earned the S-400H plaudits from the Union of Concerned Scientists.

The UCS ([www.UCS.org](http://www.UCS.org)) rates hybrids from the standpoint of their greenhouse gas reductions, and their value in terms of the amount of “forced features” they may have. Don Anair, the UCS engineer who maintains the Hybrid Center Scorecard ( <http://www.hybridcenter.org/> ), explained that “when you purchase a hybrid, they often come with features which are otherwise options. The value score we created looked at the cost of the hybrid system vs. the reduction in greenhouse gas emissions and determined how much you are paying for a percentage in reductions.

“The Ford Escape’s base model has three trim levels. But you only get the hybrid at the mid trim level – you’re forced to buy the features which are optional on the standard Escape. It can run to a lot of money: on the Lexus 600 the difference was about \$20,000.”

The UCS gave Mercedes high marks putting the same amenities in both the S-400H and the standard S-550, and the price is lower because the gasoline engine on the hybrid is a V-6 producing 275 horsepower – about 100 less than in the all gasoline version.

But its ecological improvement was just marginal because the S-400H has what is called a “mild” rather than full hybrid. “You can’t drive on the electric motor alone,” Anair said. “You get a 14% reduction in greenhouse gas emissions, but you benefit from the idle-off feature which shuts down the gasoline engine whenever you stop.

“Mercedes has talked about developing a full hybrid, and we hope they move in that direction. What you get with the S-400H is beneficial but not powerful enough to propel the vehicle.”

The major cost difference between the S-550 and its hybrid sibling stems from the larger engine and a \$6,000 facelift. The all gasoline model has a sleeker silhouette and 19-inch, five-spoke AMG sport wheels.

Inside they are the same. Both vehicles feature six-disc CD players, XM satellite radio, Bluetooth cell phone interface and iPod and USB port connections. There is also a 40-gigabyte hard drive to store your own tunes or movies. Whatever your musical tastes, the 15-speaker Harman/Kardon LOGIC-7 system bathes you in smooth waves of sound without overwhelming and battering you with noise.

If there is a downside to the technology in these luxury liners, it's that the computerized command system is not user friendly and there is a steep learning curve for functions which should be intuitive, such as the radio or navigation system. One should not have to read a manual to locate the FM radio. But once learned, the technological innovations can be impressive.



On the safety side the cars are equipped with a small camera on the dashboard facing the driver and connecting to the side radar used in monitoring lane control and the adaptive cruise command. During the first 20 minutes of driving above 35 miles per hour, the camera records eye motions and the safety system's computer monitors how the driver responds to lane changes and sudden swerves and turns. Using that as a baseline, the system then monitors the driver's attention span.

If you are drifting outside your lane or the camera's computer notices what appears to be inattention and your eyes closing, a warning sound is produced and a message pops up in the midst of the speedometer asking is it "time for a rest?" accompanied by the image of a steaming coffee cup. It is not quite the computer system governing the automated, interactive Audi driven by Will Smith in *I Robot* – but it's heading in that direction



The driver monitoring system is augmented with an infrared night vision camera which pops a thermal image of the road ahead in the middle of the dash in place of the speedometer – which becomes a digital readout at the bottom of the screen. The infrared screen can see images 500 feet in front of the car and pedestrians are bracketed to make sure the driver notices them. The ability to detect body heat is a serious advantage in places like upstate New York, where Bambi and her cousins run into more than 1,200 cars *each week*. And while Mercedes

doesn't advertise this, the infrared beam can spot the heated engine of a police car waiting behind bushes with its lights out long before the car is in range of a radar gun.

Slowing down, staying awake *and* avoiding tickets are very good things.



### **2010 Mercedes Benz S-550**

<b>MSRP:</b>	<b>\$116,995</b>	
<b>EPA Mileage:</b>	<b>14 MPG City</b>	<b>21 MPG Highway</b>
<b>As Tested Mileage:</b>	<b>15 MPG Mixed</b>	
<b>Performance / Safety:</b>		
<b>0 – 60 MPH</b>	<b>5.4 Seconds</b>	
<b>Top Speed:</b>	<b>130 MPH</b>	

5.5-Liter, 32-valve, aluminum V-8 engine producing 382 horsepower and 391 pound-feet of torque; 7-speed transmission with automatic and manual mode with paddle shift; all wheel drive; electronic traction control; rack-and-pinion steering; air suspension; internally ventilated disc brakes; 19-inch AMG 5-spoke wheels; dual chrome exhausts; active bi-xenon headlights and cornering lights; driver safety system; night vision; dual stage front airbags; front and rear side airbags; head curtain airbags.

### **Interior / Comfort:**

AM/FM/XM satellite and HD radio; 6-disc CD player; iPod and USB port; 40-gigabyte hard drive; 15-speaker Harman/Kardon Logic-7 surround sound; power sunroof; power sunscreens; leather, adjustable seats with massager; wood trim; rear DVD players.

### **2010 Mercedes Benz S-400H**

<b>MSRP:</b>	<b>\$105,230</b>	
<b>EPA Mileage:</b>	<b>19 MPG City</b>	<b>26 MPG Highway</b>

**As Tested Mileage:** **21 MPG Mixed**

**Performance / Safety:**

**0 – 60 MPH** **7.2 Seconds**

**Top Speed:** **130 MPH**

3.5-Liter, 24-valve, aluminum V-6 gasoline engine producing 295 horsepower and 284 pound-feet of torque; 3-phase, mild hybrid, 120-volt electric motor producing 20 horsepower and 118 pound-feet of torque.