W126 - MB-W126 Club - Interessengemeinschaft der Mercedes-Benz Baureihe 126

Buying advice - type 126

by Marc Westhofen, latest update: November 3, 2002
English translation by Gerben van Vlimmeren

Table of contents:

Introduction

The 126 series S-class is in the transition phase between an old daily driver and a young timer on it's way to become a true old-timer. A phase many other known classic cars have already gone through. Whether the 126 can be seen as a daily driver or as a young timer depends on it's general condition. Right now, the moment has come to distinguish between the good and the bad. Not every 126 with excessive chrome and an impressive price tag can be considered to be a 'good buy'. To help you to decide what to buy and perhaps more importantly what not to buy we present you this document. The 126 was not only the flag ship of Mercedes-Benz, but also a forbearer of new technology, leading the world of old-timers into a new future. Pyrotechnically operated seatbelt tensioners and the drivers airbag were introduced to a production car for the first time in 1981, in a 126 S-class. Another new feature was the ABS antilock braking system, introduced in the latest 116 series. ASR and the passenger airbag, introduced in 1986, continued this chain of innovations. These features are nowadays well known and accepted in modern cars. Yet, there is no experience with these devices in cars that are 'coming of age'. How reliable will the pyrotechnical and electronic devices be in these new old-timers? Therefore, just as the 126 pioneered these devices many years ago, so will the 126 pioneer again: Old-timer experts everywhere in the world will benefit from experiences made with technology introduced first ever in the model 126.

Both because of this pioneering and the continuous flow of experiences provided by our club members this document will continuously be developed. Apart from this, the daily usability and the maintenance costs of this timeless Mercedes-Benz S-class design will be discussed.

Do not be fooled. The 126 is not a cheap car to run. It was an expensive car to make and it's an expensive car to maintain. Filling up a tank will cost you more than 90 EUR, depending on your location. It's not a fuel efficiency car either. Repairs can and usually will be expensive. Do not be put off by these warnings though, just remember that things can get expensive, so know what you get yourself into. Most 126 owners do not see their car as just a mean of transportation, but more as a hobby. If the 126 would just be considered to be a mean of transportation, the financials would quickly become a source of frustration.

If these issues are not a problem for you, we wish you lots of fun with your future 126.

Engine advice

6-cylinder:
The 300 series (starting fall 1985) is the best choice in the 6-cylinder range. They have the best running characteristics and they're the most common engines (therefore also most offered as used cars). The 260 series (fall 1985) are better suited for the more relaxed drivers. The 300 can handle the weight of the 126 quite well (180HP is not much for a 126), but the 260 balances on the verge of underpowerment and its running costs (maintenance and insurance) are not much less than those of the 300. Anyone who wants to take this difference in running costs seriously, is better not to get involved in the 126, because this difference can be neglected in practice. The 280 engines (until 1985) are amongst the most robust 6-cylinder engines ever produced by MB. Because they were fitted with quite tame overhead cams to provide fuel efficiency, they have a long life expectancy. In countries where cars without catalytic converters are heavily taxed it is advisable to look for a 280 with a cat fitted. Because of these tax issues, the 280S carbureted version can hardly be found anymore. Buying a 280 without cat cannot be recommended in these countries. Because the 280 was built until 1985, examples of this engine variant will usually have higher maintenance costs (older cars, higher mileage). Of course, there are many well conditioned examples of the first series and many abused 126 cars of the second series, but as a whole we can say it is safe to include a buffer for repair costs in the total budget.

8-cylinder:
The 8-cylinder engines are by far the best match for a heavy car like the 126. They offer great comfort and versatility, albeit at a price. Fuel consumption is high. Generally, the V8 engines perform better than their 6-cylinder counterparts. The 380 versions (until 1985) have a tendency to wear out their cam shafts quite quickly, therefore we advice against this engine. The 500 of the first series (until 1985) are very durable and have excellent running qualities. As with the 280, this version is hard to find with a catalytic converter, because only the 380 was available with this environment friendly aide. Because unleaded fuel was hard to get in the early days, Mercedes recommended their customers not to order a cat. Therefore, most of the first generation cars in Germany will have an aftermarket cat fitted. In the fall of 1985 the new V8 series was introduced in the 126 (420, 500, 560). All these engines have proved themselves to be reliable. We especially recommend the versions from after fall of 1987. These engines had increased performance to compensate for the loss of power that came with the catalytic converter. Until 1989 versions (also the 260 and 300) were sold as 'RÜF' or 'Aftermarket version'. These cars had the increased performance, but not the cat, as they were only prepared to have a cat installed later (in the late 80s all new cars in Germany were legally required to have a cat fitted. Cars without cat were taxed higher). The 500 (second series) is especially recommendable, the rpm were lowered, providing a quieter and more durable engine. All V8s of the second series are generally long lived: More than several hundreds of thousands of kilometers are obtainable without problems. The 560 is interesting because of it's very high standard equipment level. Performance wise they're not much better than the 500 but they run smoother and thus quieter. The 560 revs a bit higher than the 500, supporting a more sporty driving style. Keep in mind that this feature means that some of the 560s were abused as Porsche hunters. Fuel economy of the 500 is just marginally better than that of the 560. The 420 is the smallest V8 engine available after 1985. The version before 1987 is not recommended because it hardly performs better than the 300. Better is the 420 that was offered after 1987. 20HP more helped to widen the gap between the 420 and the 300. Disadvantage of the 420 is that it doesn't have the acceleration stabilizer mounted on the rear axle like the M117 (500 and 560) series and therefore has the tendency to 'squat' on take-off (especially the more powerful post-1987 version).

Diesel:
The Diesel versions were only produced for the North American export market. Over here, they are quite rare, therefore we have only limited information about their performance. Even the best MB workshops generally do not know how to handle these cars when they require service. More often than that, spare parts for these cars are sought in 123 spare parts lists, not always the most reliable source. Most 126 diesels in Europe are privately converted gasoline engine versions. We have to advise against those: Quality of such projects is hard to describe! Those who are looking for an original diesel should look for the telltale US markings: Combined mileage/kilometer counter, fat bumpers front and rear, English text on switches, VIN plate visible through the front windshield and the characteristic sealed beam headlights and taillights with integrated running lights. The diesel was available in three main engine variants: the 5-cylinder OM617 300SD Turbo diesel (until 1985), the 6-cylinder OM603 300SDL turbo diesel (only available as long wheelbase version) and the 6-cylinder OM603 350SD turbo diesel. We have to advice against the 350SD because of its tendency to develop cracks in the cylinder head. Best buy is the 300SDL, both because of the long wheelbase option and the better performance (145 HP against 120 HP of the OM617).

Further Informationen about the diesel types

Weak spots of the 126 - Where to look at?

Just like any other car, during the long life of the 126 several weak spots emerged that require attention. The same goes for (barely) invisible accident damage. Black sheep are plentiful in the used car trade world. To ease your mind we will provide you with some tips. One of these is to carefully observe the seller of the car. If the seller is nervous, busy, or downright blunt when you look at the car or ask some questions about it, then leave the car alone - he is probably hiding something.

Engine/ Exhaust:

Take a good look at the engine and the engine bay. Many used car salespeople tend to clean the engine bay so that the car looks better maintained than it really is. Usually these cleaning frenzies are undertaken with steam cleaners or high pressure cleaners. Both can damage the sensitive and expensive electronic components of the car. The wax protection layer on the engine is usually not replaced after these cleaning operations either. Also, when the engine is 'clean', a lot of signs are hidden. Most engines of the 126 series have a tendency to 'sweat' a little. This is quite normal and nothing to be afraid of. Most of the time the valve cover seals just have dried out over the years, allowing small amounts of oil to escape. Something you can try when an engine has been cleaned: Take a good long test drive (preferably with a good load) and check the engine for traces of oil afterwards. This way you can trace the most serious leaks.

Can a slightly slipping sound be heard ("chechecheche") with an opened hood and a running engine? The sound comes from the pulley and drive belt system and is quite harmless. Usually it is the generator that shows some wear, but that does not mean it is worn out at all. A good test is this: If the engine is running, the red battery indicator light should be off. If the light keeps burning, the generator may be broken or the contact between the generator and the battery is disconnected. The light should not burn faintly either. If this is the case, one of the diodes in the generator might be defective. As a result the generator will provide a current that is too weak and the battery will be drained during use. If you want to be completely sure, test the generator while the engine is idling: Switch on some power absorbing features like the high beams, the heater, rear windshield heater, seat heaters, etc… Now measure the voltage between the plus and minus poles of the battery with a voltmeter. If the voltage remains below 12 volts, the generator or the battery is defective. Check the state of the battery: is it older than 3 years? Does the capacity of the battery match the prescribed capacity in the owners manual of the car? Please bear in mind that a bad battery is no reason not to buy the car. It is a reason to adjust the price of the car.

If leaks in the neighborhood of the engine exhaust manifolds are audible, than the exhaust manifolds or the manifold seals may need replacement.

If a ticking sound can be heard when the engine is cold and if that sound goes away when the engine has run for a while, the hydraulic valve clearance compensators are usually the cause. If the ticking does not go away, then the camshafts are likely to be the cause. Because of the timing chain there are no timing belt problems. The very durable double timing chain does have a maximum lifespan, though. When in use for over 200.000 km the chains can stretch a little, causing synchronization problems between the camshaft and the crankshaft.

Cars that have been parked or stored for a long time often develop leaking water pumps. Usually the gaskets have dried out and do not seal properly anymore as a result. It is important to observe the water pump when a cold engine is started. Usually the gaskets reseal themselves when they are in use again, but replacement might be necessary. One look at the coolant expansion tank (or in the radiator when the car has no expansion tank) can reveal leaks in the cooling system. This does not mean that the water pump is at fault. Very often, the gasket of the expansion tank cap is at fault. Replacement is cheap. It is also important to feel around the water hoses: The

hoses are threaded on the inside, surrounded by a black rubber layer. It can happen that the threading underneath this black rubber layer has burst open. In that case, the hose is no longer watertight. Other causes of coolant loss can be determined by looking at the exhaust:

Exhaust fumes white with cold engine: Everything okay. Just condensation.
Exhaust fumes white with warm engine: Pull over and carefully (!) open the cap of the coolant expansion tank. Do you smell exhaust fumes? That can indicate leaking cylinder head gaskets (rare) or a cracked cylinder head (very, very rare).
Exhaust fumes are blue: Only after a cold start? Not that bad. The valve stern seals tend to dry out over time. If oil consumption gets too high, you might want to renew the valve stern seals. A cracked cylinder head is very rare - in that case you might also notice cooling fluid mixed in with the engine oil (check with dipstick).
Exhaust fumes are grey to black: The air/fuel mixture is too rich. Wrongly adjusted engine or a very dirty air filter that needs (very urgent) replacement. Also test the fuel injectors.

Cars that have been stored for a long time or that have driven many short stretches are prone of having defective or leaking exhaust systems or flanges. This is caused by the residue of sulphur, one of the ingredients of fuel: In every engine and exhaust system that is left to cool down, condensation will form. This condensation disappears when the engine is in use again. If the engine does not get hot enough to remove the condensation, the sulphur residue will chemically react with the condensation water to form an acid. This acid will corrode the exhaust system.

A good indication of the state of an engine is an engine compression leak test, but does it say anything about the future of the engine? Regrettably it is not possible to look inside the engine. The exact life expectancy of an engine cannot be determined, but do not fear: The life expectancy, especially of the V8, is very long. Distances of half a million kilometers and more are not uncommon at all, almost as much as that of an average truck! There is a simple test to check whether the engine has compression leaks: With the engine idling, carefully remove the oil filler cap and push it on with a finger. If the cap is pushed upwards slightly, then there is a pressure build up that is usually caused by a compression leak in the engine. A compression leak test is recommended in that case!

Drive system:

The automatic gearbox should shift gently (no thuds when it changes gear, everything should go smoothly). If all gear changes are hard, then the problem usually has to do with the pressure modulator settings. We are entering a dangerous area here, though: When the gearbox is set too softly, the hydraulic clutch will wear out quickly, because the slipping will cause an excessive amount of heat build up. This can be noticed during an upshift, when the engine revs up a little while shifting. If the gearbox is set to firmly, the load on the drive shaft and the rear differential will be too high. In this case, the road to the MB dealer should not be avoided: They will adjust it within minutes for a minimal fee. If the gearbox only thuds at some shifts, for example from 3 to 4, then the internals of the gearbox may be worn out. Automatic gearbox repair is usually very expensive (amounts over 1000 EUR are easily spent) and a replacement gearbox can cost you as much as used compact car.

The rear differential should not be overlooked either: Some of them develop a whining noise, indicating wear of the differential gears. This wear generally doesn't mean that the differential has become unusable. It is more important to visually inspect the differential housing. Most have the tendency to sweat quite a lot, not really a problem. If they leak, then the sealing rings need replacement quickly (about 200 EUR), to prevent the oil level from getting too low. If the rear differential runs dry it can block up during driving, causing complete destruction of the differential. This in turn can cause hazardous situations and even a serious car crash!! The oil in the rear differential housing generally is not being replaced anymore (against maintenance schedules) these days. When the sealing rings need replacement it is the ideal moment to change the differential oil as well.

When a trailer hitch is present, inquire whether the car has pulled heavy loads (like large caravan trailers or horse trailers). If it has, you should not buy it. The drive system (especially the automatic gearbox and the rear differential) has been taxed heavily.

Wheels / Steering system / Brake system:

Do the tires show regular wear? If not, the balance or alignment of the wheels may be faulty. In this case, get the car rebalanced and realigned as soon as possible. Also check the bearings and ball joints for play. These parts are heavily taxed by a heavy car like the 126 (especially the V8).

If **steering play** is encountered during the test drive (something many of the V8 have because of their high weight

then do not worry: The power steering system is of the circulating ball type, like many trucks have. The play can be simply corrected by adjusting a set screw by any MB shop (usually for less than 150 EUR). Whether the play can be corrected by adjustment can only be determined by measuring the friction in the center range of the steering wheel. If the friction is too high, an expensive power steering system change is unavoidable. Stay clear of cars with extremely wide tires. Power steering systems of these cars are usually history.

The power steering pump is also prone to leakage. Usually this is recognizable by large amounts of oil residue present around the pump. Be sure to check the oil level in the pump reservoir.

The height of the rear end of cars with **self leveling suspension** is usually a bit lower, but this can usually be adjusted quite easily. A level controller is connected to a torsion bar on the rear axle by means of a linkage. In most cases the level controller is at fault, but not always: The level controller is equipped with a damper that works as a delay system. This delay system prevents that the suspension reacts on every little pothole that is encountered, only the ride level needs to be kept. Also: cars with self leveling suspension usually have weaker rear springs in order to improve that function. The level of the hydraulic oil in the expansion tank should always be checked.

Be careful with **hydropneumatic suspension**: It is very comfortable and it gives a smooth ride, but this maintenance free system tends to develop leaks when ageing. Traces of wear on the suspension bellows unavoidably point towards expensive repairs. The conventional suspension of the 126 is well balanced and therefore generally operates without problems, that is why we advice against hydropneumatic suspension.

Check the **braking system** thoroughly: The brake disks and pads are usually well worn. At cars with ASR (electronically controlled anti slip system) the rear brakes tend to wear out more quickly, especially on the more powerful V8 versions.

Body / Corrosion:

Be careful with corrosion: cars of the first series did not have as effective rust proofing as the second series (after fall 1985). Because of this fact is it difficult to determine specific weak spots for this series. Generally speaking these cars should be checked thoroughly, especially at the jack supports and the wheel arches. It speaks for itself that the few weak spots of the second series can also be found on the first series. The second series received additional zinc coating and are well protected. In fact, the 126 series still outperforms many younger cars when it comes to rust proofing. Often, rust spots on the second series are proof of bad workmanship on bodywork repairs.

Known weak spots:
1. C-pillar, inside, where the chrome trim ends. There are usually small rust spots visual.
2. Rear windshield. Both above and underneath the windshield rust spots may be visible. Especially underneath, where it is difficult to detect. Immediate rust proofing is usually needed in this area. Also watch out for chrome trim on the wheel arches. When you remove the trim, you are likely to find rust spots, paint damage or parking dents. As with all cars, the underside of the doors should be checked. It is common that moisture can make it's way into the door. The water should be able to escape from the bottom of the door through special holes. These holes tend to get rusty, especially when they get blocked up by dirt and debris. When you get a car from the USA, be especially careful. The dry climate in some states (especially California) prohibits bare metal from rusting. A couple of weeks in our moist climate is enough to get the rusting process going.

What is the condition of the **trunk area**? - Is it damp inside? When the trunk is damp the rear windshield seals may be worn, enabling water to enter the trunk via the rear windshield. Also very important: Be sure to remove the spare wheel and check whether the spare wheel storage area is undamaged. Many workshops tend not to repair damage to the storage area because it's hidden out of view anyway. Also check the air vents in the trunk.

The door holders, especially those at the rear, are also one of the shortcomings. If they make a clacking sound when opening or closing the door, they need replacement. When replacement is postponed too long, the door can get stuck when it's open! The parts only cost about 15 EUR, but it's somewhat of a hassle to dismantle these doors, that were built to last forever. If the door holder is unpainted (brass colored), then it has been replaced before. Usually the door holders are repainted to match the bodywork again, but this is a purely cosmetic action.

Is the width of the seams between body panels, engine hood, trunk lid and doors equal? When they're not, leave the car alone. Usually this points to badly repaired body damage. When comparing the width of the seams, you can compare one side of the car to the other side. The doors can be misaligned a bit, but that is quite rare. Be sure to check the door hinges for crash damage (in case of doubt, consult with a MB workshop).

One should also place the paint under some scrutiny. Does the quality of the paintjob match the mileage of the car? Are there discrepancies in gloss, tint or (with metallic paint) the number of metal particles in the paint? Usually a sign of repainting. Was it repainted because of accident damage? If the selling party appears to be ignorant to that fact or if he denies such events, then gently tap the various metal parts on the part in question and compare the sound with parts on the opposite side of the car. When the other side sounds more massive, there could be some priming work present, indicating an accident repair job. It is much more difficult to detect repairs if new body parts were installed (for example the trunk lid). Be warned that paneling from non-MB sources is usually not of the best quality: They're cheap, but also made of a thinner, lesser quality steel and therefore more prone to rust.

Interior:

In some cases the thin flexible **B-pillar covers** may come loose at the edges. This is not very problematic. Just remove the pillar and glue the material back into place. More problematic is the quality of the **dashboard panels in blue interiors**. The solvents used to keep the plastic flexible show their age: The plastic will shrink, causing tears in the dashboard plastic. This effect is barely seen with other interior colors and therefore not a significant threat there.

Cars that have been exposed to high outside temperatures usually show this fact on the wood decoration: Both the versions with zebrano (a tropical wood) and burl wood are made up of several layers. The base is an aluminum strip on which a thicker wooden base is attached. On top of this wooden base the zebrano or burl wood is attached. This strip of veneer is covered with several layers of transparent varnish. The background of this construction is passive security: The aluminum strip will prevent the wood from fracturing during collision impact. (MB actually crash tested the wood lining of glove box doors). The drawback of this construction is that the materials work separately from each other during changes in temperature, causing fractures in the wood (generally only the door panel inlays and glove box door inlay). This effect gets worse as wood tends to dry out and shrink with age. Price of the wood parts should not be underestimated. The 126 does not have any nonfunctional switches in it's center console, therefore there is a large number of center console wood layouts, dramatically increasing the price of this part.

Extras and options:

Check whether the **air conditioning** works. If it doesn't function, most workshops in most countries may only refill the air condition system with FCKW-free coolant (R134a). When the outside temperature is low, the air-con compressor will only work the windshield defroster (switch to upper setting on non-climate control cars). If the compressor cannot be switched on via the windshield defroster switch, the air-con system may have developed leaks. When the system pressure of the air-con gets too low, an emergency switch will shut it off automatically. Because of it's typical construction, the automatic climate control version is not without problems. Replacement of a control unit can get expensive, other than with normal air conditioning systems. We therefore prefer the normal air-conditioning rather than the automatic climate control. The 126 system will shut down the compressor when the selected inside temperature can be reached and maintained without using it. The automatic climate control in the 126 controls the blower settings as well. This means that in cars with automatic climate control the driver and passenger can only select a certain temperature zone for both, allowing only a small margin between left en right temperature settings.

Does the **central locking system** (including fuel cap lid lock) function correctly? In many cases the air pressure controlled system has air leaks. In these cases the air compressor will continue to run a bit longer after the locking or unlocking process has ended. Be sure to check all the **door locks**, and the trunk lid lock. The central locking system can be operated from the left door lock, the right door lock and the trunk lid lock. This means that once one of the locks is operated, all other locks should open or close. Note: the trunk lid lock can be excluded from this list by turning the key in the other direction (prevents theft from the trunk of the car, for example when waiting for a red traffic light).

You should be able to operate the slide roof (without tilt function on the first series) without any squeeking and cracking sounds. You can also check the functioning of the small spoiler in the slide roof: Does it spring up to the right angle whe the roof is opened and does it retract correctly when the roof is closed again? Problems with the slide roof can be prevented by regularly greasing the components of the roof, something that is commonly overlooked during maintenance sessions. Also, the slide roof motor should switch off when the roof is closed. If it doesn't, the shut-off moment of the motor can be adjusted with a set screw. The motor is located behind the trunk lining on the left. Cars with dark paint colors often have small scratches on the slide roof. This scratching is caused by a sound insulating mat in the roof. In dark cars, this mat can deform when the car is exposed to high outside

temperatures. Solution is to loosen the roof lining and cut the mat back to size - done. It is a job that takes some time, however.

When operation of the temperature selectors does not produce any results or the **heater** works indifferent from the chosen temperature, the cause may well be a defective or blown fuse. In any case, the source of the problem must be found. There is a possibility that heating problems are caused by torn membranes in the heating duo valves. Parts can be expensive, as the membranes can no longer be ordered separately from Mercedes-Benz. In many cases, one has to replace the complete valve.

The electric sun screen of the rear windshield usually doesn't work. Repairs are labour intensive because they can only be made after removing the complete package tray.

Testing **the electric windows**: Do they operate without any knackering sounds? When they go a little slow in the upper part, do not worry. That is normal. Some 126s have been modified to reduce wind noise during driving: The window frame has been bent inside slightly, that's no problem. MB workshops did it themselves as well.

Miscellaneous:

Airbags have been unknown components of classic cars until know. They became common good after the introduction in the W126 (1981, Passenger airbag in 1987). At the B-pillar or in the glove compartment lid there is an airbag tenability sign. After passing of this date, the airbag(s) should be tested and, if necessary, replaced at a MB workshop. Mercedes-Benz has lengthened the tenability period though. They stated officially: *'...with the present state of affairs, the period during which the correct operation of both driver and passenger side airbags will function reliably can be raised to 15 years. Mercedes-Benz has therefore increased the tenability date for all vehicles that were built before January 1992'.*

Sometimes the mechanism of the **ignition key lock** can deter to a state where the key can no longer be turned easily. Heavy key chains that have hung from these locks for years are usually the cause of these problems.

Prices

The price list books used by car traders, are generally speaking of no use, when determining a valid price. Reason: The price in these books is based on average dealer trading prices. Good W126 cars are barely sold through car traders these days. Most change hands between owners directly. Cars that are sold by car traders - especially the brand independent ones - are generally speaking of low quality. This causes the list prices to be low. It is therefore a tough question to answer: What should I pay for a W126? The selling price is usually a combination of what the seller wants to get and what the buyer wants to pay. The most important question you should ask yourself is:

"What is the car worth to me?"

Whether the car in question is *the* car for you, you should be able to answer using this document. And: When the car is really in a good state, one can be reassured that it was worth paying the extra money for it. So be sure to be look at the quality of the car with a critical view!

It is not possible to produce a general value for these cars. Unlike the A-class or the Volkswagen Golf, these cars are in too short supply to speak about a 'general value' or a 'general state of maintenance'.

And: Most 126s that are supposed to have 'full options' usually have not. Mostly the rarest options (like the ultra rare trip computer) are not present on those cars.

Most importantly, we wish to guard you from financial illusions. There are plenty of examples of people who bought a car cheaply and also expected cheap maintenance!