

POWER-WORK-ENERGY

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With GT S, Mercedes Builds a Performance Classic



INTRODUCTION: Efficiency = $X = P_{\text{OUT}} / P_{\text{INPUT}}$,
 $P_{\text{OUTPUT}} = W_{\text{OUTPUT}}/t$, $W_{\text{OUTPUT}} = \text{KINETIC ENERGY} = \frac{1}{2} m V^2$

Thus, $X = [\frac{1}{2} m V^2] / t P_{\text{INPUT}}$

QUESTIONS: (a) Determine mass (in slugs) of GTS?, (b) Convert 503 HP (P_{INPUT}) to ft. lb./s.? , (c) Find efficiency of GTS?

HINTS: mass = weight/g , $g = 32 \text{ ft./s.}^2$,
550 ft. lb./s. = 1 HP , 60 mph = 88 ft./s.

ANSWERS: (a) 113.34 slugs, (b) 276,650 ft. lb./s.
(c) 0.429 or 42.9 % efficiency of the GTS Mercedes.

COMMENT: Turbo engines normally are in the 40% efficiency range. jc

The Mercedes-AMG GT S is not the car many expect from the tri-star folks. Far from the opulent S-Class and tot-toting GLS S.U.V., the two-passenger GT S clearly says "let's race." It's speaking directly, and confidently, to the [Audi R8](#) and Porsche 911. "Something wicked this way comes — in yellow," said an observer, gazing at the Mercedes simmering along the roadside. Indeed, this machine — replacing the longer gullwing SLS — cuts a seductive and menacing figure. The AMG Solarbeam paint on the test model I drove does look suitably wicked. I salute those extroverted souls who choose it over white or silver. This is not an automobile for the masses, given **prices that begin at \$132,125.** But that's a bargain of sorts considering it is about 70 grand less than the asking price on the less-sophisticated SLS it replaces. My tester, equipped with fade-free carbon ceramic brakes (\$8,950), carbon fiber exterior trim (\$5,300) and that Solarbeam paint (\$9,900!) has a **sticker price of \$171,900.** I'll point out that 97-month [auto loans](#) are now available. Aluminum body panels seem to be poured over the aluminum space-frame chassis. Replacing the SLS's 6.2-liter V8 is a **4-liter V8 with turbochargers** nestled between the cylinder banks. (That's a "hot inside V" setup for jargon lovers). The elimination of a traditional oil pan allowed engineers to drop the engine 2 inches for a lower center of gravity. Yes, there are drive settings to tailor suspension and performance, from "comfort" through a manual mode properly tagged "race". The optional computer controlled engine and transaxle reduce vibration. Buy them. They're only \$2,600. **(((Mercedes claims the turbo V8's 503 horsepower and 479 pound-feet of torque launches the 3,627-pound GT S from rest to 60 miles-an-hour in 3.7 seconds)))** (which is conservative, methinks Considering its looks and performance, the Mercedes-AMG GT S should fast become a classic.