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Digital Adrenaline For Your...
Mercedes-Benz 500E 5.0 V8



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 500E 5.0 V8.

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	500E 5.0 V8
Engine	M119
Year	Jan 91 to Dec 92
Powerchip Code	MER0156



Power

In standard form the Mercedes-Benz 500E 5.0 V8 produces 322 hp at the flywheel, and Powerchip improves the engine power to 325 hp.

Power (hp)			
Standard	Bronze/ Silver	Gold 91	Gold 93
322	N/A	325	325

The extra performance achieved by the Powerchip allows your vehicle to respond much better than stock 500E 5.0 V8s. 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
354	N/A	357	357



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 500E 5.0 V8.

Fitting Details

Your car utilizes a plug-in plug-out chip (EPROM). Fitting is simple and the Powerchip can be installed in about 30 minutes with basic skills and equipment. To install the upgrade software, simply locate the computer and un-plug the standard chip. Place the Powerchip performance chip into the socket and insert fully. Then, close the computer, re-install into the vehicle and start the engine to fully complete the installation process.

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 500E 5.0 V8 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	\$390
hp Gain	3 hp
Price/hp	\$130

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	\$390	\$390

Ask the Experts

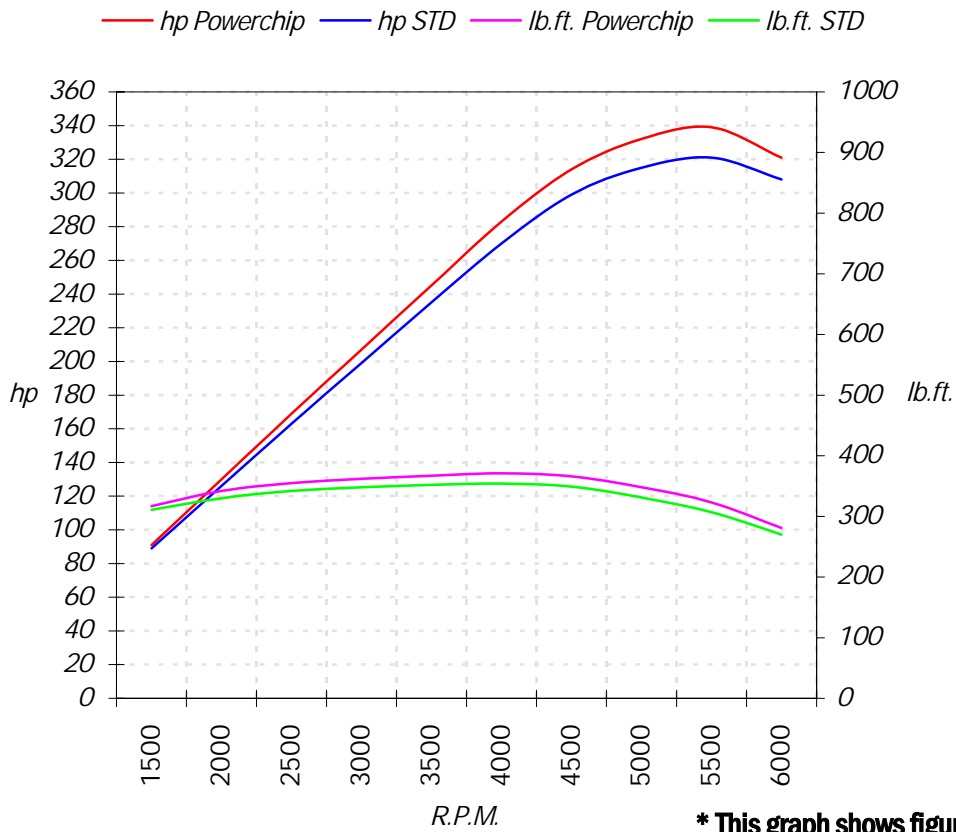
Your Powerchip Power Consultant is trained to provide you with the best information about getting more performance for your car. We have a specific Power Consultant who is responsible for the Mercedes-Benz range, and he is an expert at answering all of your technical questions, especially about the 500E 5.0 V8. 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 500E 5.0 V8 *

R.P.M.	hp STD	hp Powerchip	hp Gain	lb.ft. STD	lb.ft. Powerchip	lb.ft. Gain
1500	89	91	2	311	317	6
2000	126	130	4	330	342	12
2500	163	169	6	342	355	13
3000	199	207	8	348	362	14
3500	235	245	10	352	367	15
4000	270	283	13	354	371	17
4500	299	314	15	349	366	17
5000	315	332	17	331	348	17
5500	321	339	18	307	323	16
6000	308	321	13	270	281	11



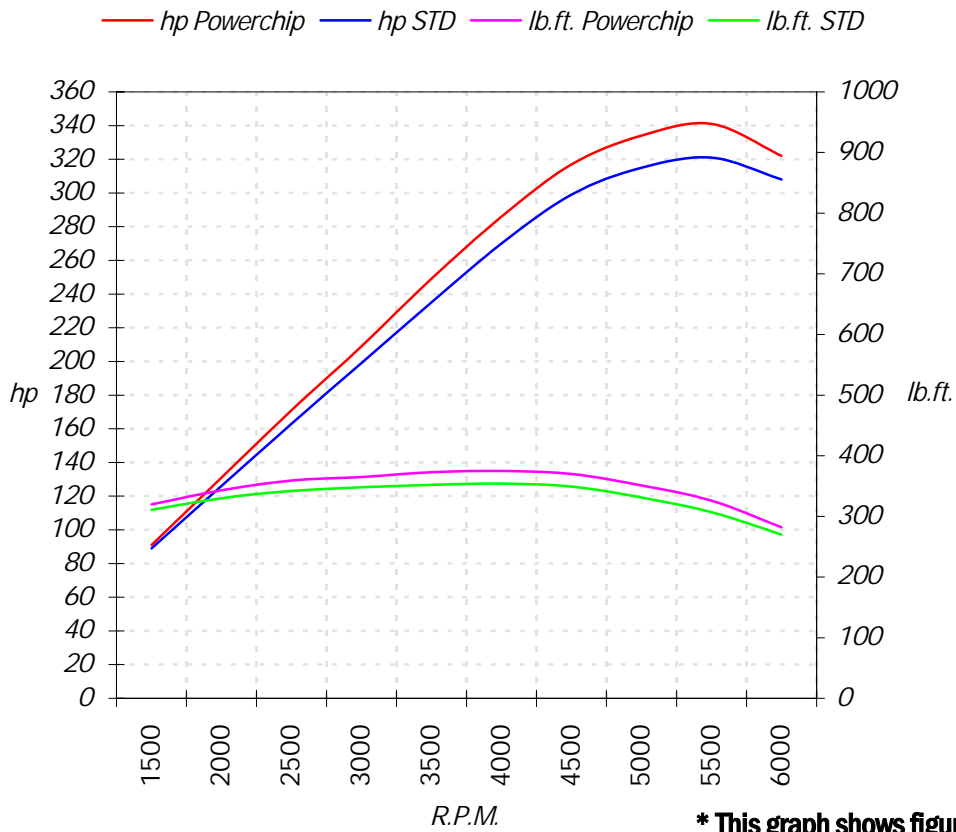
* This graph shows figures for Powerchip Gold 91

MODEL	ENGINE	VERSION	CAPACITY	Max hp	Max lb.ft.	0-60 Auto	0-60 Man
500E 5.0 V8	M119	Standard	4973cc	322	354	N/A	N/A
500E 5.0 V8	M119	Gold 91	4973cc	325	357	N/A	N/A

Gold 93 Performance Data for your...

Mercedes-Benz 500E 5.0 V8 *

R.P.M.	hp STD	hp Powerchip	hp Gain	lb.ft. STD	lb.ft. Powerchip	lb.ft. Gain
1500	89	91	2	311	320	9
2000	126	131	5	330	343	13
2500	163	171	8	342	359	17
3000	199	209	10	348	365	17
3500	235	249	14	352	373	21
4000	270	286	16	354	375	21
4500	299	317	18	349	370	21
5000	315	334	19	331	351	20
5500	321	341	20	307	326	19
6000	308	322	14	270	282	12



* This graph shows figures for Powerchip Gold 93

MODEL	ENGINE	VERSION	CAPACITY	Max hp	Max lb.ft.	0-60 Auto	0-60 Man
500E 5.0 V8	M119	Standard	4973cc	322	354	N/A	N/A
500E 5.0 V8	M119	Gold 93	4973cc	325	357	N/A	N/A

