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Digital Adrenaline For Your...
Mercedes-Benz E500 5.0



Powerchip technology enhances your Mercedes-Benz to its ultimate level, delivering faster, smoother acceleration in all driving conditions. Whether you enjoy a leisurely weekend cruise or a hard racetrack drive – there is no easier and more effective way to release the potential from your E500 5.0.

The following information is an overview of the performance the Powerchip will deliver. If you have any questions, your Power Consultant will assist you as best as possible. We look forward to giving you the best performance possible from your Mercedes-Benz.

Make	Mercedes-Benz
Model	E500 5.0
Engine	M113
Year	From Aug 02
Powerchip Code	MER0097



Power

In standard form the Mercedes-Benz E500 5.0 produces 302 hp at the flywheel, and Powerchip improves the engine power to 323 hp.

Power (hp)			
Standard	Bronze/ Silver	Gold 91	Gold 93
302	N/A	317	323

The extra performance achieved by the Powerchip allows your vehicle to respond much better than stock E500 5.0s. You will notice an effortless push back into the driver's seat, to give you a much more enjoyable and at times safer driving experience. The Powerchip will tap into your Mercedes-Benz's 'hidden reserves', to give you an immediately noticeable improvement from your vehicle – we guarantee it!

Torque

Torque is a measurement of your engines pulling power, and it's torque that pulls you up hills, allowing your engine a more linear and aggressive acceleration curve. With the Powerchip, you notice the increase in torque right throughout the rev range, which gives you far greater flexibility at low engine revolutions. Towing will become less demanding, and you will no longer feel the need to take the engine to the redline in each gear to get the performance you demand... It's always there for you, when you really need it most!

Torque (lb.ft)			
Standard	Bronze/ Silver	Gold 91	Gold 93
339	N/A	355	362



Acceleration

Increased Power and Torque results in faster acceleration. And it is not just standing start acceleration that is improved, your in-gear acceleration is improved and faster.

If overtaking is important to you, you will feel safe knowing that you spend less time on the "wrong side of the road", improving the safety of your car, for you and your family or passengers.

Perhaps you feel that you need that extra bit of power when you are lined up at the "traffic light grand prix" against another car with similar (or more) power? If you want to have the unfair advantage that will give you more 'GO' away from the lights, you need a Powerchip performance software upgrade for your E500 5.0.

Fitting Details

Your car utilizes a Surface Mount Chip (SMT) – a very sophisticated and powerful memory device which is fitted to many late model (post 1996) vehicles. Because of its complexity, the SMT style chip must be 'flash' programmed in the same way as the dealership (don't worry - we do this for you when we receive your ECU), similarly to when servicing the vehicle. The ECU itself is very easy to remove, and should be sent overnight to be modified at Powerchip and then return overnight to you (we use FedEx Priority Overnight Service). Detailed instructions (including photos) are also provided to ensure the ECU can be removed easily from the vehicle. Once complete, and re-installed into the vehicle, you are back on the road to enjoy your enhanced performance – as soon as possible.

On Road Development

Where Powerchip really shines out over its competitors is the emphasis and time spent refining the program for drivability and enjoyment. Much more a 'real world' gain than full throttle horse power runs on a dyno, part throttle refinement is a gain everyone uses every time they drive the vehicle. Flat spots and poor off the line performance are smoothed out in this process, and transient throttle conditions are made razor sharp for the ultimate in response. Real time changes to tables like throttle response and power enrichment are done on road to fine tune the driving experience of the vehicle, with acceleration timing equipment used to ensure consistent and measurable gains in part throttle drivability.



Driveability

Beyond the impressive torque and power gains on full throttle, many hours were spent refining the part throttle timing maps for maximum throttle response and driveability. Both the full throttle and part throttle maps are changed for improved driveability in day-to-day driving.

In other words, you don't need to be on the racetrack to notice the Powerchip performance improvement.

Manufacturers Tolerances

Mercedes-Benz unfortunately leaves large tolerances in the performance characteristics of its entire fleet to allow for drivers that are negligent on maintenance, and who are non-enthusiasts. The E500 5.0 is 'de-tuned' to be able to run on the poorest grade of fuel that the car is likely to encounter anywhere in the world, and also to allow for the small percentage of owners who put their cars reliability to the test due to their lack of mechanical understanding. In most cases, our clients are enthusiasts who place more emphasis on the performance characteristics of their vehicle, and therefore the Powerchip does not need to be programmed as conservatively as the stock software.



Modified Spark Advance

In the old days the ignition distributor controlled the engine spark timing. Changes to the position in the distributor will result in changed ignition settings, and is a good method of 'tune-up' for older vehicles. Modern engine ignition is controlled by a series of tables or maps. These maps give the engine any instructions required to operate, under ALL load and rev per minute access points.

Similar to the old systems, advancing the point of ignition within a cylinder results in increased horsepower and torque. It is important not to advance the timing beyond the capabilities of the fuel used, or else detonation can occur. Peak horsepower is achieved when ignition timing is set as close to the point of detonation as possible, without exceeding it. This is the primary purpose for asking the octane rating each client uses most frequently, so that the software is set to the correct level of ignition advance for the fuel used.



The end result of ignition advance changes is increased horsepower and torque, resulting in better acceleration and various other driving benefits.

49 State Emissions Legal

The Powerchip complies with U.S. EPA Memorandum 1A, or it has not been found nor is believed to be unlawful for use under the provisions of the Clean Air Act. Currently, Powerchip is not legal in California for vehicles that may be used on a highway. Powerchip is currently undergoing testing for certification under the Californian Air Resources Board (CARB) exemption process.

Our Satisfaction Guarantee

Every Powerchip sold in North America comes with an unconditional 14-day money back guarantee. This ensures that the Powerchip will live up to your expectations, not ours! If for any reason you are unsatisfied with the Powerchip, you may return the Powerchip to your place of purchase for a full refund of the purchase price (not including shipping and handling, installation and removal etc.).

Our satisfaction guarantee offers you total peace of mind, and makes the purchase of the Powerchip risk free. By purchasing a Powerchip you have nothing to lose – and everything to gain!

Octane ratings

The Powerchip is designed to get the best from your engine, and to do this you must use a high performance fuel (91 Octane minimum). It is not possible to improve the performance on late model fuel injected vehicles using poor quality fuels, such as 87 or 89 octane. When ordering your Powerchip upgrade, your Power Consultant will ask you for the octane rating you would like your program to run.

Powerchip Gold 91 is designed to run on fuel with an octane rating of either 91 or 92. Powerchip Gold 93 is designed to run on fuel with an octane rating of 93 or higher. We highly recommend that you use the highest-octane fuel available to you, such as 92, 93 or 94 octane if a higher than 91-octane fuel is available.



Warranty

All Gold 93 Powerchips come with a three year, unlimited mile warranty, which means that if anything occurs with the Powerchip in that time, we will replace it without charge to you. An optional extended Powerchip warranty is also available at an additional \$90 at the time of ordering. This extends the warranty period on any Power chip to six years.

The terms and conditions of the Powerchip warranties can be viewed in detail on our web site at

<http://www.powerchipgroup.com/products/warranty.asp>

To briefly summarize the information: if your car is covered by a new or dealer warranty, the dealer may not 'void' a warranty simply because you have fitted an aftermarket product. SEMA, the automotive aftermarket industry body in North America has made the following statements regarding aftermarket products such as performance chips...

"The vehicle manufacturer is not allowed to void the vehicle warranty just because aftermarket equipment is installed on the vehicle..."

"...In cases where such a failed aftermarket part is responsible for a warranty claim, the (vehicle) manufacturer must arrange a settlement with the part manufacturer, but the new vehicle warrant is not void under the law."

"If the failure to honor a claim involves the new-vehicle warranty, and it appears that the (vehicle) manufacturer is improperly denying a claim, the incident should be reported to the Federal Trade Commission (FTC)."

The fitment of the Powerchip will not have a detrimental effect on your vehicle performance or engine longevity, and therefore does not interfere with the manufacturers warranty in any way.



Value for a Lifetime

The investment you make in the Powerchip will last for as long as you keep your car, and for most of our customers, that is normally for 3 or 4 years. So when you consider the benefits of the chip over a number of years, it is not a lot to pay for extra performance you will probably use nearly every day. As a percentage of the total cost of your car, the Powerchip works out to be very cost effective.

Cost Effectiveness

As we all know, modifying late model vehicles is not a cheap exercise, however, when you look at it on a hp per dollar basis, the Powerchip comes in ahead of any other modification you could make to your Mercedes-Benz. Have a look at just how well the Powerchip stacks up:

Price	\$840
hp Gain	21 hp
Price/hp	\$40

The Powerchip is designed to offer excellent value for money compared with other modifications you might be planning in the future.



COST USD(\$) (not including shipping/handling)			
Bronze	Silver	Gold 91	Gold 93
N/A	N/A	\$840	\$840

Ask the Experts

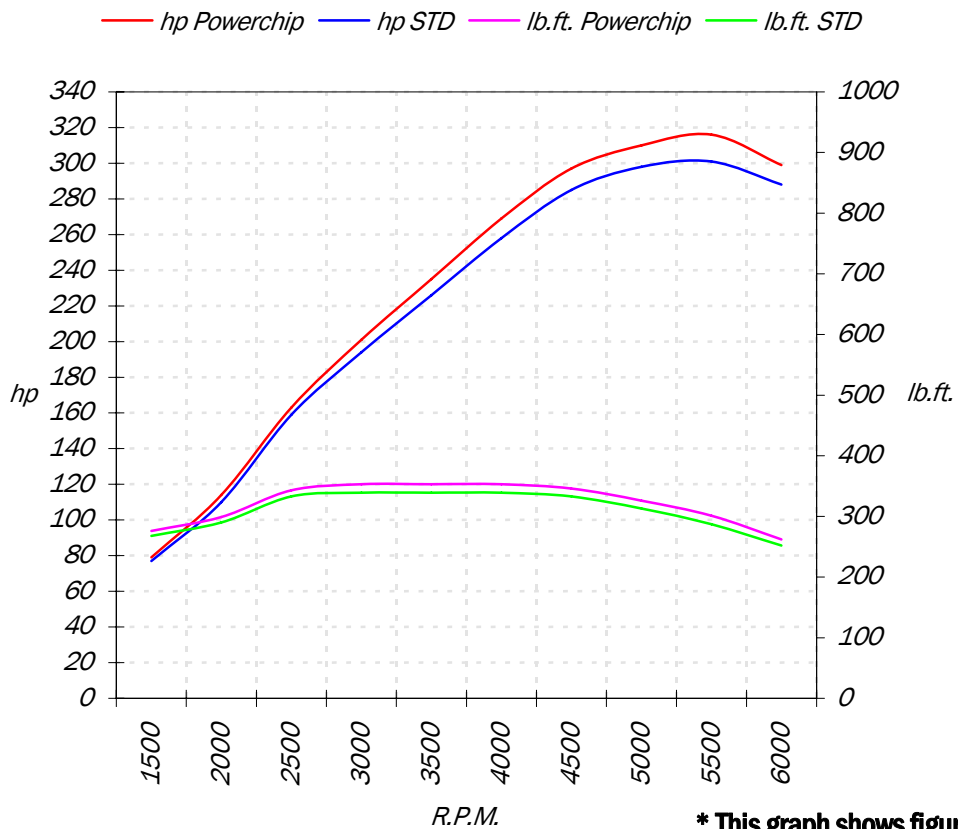
Your Powerchip Power Consultant is trained to provide you with the best information about getting more performance for your car. We have a specific Power Consultant who is responsible for the Mercedes-Benz range, and he is an expert at answering all of your technical questions, especially about the E500 5.0. If you would like to speak with your Power Consultant about any aspect of the upgrade, please telephone Toll Free North American headquarters in California on 1800-495 0777 or email your Mercedes-Benz Power Consultant directly at tcattach@powerchipgroup.com

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Gold 91 Performance Data for your...

Mercedes-Benz E500 5.0 *

R.P.M.	hp STD	hp Powerchip	hp Gain	lb.ft. STD	lb.ft. Powerchip	lb.ft. Gain
1500	77	79	2	268	276	8
2000	110	114	4	290	299	9
2500	159	163	4	333	343	10
3000	194	201	7	339	353	14
3500	226	235	9	339	353	14
4000	258	269	11	339	353	14
4500	285	297	12	333	346	13
5000	298	310	12	313	326	13
5500	301	316	15	287	301	14
6000	288	299	11	252	262	10



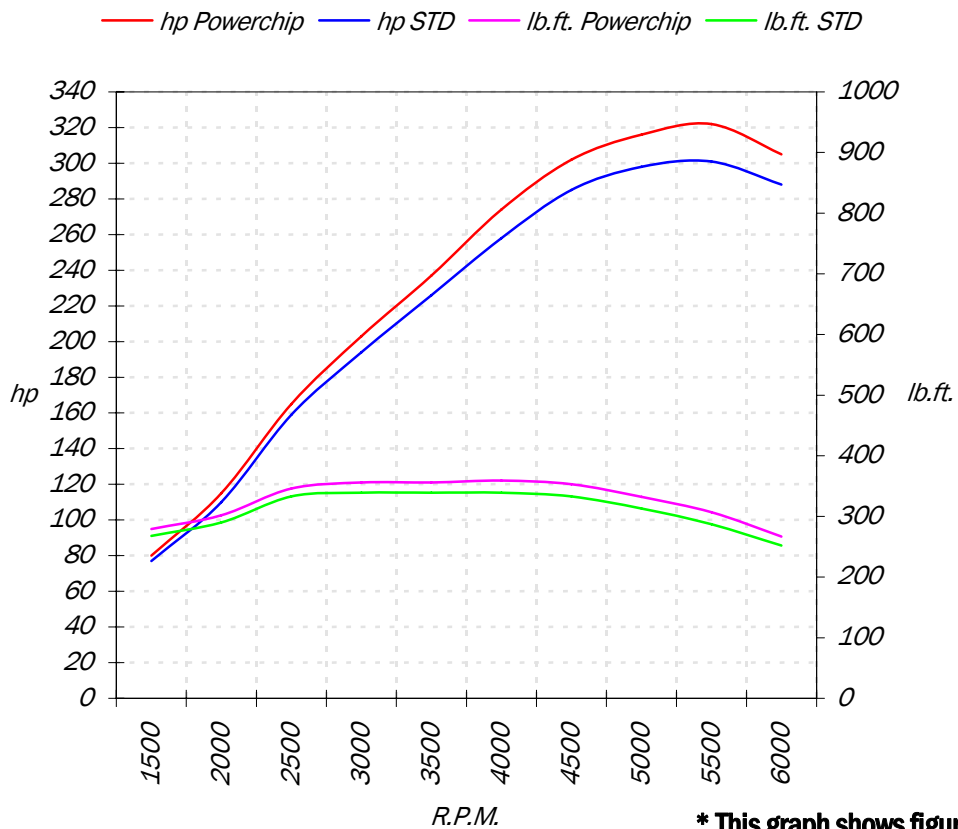
* This graph shows figures for Powerchip Gold 91

MODEL	ENGINE	VERSION	CAPACITY	Max hp	Max lb.ft.	0-60 Auto	0-60 Man
E500 5.0	M113	Standard	4966cc	302	339	N/A	N/A
E500 5.0	M113	Gold 91	4966cc	317	355	N/A	N/A

Gold 93 Performance Data for your...

Mercedes-Benz E500 5.0 *

R.P.M.	hp STD	hp Powerchip	hp Gain	lb.ft. STD	lb.ft. Powerchip	lb.ft. Gain
1500	77	80	3	268	279	11
2000	110	115	5	290	302	12
2500	159	165	6	333	346	13
3000	194	203	9	339	356	17
3500	226	237	11	339	356	17
4000	258	274	16	339	359	20
4500	285	302	17	333	353	20
5000	298	316	18	313	332	19
5500	301	322	21	287	307	20
6000	288	305	17	252	267	15



* This graph shows figures for Powerchip Gold 93

MODEL	ENGINE	VERSION	CAPACITY	Max hp	Max lb.ft.	0-60 Auto	0-60 Man
E500 5.0	M113	Standard	4966cc	302	339	N/A	N/A
E500 5.0	M113	Gold 93	4966cc	323	362	N/A	N/A

Customer Testimonials

Customer Name: Sean G, Del Mar

Car: E320 3.2

Testimonial added: May 23 2003

Customer Comments:

"My 2nd Powerchip...first one was for my 1995 MB C36 AMG...I loved the difference and I sold it to a friend who continues to run it with no problems, 120,000 miles and nearly 300 bhp. My wife drives our new E320 most of the time and when I snuck the Powerchip into it within a month she asked me, "Did you put a supercharger in this?" No lie, she even felt the difference. Along with my dual K&N Air filters and REMUS Cat-back sport exhaust I went from 221 bhp to 252 bhp, off the line is fantastic with 258 lb/ft of torque. I have the E320 that MB will release in 2004 or 2005 when they upgrade the power, I have it already today. Wayne B. is awesome. Thanks Wayne."

Customer Name: Simon S, Tampa

Car: SL55K AMG 5.5 V8

Testimonial added: Mar 4 2003

Customer Comments:

"I sent my ECU to Santa Monica via FEDEX and in 2 days i put it back into the car. The difference was better than expected. The power increase on full throttle is slight (i find it hard to hit full throttle on the street regardless), but part throttle seems much stronger. Even my wife noticed the change in smoothness.

I have a track day in a while so I will let you know how I go with my track day when i race other SL55's. I am hoping to be the fastest there!

"

Customer Name: Scott L, Galena

Car: SL55K AMG 5.5 V8

Testimonial added: Jun 5 2004

Customer Comments:

"The chip has performed flawlessly and as represented. The speed limiter (155mph) has been removed; something I enjoyed confirming personally!

Performance has been enhance throughout the entire power curve and is evident in the initial acceleration as well as the additional higher end power.

The company has been ideal to work with with immediate turn around on the computer. My mechanics are sophisticated and were impressed with the level of service and support as well."

Customer Name: David B, Flemington

Car: ML350 3.7

Testimonial added: Mar 31 2005

Customer Comments:

"Powerchipping my ML350 has made a tremendous difference in it's responsiveness. Prior to the ECU upgrade, the truck was very 'pokey' especially going up hills. Now the throttle response is immediate and smooth throughout the RPM range.

Powerchipping my truck was exactly what it needed.

Add to this the great customer service makes Powerchipping your vehicle a easy and hassle-free

Truly the most bang for the buck mod you can make.

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