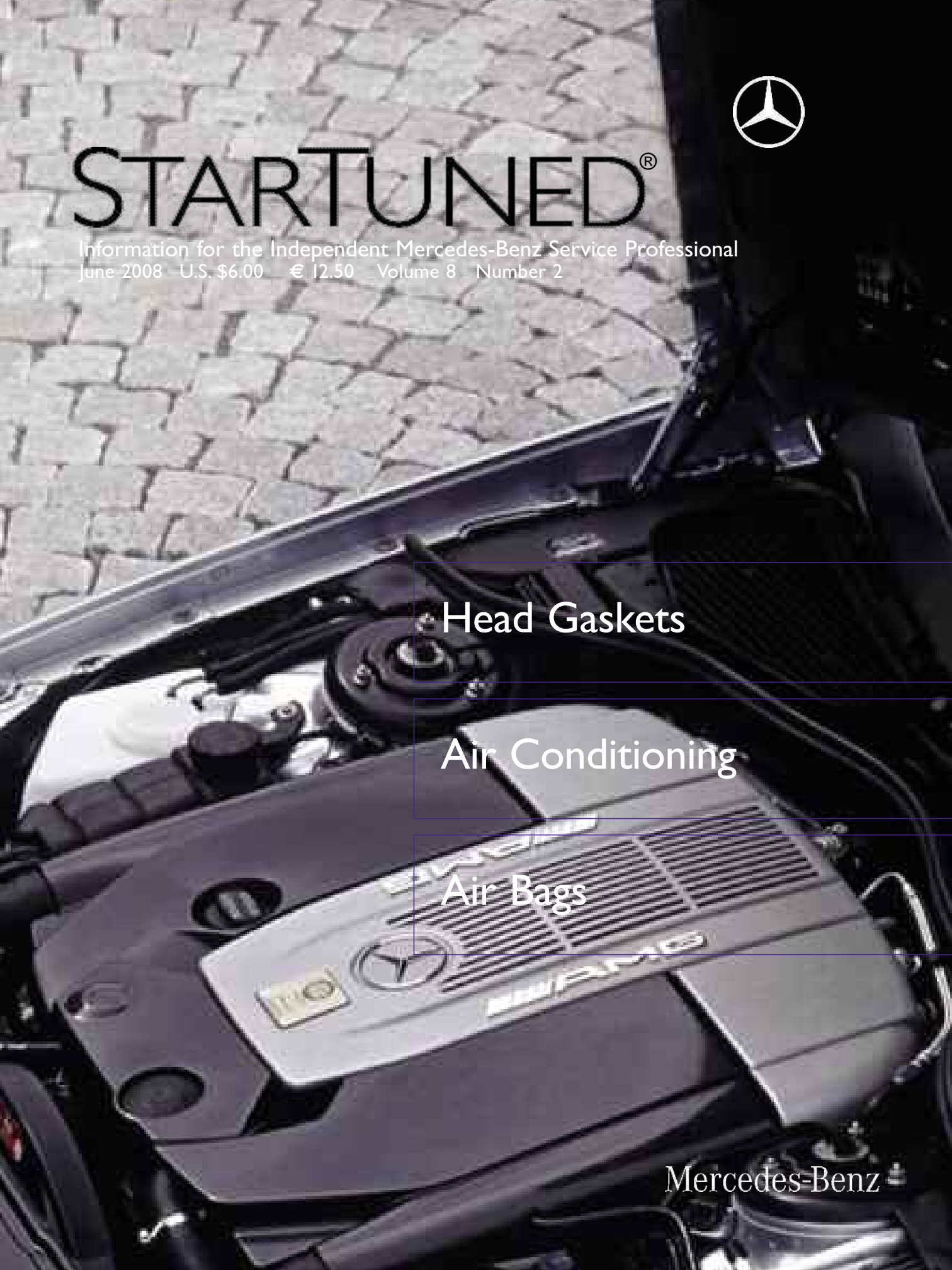

STARTUNED®

Information for the Independent Mercedes-Benz Service Professional
June 2008 U.S. $6.00 € 12.50 Volume 8 Number 2

Head Gaskets

Air Conditioning

Air Bags

Mercedes-Benz

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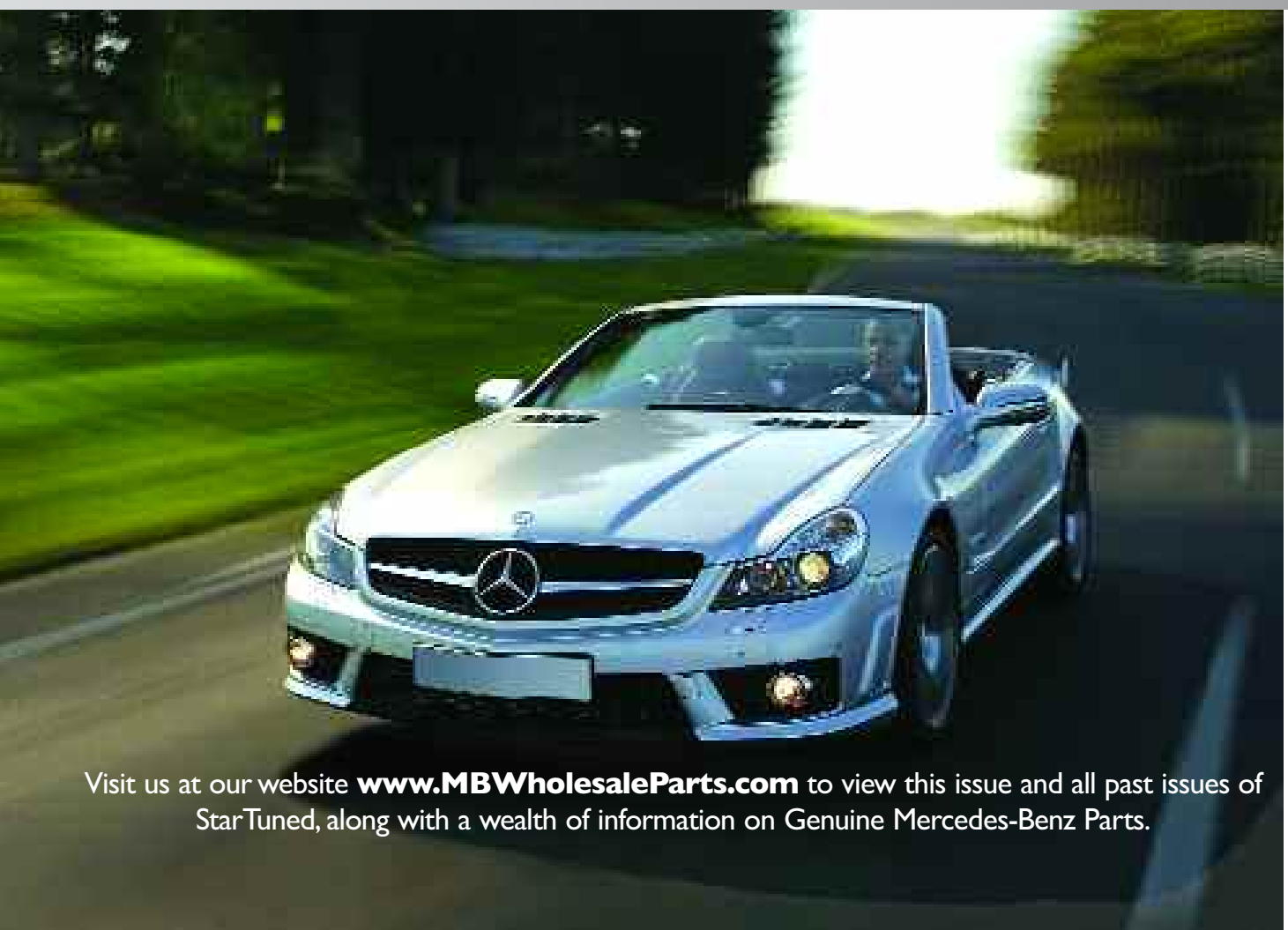

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Clean, Straight and Clamped:

Head Gasket Diagnosis and Replacement

One of the benefits of owning a Mercedes-Benz has always been longevity. But after many years of flawless service, there is a chance that head gasket failure will occur. The value of a Mercedes-Benz makes it worth repairing.

Aside from swapping an entire engine and/or transmission, replacing cylinder head gaskets is probably one of the more time-consuming jobs you perform. Looking at labor times, a typical cylinder head R&R procedure can take 10 to 15 hours for a straight four or six, and up to 25 hours for a V8 or V12. The job represents a significant investment on the part of the customer. So, when you diagnose a failed head gasket you need to be confident that this will address the customer's concerns. Some failures are straightforward, but on the more difficult ones you need methods to verify your suspicions. Here, we'll look at how head gaskets fail, symptoms of failure, and foolproof testing methods, and review some important procedural points.

Pressure testing the cooling system may force coolant through a leaking cylinder head gasket. With a boroscope you can see into the cylinder and observe if there is any coolant seepage.

Using a combustion gas leak detector will allow you to determine if there's a leak between the combustion chamber and the cooling system. Don't forget to drain some coolant out of the system to build up sufficient combustion gas.

How Head Gaskets Fail

Head gasket failures can occur in several different ways. The fluids that pass through the gasket are either oil or coolant. Pressurized oil is sent through the gasket on its way to lubricate the valve train. It then drains back through the cylinder head into the crankcase. Coolant also passes through the cylinder head passages and the block to keep these components cool. As with any gasket, the one between the head and the block is meant to seal fluids in. The oil pressure passing through the head and the oil draining back to the block needs to be contained by the gasket. Any external leak of oil would be considered a head gasket failure. By the same token, any external coolant leak would also be a head gasket failure.

Not all leaks have to be external. The failures that are not visible are often the ones that have to be diagnosed. They require more in-depth testing. Head gaskets may fail with the oil pressure supply line breaching its gasket and entering the cooling passage. Oil pressure is usually higher than cooling system pressure, so oil is forced into the cooling system. If the oil return passage leaks, you may end up with coolant in the crankcase. Another instance is a high-pressure oil system leaks into the combustion chamber.

Probably the most tell-tale sign of a bad head gasket is coolant entering the combustion chamber. This problem causes many symptoms from high pressure in the cooling system resulting in blown hoses and leaks to steam exiting the exhaust. Technicians naturally think of this situation first when head gasket failure is mentioned, but as already mentioned this is not the only type of failure. So, other than visible leaks or steam, what are the symptoms that indicate head gasket failure?

Tipoffs

We have discussed engine oil in the coolant and coolant in the oil. Another common-sense item is the coolant level. Very often we add coolant, check for external leaks and move on. Well, the coolant had to go somewhere so

Here we can see the swirl marks left by surface conditioning discs. If you stay in one portion of the cylinder head too long you can create a dip that the head gasket may not be able to seal. So, clean the cylinder head by hand using suitable scrapers.

further investigation is warranted. Did an overheating problem cause the low coolant condition, or did a low coolant condition cause the overheating?

Overheating is one of the major symptoms of head gasket issues, especially if you do not see any signs of external coolant loss. If you do have a leak, you may need to look deeper anyway. Sometimes a leak is just a leak, but excessive pressure in the cooling system will promote and enlarge leaks. Of course, there are many possible reasons for overheating, but it's always a good idea to test for head gasket failure before (or even after) cooling system repairs. After all, if the overheating was severe enough it may have warped the cylinder head casting(s).

If your customer's concern is an erratic temperature gauge, this may be another symptom. Combustion gases getting into the cooling system can collect at a high point, and if it so happens that this is where the CTS (Coolant Temperature Sensor) is located, the sensor may be exposed to gases instead of liquid. This could cause the sensor to change its resistance value, hence its signal, rapidly, and be an early indication that something is wrong with the cooling system.

Finally, a driveability problem may be an issue that has more to do with engine temperature than the fuel injection and ignition systems. Cylinder misfires can be caused by coolant leaking into a combustion chamber. Mercedes-Benz engines are known around the world as some of best, but lack of proper maintenance, use of low-octane fuels and long periods of time in stop and go traffic can contribute to premature failure of various components, such as the head gasket.

Testing, Testing, Testing,...

Here is where it may get ugly. You have a vehicle come in that's running a little roughly. Maybe the Malfunction Indicator Lamp (MIL) is flashing, indicating a misfire, or there's a message in the instrument cluster message center indicating that the PCM has detected a problem. You evaluate the service records and see that a tune-up may not have been performed in quite a while. Maybe the customer has forgotten about the 60,000-mile service, or has just been resetting the "ASSYST" warning system, which indicates the need for maintenance. Whatever the reason, you inform the customer that maintenance service is due, and you perform the tune-up. A considerable amount of money must be spent, but this is a Mercedes-Benz and the customer clearly sees that the vehicle is worth the required investment. The problem occurs when the symptom comes back. Now, your reputation is damaged, and you have to dig a little deeper.

You may have tested the coil by checking its output with a spark tester (HEI type), or replaced it anyway. You could change the position of the coil (in coil-over-plug configurations) and see if the problem moves. If not, you may perform a "fuel pressure drop" test on the injector and/or changed its location as well only to find the problem is still in the same cylinder. Providing it is not a defective new spark plug (what are the odds of that?), the problem must be in the cylinder. A compression test may indicate an acceptable amount of pressure, but a leak-down test may tell you a bit more. Low compression on two adjacent cylinders typically means the gasket between them has failed. Through a process of elimination, you have determined all other components are performing as they should, but you still have a misfire. You need to look at the possibility of coolant leaking into the combustion chamber.

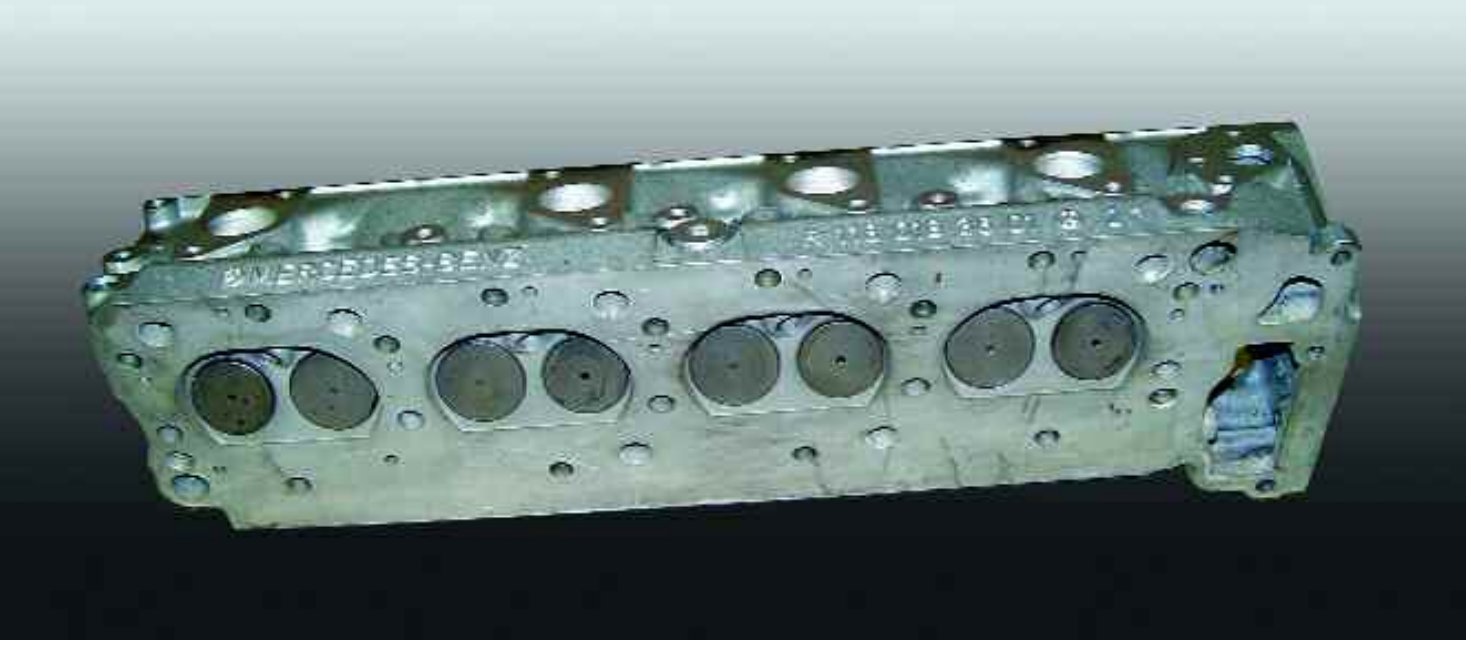
Pressure testing the cooling system is a good way to find leaks, including leaks into the combustion chamber. Head gaskets survive admirably under tough conditions. They need to seal when the engine is both cold and hot. So, it is a good idea to test under both conditions. A head gasket may leak when cold, but not when hot, and the opposite is also true. If you pressure test the system and get noticeable white "smoke" (actually steam) out of the tailpipe, one or more cylinders are leaking coolant into the combustion chamber. If you have a boroscope that allows you to look into the spark plug holes, you may be able to actually see the leak while the system is pressurized. Using Star Diagnosis, or an approved scan tool, you can look at misfire data. This may help indicate what cylinders are the likely culprits.

If the symptoms are minor, finding a head gasket leak will be more difficult. The best way to test for a small compression leak is to use a "chemical block tester." This contains a chemical solution in a multiple diaphragm syringe. Gases in the cooling system are drawn into the tool and mixed with the solution. If combustion gases are present, these chemicals change color. To get an accurate reading you need to drain approximately one half to one full gallon of coolant from the system, depending on its total volume. This allows a sufficient quantity of gases to build up in the coolant reservoir and the radiator for the leak detector to work. Overlooking this step is likely to lead to false readings and an erroneous diagnosis.

Now For the Hard Work

Once you have determined that coolant is indeed getting into the combustion chamber, it's time to start the disassembly phase. At this point it would be wise to inform the customer that although it looks like the head gasket has failed, there could be other causes such as a cracked block or cylinder head. There is no way of knowing until disassembly has been completed and the various components checked for cracks.

Depending on the age of the vehicle, this may also be an opportunity to renew various engine components. The cylinder heads themselves could be exchanged for units refurbished by



After cleaning, measure the surface straightness of the cylinder head mating surface. In this case it was necessary to mill the cylinder head, and the head thickness was sufficient to do so. This creates a near ideal surface for the head gasket to seal against.

Mercedes-Benz. If you are equipped to rebuild the cylinder heads, you can perform the task yourself. Even if you do not have the equipment to cut the valves and valve seats, you can remove the valves and lap them in. Cylinder head gasket sets typically include valve guide seals, so replace them by all means. Timing chains need to be removed in order to perform the head gasket job, so a new tensioner would be a good idea. Replacing the timing chain itself would be advantageous from a labor saving standpoint.

After removing the timing chain, and the intake and exhaust systems, (sometimes it's easier to remove the cylinder head with the exhaust and/or intake manifolds still attached), we can then unscrew the head bolts. With aluminum cylinder heads, Mercedes-Benz recommends that you crack each bolt loose in four stages of about 90 deg. each. This prevents any warping of the head, especially on a warm motor. Once the bolts are out, the casting is still "glued" to the block by the seal of the head gasket. You need to find a safe point to pry the cylinder head from the block, then you can safely lift off the cylinder head assembly.

Getting Cleaned Up

Cleaning the cylinder head gasket surface properly is critical. Aluminum is so soft, it's easy to ruin a head casting with electric or pneumatic tools in a matter of seconds. Do not use Scotch Brite pads on your "whizzer" tool as they will cause gouges and undulations, and leave abrasives behind that can actually damage bearings. Ditto for the sealing surface of the block.

Soaking the head in a distillate solution causes the gasket remnants to soften for easier removal. The use of a properly sharpened gasket scraper, free of gouges itself, will remove most of the material left on the head.

Next, accurate measurements must be taken for surface flatness and irregularities. These measurements, along with the overall thickness of the cylinder head, will determine if the casting simply needs to be cleaned, or must be milled or replaced. Hold a straight edge tool against the block and cylinder head in multiple positions and measure the depth of any gaps with a feeler gauge. If excessive "waves" or "ripples" are found, the head or block must be milled to assure a good seal.

Look at the two cylinder head bolt holes on this 190 model and you can see that the one on the lower right is cleaner than the one on the left. Do not use a tap to clean bolt hole threads. You will remove too much material. Use thread cleaners or chasers and you will have a secure mating of the thread surfaces.

You should also be concerned with the head bolts. Since torque-to-yield bolts are used (meaning they stretch), Mercedes-Benz has included a specification on head bolt length. If the head bolt has stretched beyond this spec, then the possibility exists that the bolt will bottom out in the block and the head bolt will not apply the necessary clamping force to the cylinder head allowing it to warp when the engine gets up to operating temperature. Or, the bolt may simply snap, which would result in a time-consuming extraction job.

Reassembly

Now is the time to choose what kind of gasket you're going to use to reassemble the engine. Remember, genuine Mercedes-Benz replacement parts use the same design, materials and construction as the original – and look how long it lasted. The cost is competitive with aftermarket brands that simply can't come up to Mercedes-Benz standards. This is not a job you want to do over again.

According to Mercedes-Benz WIS-net (accessible through a paid subscription to www.startekinfo.com) document AH01.30-P-1000-06V, there are two different dimensions in the compression ring of the cylinder head gasket for the 112 and 113 engines found in the 210 chassis. They are distinguished by one or two notches found on the outside of the timing chain passage of the gasket. If the smaller dimension is used in the larger application the piston may contact the gasket and create a knocking noise at idle. Does the aftermarket head gasket supplier make this distinction?

After returning any dowels to the engine block that were removed for cleaning, locate the head gasket properly and carefully lower the cylinder head into place. Of course, the cylinder head bolts must have the proper torque applied in four stages to ensure the casting is pulled down evenly and the gasket receives uniform clamping force. Follow the published service procedure carefully. The same process applies to any other large gasket surface such as the intake and exhaust manifolds. Install the timing chain according to service procedures outlined in WIS. Rotate the crankshaft a few times to verify that the timing chain is installed properly.

You can finally connect auxiliary devices and components, fill with fluids and check for leaks.

Small Repair

Should the going get a little rough

Small scratches, stone impacts, dents and blemishes – and the customer's Mercedes can quickly lose the shine from its exterior. And because that is annoyance enough, we keep the costs for a repair as low as possible - with Mercedes-Benz Small Repair. Special repair methods mean that small appearance defects vanish in next to no time. It goes without saying that our kits meet the high, tested Mercedes-Benz quality standards that you expect. So if your customers are driving around with a small imperfection, it may be able to be repaired with Mercedes-Benz Small Repair. Small Repair Kits are available from your authorized Mercedes-Benz dealer.

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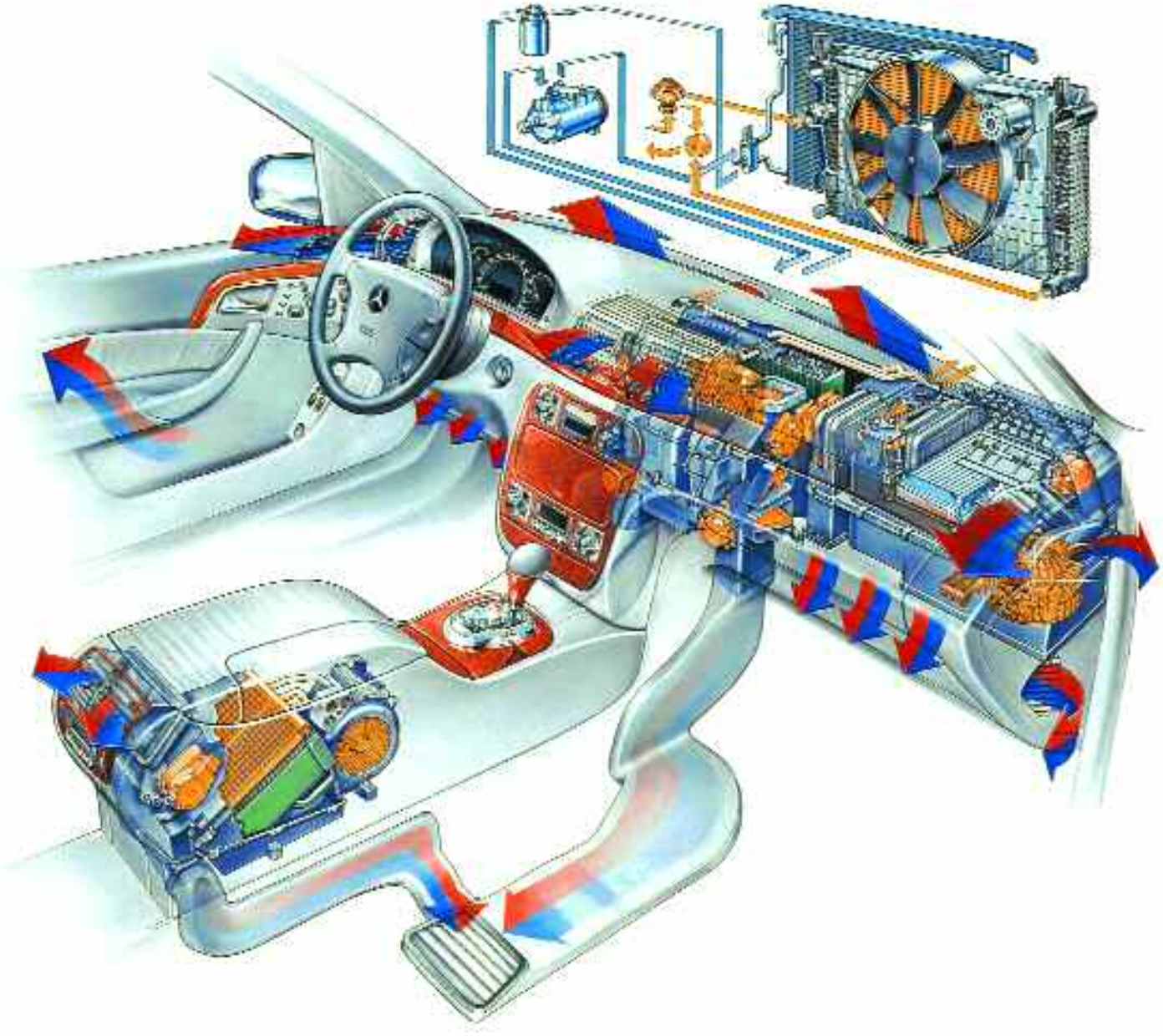
A/C Principles a



nd Controls

Summer is almost upon us, and with the warmer weather come customers hot under the collar about air conditioning performance.

Advancements in technology are everywhere. From computer-controlled systems to new materials, the automotive industry is marching forward to provide lower emissions, increased safety and more creature comforts. The creature comfort in question here is Automatic Air Conditioning (AAC), which provides more efficient cooling of the cabin. Driver, passenger, and even rear passengers (Thermotronic) can each enjoy their own personal space, at least when it comes to temperature regulation.

As a technician you may feel these advancements come at the price of added complexity in diagnosis and difficulty of service, but this is not entirely true. Yes, the systems are more complicated, but the basic principles of air conditioning still apply. All you need to know is how the advancements improve system operation and take them into account, particularly during troubleshooting.

Basics

In order to understand the changes in air conditioning systems over the past few years we first need to have an understanding of the most basic principles. We will start with what is considered the heart of the air conditioning system, the A/C compressor. Its function is to take the mechanical energy of a running engine and convert it into a pumping action that moves refrigerant throughout a closed system. It takes in a low pressure gas and pressurizes it into a high pressure gas. During this process, due to the compression of the gas and the friction created, the temperature of the refrigerant is increased as well.

This hot pressurized gas is sent to another component called the condenser. The function of the condenser is just that. It functions like a radiator – air flows over its fins and tubes cooling the contents. As the refrigerant cools it condenses into a high pressure liquid and exits the condenser. The refrigerant then passes through what is called a receiver/dryer. This component filters out impurities in the refrigerant charge, both chemical and physical debris.

The next component this high pressure liquid passes through is, in the case of Mercedes-Benz vehicles, an expansion valve. Its job is to meter the liquid through an orifice, forming a low-pressure liquid. This low-pressure liquid now enters the evaporator core. This is where refrigeration actually takes place. As the low pressure liquid passes through the evaporator core it changes state and absorbs the heat in the air around it.

A blower motor forces either fresh air from outside the car, or recirculated air within the cabin, through the evaporator core and the core absorbs the heat in the air. It's sort of like a radiator, but it works backwards. Instead of the heat of a liquid being dissipated into the airstream, it's the other way around. As the low-pressure liquid absorbs the heat of the cabin it evaporates and becomes a low-pressure gas. This passes back through the expansion valve, giving the expansion valve an indication as to how much heat is being absorbed (load) and opens and closes the valve accordingly. Finally, the low-pressure gas is returned to the compressor and the process begins all over again.

Automatic Air Conditioning (AAC)

The purpose of AAC is to control temperature and direction of airflow according to the occupants' desires. This is accomplished by using computer controls to monitor cabin conditions and outside temperatures, and to provide the changes required to respond to occupant requests. Let's look at the typical players involved in this symphony of climate control.

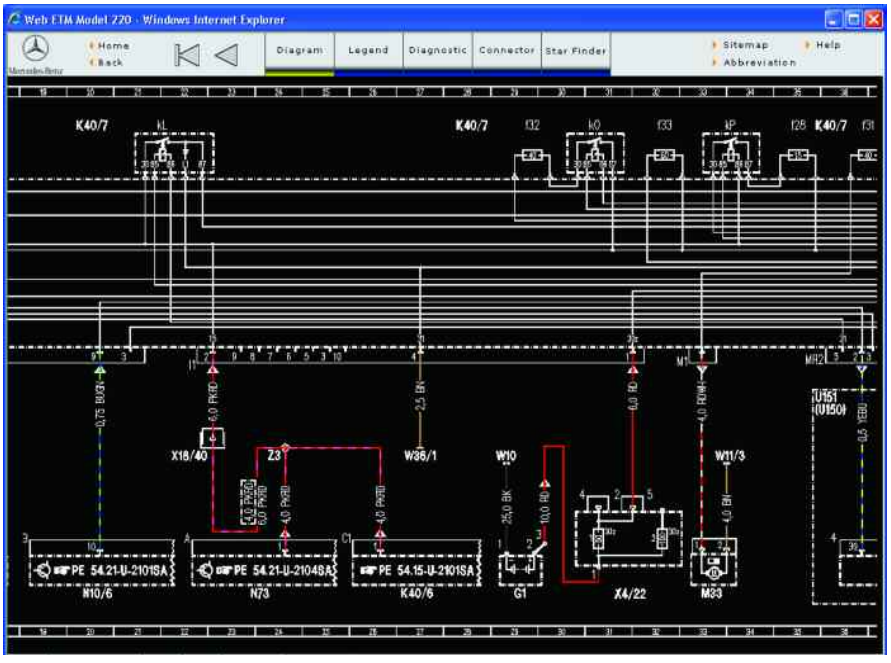
The first component we will discuss is the climate control computer. This is the brain of the system, both monitoring input and manipulating outputs to respond to the passengers' needs. The control unit can be on its own, or, in the case of most Mercedes-Benz vehicles, can be incorporated into the control panel in the vehicle. Self-diagnostic functions have also been incorporated in their design.

Next on our list are the environmental sensors. These relay information back to the computer. They indicate air temperature outside the vehicle, inside the vehicle (in the case of dual zone climate control, the temperature in both the driver's side and passenger's side ducts). Mercedes-Benz has also incorporated a sun load sensor that monitors ambient sunlight and adjusts air conditioning controls to compensate for it. More input sensors are used to control both the A/C system and heating systems. A/C refrigerant switches/sensors are used to monitor refrigerant pressure and temperature to control compressor operation, hence temperature. Aside from reading refrigerant temperature and pressure in the lines, there are also sensors that read the temperature of the evaporator. This tells the control unit when the evaporator core is starting to freeze so the AAC unit can prevent ice from forming and blocking air flow. Additional sensors include a Multifunction sensor that passes on humidity information to the AAC unit.

On the output side of the equation is the compressor clutch (not every vehicle has one), solenoids and mode door motors. These outputs control when the compressor cycles on and off, how much heated coolant will be allowed into the heater core and what vents the airflow will be directed out of. As mentioned earlier, the more

By positioning the driver's side temp to high, the passenger side to low and pressing the "ECON" and "REST" buttons, you can have this AAC control unit display codes. You can also command output control and read sensor values.

temperature controlled zones in the vehicle's interior the more sensors and motors will be added, but their basic operation will be the same. Up until recently most of these "mode door" controlled outputs were handled with a system that used engine vacuum and redirected it to various diaphragms under the dash, attached to the HVAC control assembly, to change airflow direction. These systems have since been replaced with electric motors that control mode door operation. In the past a mechanical lever positioned a door that controlled the temperature by mixing the cool air of the A/C system with the heated air of the heater core. With ACC, the control unit operates an electric motor blend door (or two, or more) in response to changes in sunlight, ambient temperature and occupant requests. These motors also provide feedback as to their position



With a paid subscription to www.startekinfo.com you have access to factory wiring diagrams. In this diagram for the S-Class (220 chassis), look at the wiring for the left SAM. If you follow the wire from component N10/6, you'll see that it controls the A/C Compressor Control valve.

for diagnostic purposes. When replacing these motors or the AAC control unit you will need a factory scan tool, or equivalent, to calibrate the motor positions.

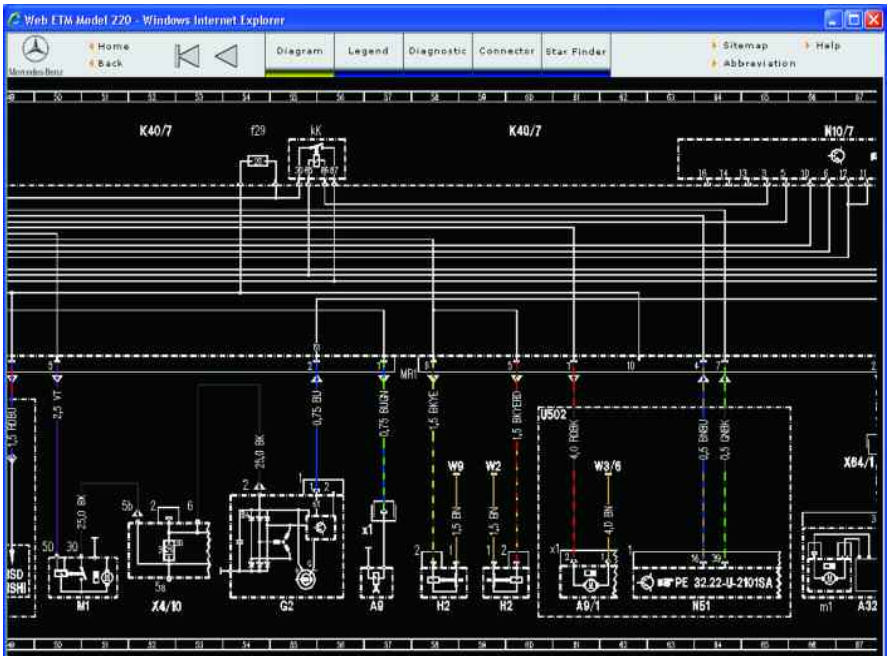
PSI

One of the most basic tests you can perform on the hardware of the A/C system is monitoring the high and low side pressures. As we discussed earlier, the refrigerant system is broken down into four phases: high pressure gas, high pressure liquid, low pressure liquid and low pressure gas. Monitoring these pressures will indicate if there is a problem in the system and where the problem may be. Typically, Schrader valves are conveniently mounted in the air conditioning lines on the high- and low-pressure sides of the system. They allow you to monitor the gas pressure in the system while it is operating. By monitoring both sides of the system you can usually get a good idea of what the performance problem may be. We have all been taught that with a proper refrigerant charge the low side of the system can be pulled down to 20 to 30psi. The high side pressure will increase more depending on ambient temperature and can run anywhere from 125 to 350psi. These pressures show the compressor is capable of creating suction on the low side and generating high pressure on the high side.

What do we do when the A/C system performance is not up to snuff? We check these pressures. If the pressure of the high side gas is too high we suspect a restriction in the system. On the high side, this can either be a clogged receiver/dryer, or a stuck-closed expansion valve. If the high side pressure is too low, then most likely the expansion valve is stuck in the open position. There are diagnostic flow charts provided by Mercedes-Benz that outline the testing of basic pressures and the problems associated with various readings. These pressure charts have been used for years on basic A/C systems.

In the mid-'90s Mercedes-Benz started to use variable-displacement compressors. These use a moveable swash plate that can change the piston stroke travel. Thus, in high load conditions the displacement of the compressor can be increased and for low load situations it can be decreased. This allows greater control of compressor load as the engine rpm changes in response to the driver's demands. As a result of this design change, you need to know the

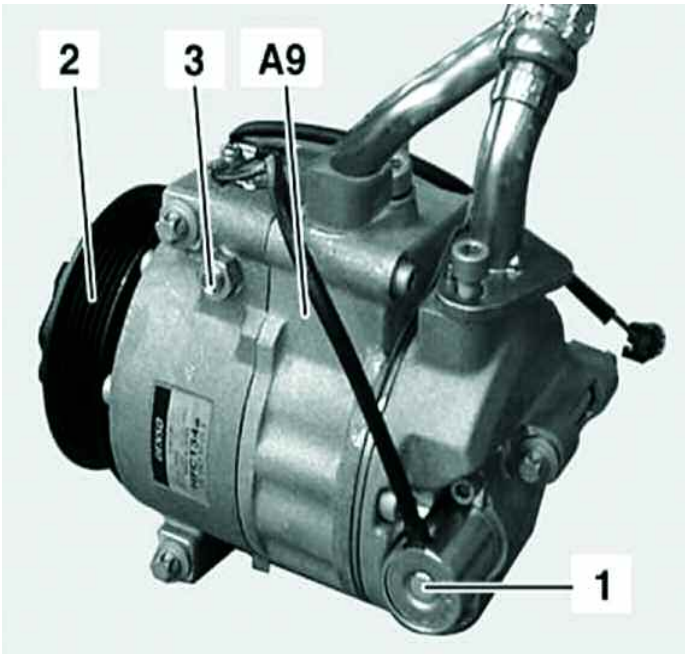
When looking for the compressor in a wiring diagram from the www.startekinfo.com website, you need to know that it will be found in section 54 Electrical Systems - Equipment and Instruments. In the case of this 220 chassis, the left Signal Acquisition Module controls the A/C compressor. Trace the wiring for component A9.



position of the swash plate if you are going to use pressures to determine what is wrong with the system. In addition to knowing the high and low side pressures, you will need to know the command from the AAC control unit for the swash plate position. There is no feedback on swash plate position, so you will just have to monitor the pressure change relative to the command change by increasing A/C request through the control panel (lowering requested A/C temperatures). A solenoid, called the A/C Compressor Control Valve, indirectly controls the position of the swash plate. Let's see how this is done.

The A/C Compressor Control valve has a pre-pressurized diaphragm mounted inside the valve at just below 30psi. This valve is connected to the intake, or low pressure side of the compressor. If the low side falls below diaphragm pressure, the A/C Compressor Control valve is commanded for a low opening and can be as low as 2% (A/C off position). You can monitor this manually with a DMM, or through your scan tool. This valve position allows high side pressure into the compressor case. The pressure pushes the swash plate in, thereby reducing piston stroke and A/C compressor output. This is also how the compressor is shut off. With the control valve at 2%, it is wide open and the high pressure reduces the piston stroke to nil, eliminating compressor output but still keeping the internals lubricated. If the low side pressure goes above that of the diaphragm, the A/C Compressor Control valve is opened up to 100%. This allows the swash plate to move to a position increasing piston stroke and overall pressure in the high side of the system. So, basically low side pressure and the A/C Compressor Control valve control the pressure in the case and the position of the swash plate, and ultimately the output of the compressor.

Some compressors still use a compressor clutch. The clutch is mounted behind the pulley. This is still necessary to engage and disengage the compressor and is still a potential fault, but conventional diagnostics prevail here. Check the amp draw of the clutch, and listen for noisy compressor engagement. There is a TSB # P-B-83.55/87 that informs us how to bypass the compressor with a smaller serpentine belt. If the noise goes away there is a problem with the A/C pulley bearing. You can replace the front clutch



The A/C Compressor Control valve is pictured here as component #1. This valve controls the pressure applied to the case of the A/C compressor. On vehicles without an A/C clutch, this is how the compressor is turned on and off.

On vehicles with this compressor pulley, you will definitely have an A/C Compressor Control valve to turn the compressor on and off. If the compressor seizes, the outer pulley separates from the inner pulley, thus saving the belt.

and bearing assembly in the vehicle, so you do not have to remove the compressor. That's a relief since this compressor is one of the harder ones to R&R. A/C compressors that do not use a compressor clutch use a rubber coupling.

Self-Diagnostics?

Not only has Mercedes-Benz incorporated a self-diagnostic function into its AAC systems, but you do not need a scan tool to access them. The control panel of the AAC system is the technician interface. This rule applies from the early '90s into the late '90s. Otherwise, Star Diagnosis, or its equivalent will be required. If you are between these years, the process is simple. On single climate zone systems with the ignition key on, you set the temperature to "LO" and within 20 seconds apply the "REST" and defrost buttons at the same time. The LED in the recirculation button will flash and the liquid crystal display should show "diA". Now press the "AUTO" button and a code will be displayed if one has been set. Push the "AUTO" button again and you will advance to the next code. Apply the "AUTO" button again until the codes start to repeat. To clear the codes, use the temperature arrow up and arrow down button simultaneously and hold them down for more than five seconds. In the event that you do not want to erase the codes, you can apply the "AUTO" button and the faults will not be cleared. Shutting the key off will end self-diagnostics.

(Continued on page 20)

REMANUFACTURED A/C COMPRESSOR WITH CLUTCH ASSEMBLY

WHY BUY GENUINE?

Replace – We replace more parts than aftermarket brands.

Engineered – Designed to meet original OEM drawings.

Manufactured – Made with same OE components as factory parts.

Assembled – Completely assembled from components and not just repaired.

New – Tested to new unit standards.

Improved Technician Efficiency

- Without the need to assemble the Reman A/C Compressor with Clutch, technicians can get right to installing the entire Compressor assembly.

Competitive Pricing

- Priced as one unit so there's only one part number to order.

Quality Reborn

- All internal components are function-tested during the manufacturing process.
- 100% replaced O-rings, snap rings and other wear parts.
- Each compressor undergoes complete quality assurance testing for performance and output.
- Assembled to OE specs for testing and measuring.

Compressor with Clutch Conversion

PART NUMBER	MODELS	YEAR
A 000 230 05 11 80	260E 300CE 300E/TE 300SE/ SEL 300SL 350SD 300SDL E320 SL320 SL500	1987-1988 1988-1992 1986-1993 1988-1991 1990-1993 1991 1990-1991 1994-1995 1994-1997 1996-1997
A 000 230 06 11 80	400E/ 500E 500SL E420 E500 SL500	1992-1993 1990-1993 1994-1995 1994 1994-1999
A 000 230 11 11 80	190D 190DT/ 300DT/ TDT 190E 260E 300CE 300D 300E 300SE 300SEL/ TE E300D	1986-1988 1987 1985-1993 1987-1988 1988-1989 1987-1993 1986-1992 1986-1992 1988-1991 1995
A 000 230 13 11 80	C220/ C280 C36 AMG	1994-1995 1995
A 000 230 17 11 80	300SD 300SE/ 600SEC 600SEL S320/ S350D S420 S600	1992-1993 1993 1992-1993 1994-1995 1997-1998 1994-1996
A 000 230 22 11 80	CL600 S320 S350D S600	1996-1999 1995-1999 1995 1996-1999
A 000 230 24 11 80	190D 190DT/ 300D/ DT/ TDT 190E 260E 300CE 300E 300SE 300SDL 300SEL/ TE	1986-1988 1987 1985-1993 1987-1989 1988-1989 1986-1992 1988-1992 1986-1987 1988-1991
A 000 230 25 11 80	420SEL/ 560SEC/ SEL 560SL	1986-1991 1986-1989
A 119 230 00 11 80	400SE 400SEL/ 500SEC 500SEL S420/ 500	1992 1993 1992-1993 1994-1995
A 000 230 70 11 80	C280/C43 AMG CLK320 CLK430 CLK55 AMG/ML320 E320 E430/E55 AMG ML430 ML55 AMG SLK230/SLK320	1998-2000 1998-2003 1999-2003 2001-2002 1998-2002 2000-2002 1999-2001 2000 2001-2004
A 001 230 02 11 80	CL500 CL55 AMG S430 S500 S55 AMG	2001-2003 2001-2002 2002-2003 2002-2003 2002-2003

INTRODUCING: NEW APPLICATIONS

PART NUMBER	MODELS	YEAR
A000 230 91 11 80	C240/C320/S430 S500/CL500/CLK320	2004
A001 230 12 11 80	E320/E500	2003-2006
	CLS500	2006+
A001 230 28 11 80	ML350/ML500/ML55AMG	2003+
	G500/G55 (NOT G55K)	2003+
A001 230 68 11 80	ML320/ML430	UP TO 2000
A000 230 90 11 80	S55AMG/CL55AMG	2003-2005
	C240/C320	UP TO 2003
	CLK320	2003
A000 230 78 11 80	C32AMG KOMPRESSOR	2002-2004
A000 230 97 11 80	C230K M271 (VIN RANGE SPECIFIC)	2004
A001 230 01 11 80	S600/CL600	2001+
	S65AMG/CL65AMG	2005+
A001 230 14 11 80	E55AMG	2004-2006
	CLS55AMG	2006
	E350/E550	2007
	CLS550	2007
	E320CDI	2005-2006
A001 230 19 11 80	CLK550	2007
	CLK55AMG	2003+
	SLK55AMG	2005+
	C55AMG	2005+
A001 230 55 11 80	C230K M271 (VIN RANGE SPECIFIC)	2004

Compressor Oil

- Superior performance over ordinary PAG
- Designed to last the lifetime of the compressor
- Unsurpassed lubricity for wear protection

R134a ND8 A/C Compressor Oil
8.45 fl. Oz
PN: 80 1 13 0001

Mercedes-Benz

(Continued from page 17)

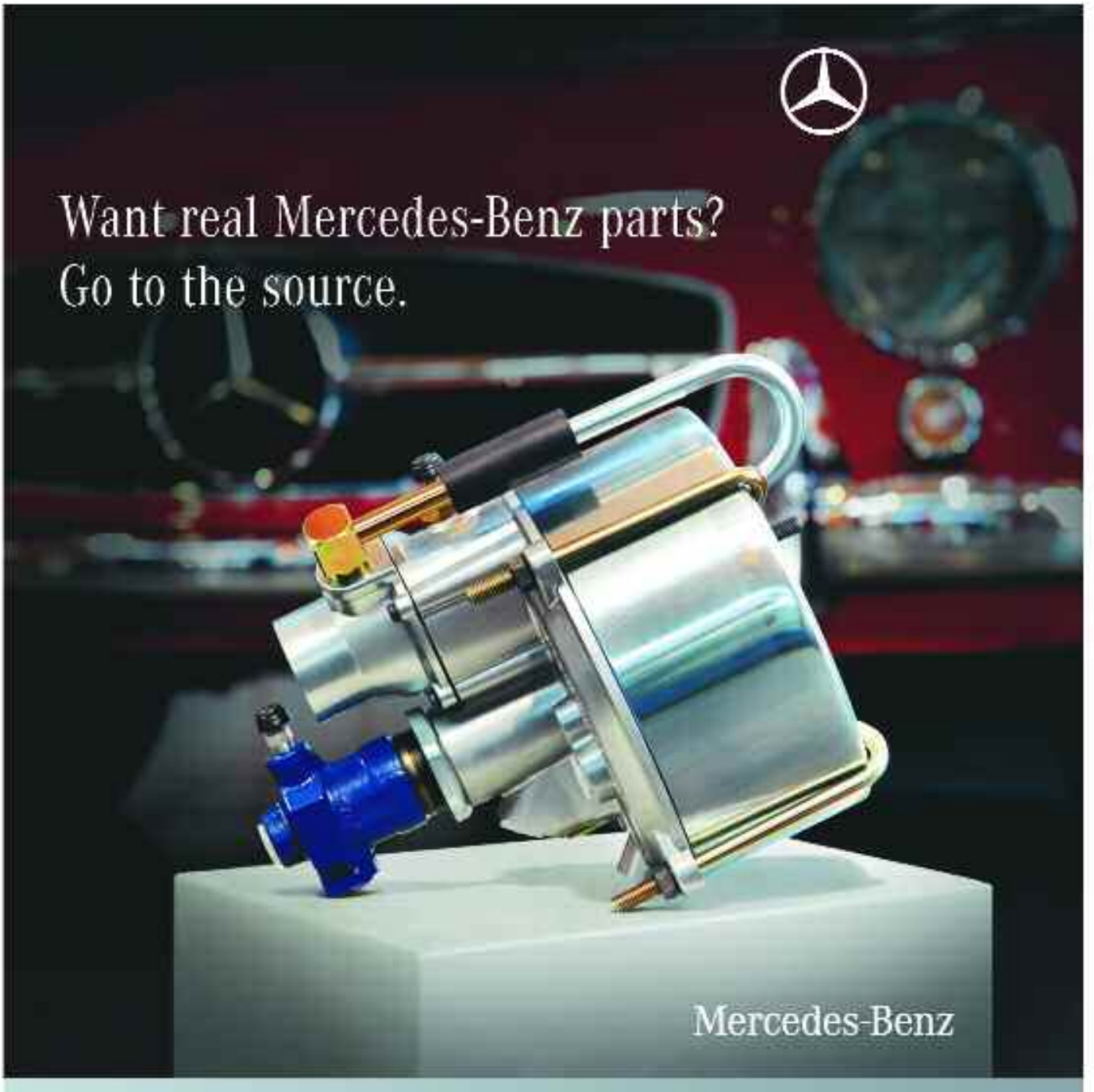
Here is a Duo-Valve assembly for dual zone climate control systems. This valve is normally open (defaults to full heat if there is a failure) and the AAC control unit grounds it to close it during A/C operation. Make sure these valves are closing when A/C is requested.

On dual zone systems, it is slightly different. With the key on make sure the driver's side temperature is set to "HI" and the passenger side is set to "LO". Within 20 seconds press the "REST" and "EC" buttons together and hold them down for over five seconds. The display will indicate "di R", the LED in the recirculation button will blink and once again pressing the "AUTO" button on the passenger side will advance you through any stored trouble codes. The letter "E" is displayed on the left side of the LCD and the code on the right. Hitting the "AUTO" and the arrow button to increase fan speed for two seconds will clear the codes and "FF" will be displayed on the screen. Pressing the "AUTO" button at this point also cancels the code clear. Shutting the ignition switch off ends the process.

Self diagnostics are always available to the Star Diagnosis unit, or its aftermarket equivalent. With Star Diagnosis, not only will you be able to pull and clear codes, but you will also be able to activate output controls such as the A/C compressor clutch, mode door control, and monitor signal voltages in the data stream. This information can save hours of diagnostic time on dual and multiple zone systems like Thermotronic. An excellent way to take advantage of the data-stream is to monitor temperature sensor inputs and opening percentages of mode door outputs. Mode doors move from 0% to 100%. This should indicate to you if a motor is binding or stuck. The temperature sensors should change their signal voltage when different temperatures are selected and the system is working properly.

Outside The Box

One quick note as we close: Not all low A/C outputs are caused by the refrigerant system. Mercedes-Benz uses electric heater control valves to supply hot coolant to its heater cores. These valves de-energized are open. This way if there is a failure in the system, you will still have full heat. If these valves do not close when commanded, they still allow hot coolant into the core. This can increase the temperature in the cabin to a noticeable degree. Always make sure the heater control valves are closing properly when the A/C isn't as cold as your customers would like it to be.



Mercedes Benz Classic Center

A Mercedes-Benz should be true to its origins. So turn to the Mercedes-Benz Classic Center for Genuine Mercedes Benz Classic Parts. Their experts have access to over 40,000 true fitting Genuine Classic Parts of the highest quality, plus a 12 month limited warranty. They sell direct, ship direct and even assist in parts specification. When you want authentic parts, only the source will do. **MBUSA.com/ClassicCenter**

To speak with our Parts Experts, call our Parts Order Desk at 1 866 MB CLASSIC (1 866 622 5777).
Mercedes-Benz Classic Center USA, 9 Whatney, Irvine, CA 92618

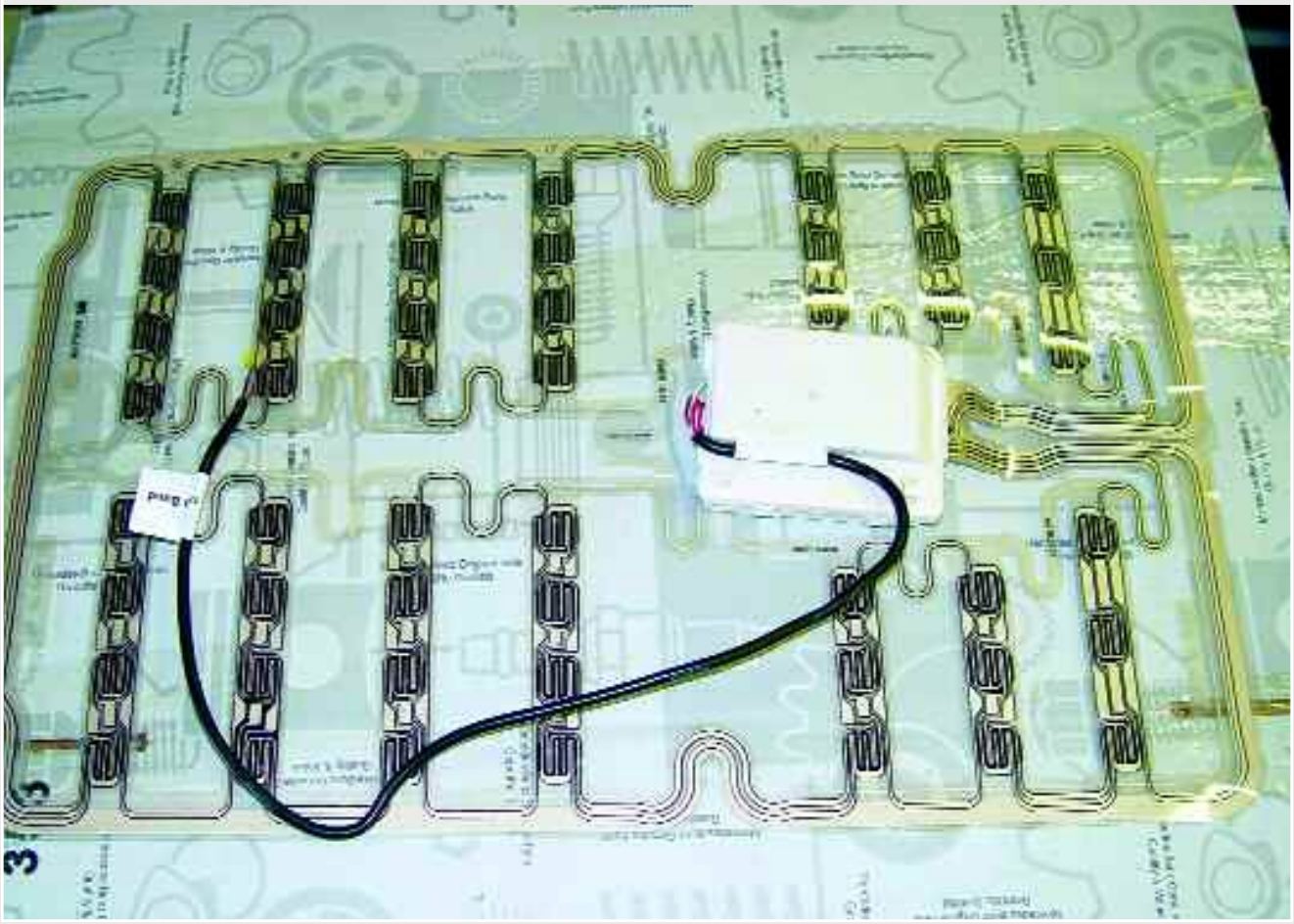
Part One

Cushioning the Blow

As always, at Mercedes-Benz the top priority is the safety of the people who drive its vehicles. Airbag systems need to be maintained and serviced to ensure the same level of safety that the engineers intended.

Mercedes-Benz has always been at the forefront of occupancy safety. In 1969, United States Federal law mandated automatic occupant restraint systems. Yet, since 1967 Mercedes-Benz had been developing airbag technology for its passenger vehicles. By 1980, the company had started to employ this advanced technology on a growing number of its vehicles. Initially, there were some of the same concerns that we hear about today, such as how to prevent secondary injury as a result of airbag deployment, particularly as relating to children and smaller passengers.

Supplemental Restraint Systems (SRS) have come a long way since the early generations. Complex computer algorithms differentiate between smaller and larger impacts, seat occupancy detection sensors prevent airbag deployment if a light-weight individual (child) is sitting in that seat, and dual/multiple-stage airbags have been only a few of the advancements made over the years.



This is a passenger seat occupant sensor and BabySmart™ transceiver for an older SRS (later Occupant Classification Systems have their sensors sealed into the seat cushion). These monitor if someone is sitting in the seat and the relative size of the individual. Regardless, Mercedes-Benz highly recommends that all children be seated in the rear passenger seats where they are safest.

What is the Goal?

While it is often believed that airbags are deployed to counter forward impact in the event of an accident, this is not entirely true. If a body flying forward is struck by a deploying airbag traveling in the opposite direction, the impact might be twice as great, possibly causing greater body trauma. The goal of an airbag system is to deploy fully before body contact and gradually slow down the body that is traveling forward. This gradual slowing process keeps points of impact at a level the human body can absorb. This also means the bag must fully inflate quickly, to the tune of about 40 milliseconds or less. A body not seat-belted in could impact the bag at the wrong time and/or slide around the bag negating its intended purpose. Seat belts need to be used to control the occupant's position and maximize the air bag's effectiveness. In fact, some older systems were engineered to only respond with the respective seat belt fastened.

With different body types, both the distance to the airbag (seating position) and energy of impact differ. These factors also play into the SRS's effectiveness. So, multi-stage airbag systems were developed that can differentiate between more and less severe impacts and deploy with only enough force to counter the forces exerted on an occupant during the accident. With this added sophistication comes added diagnostic complexity. Self-diagnostic capability has been incorporated into each control unit and is monitored during each ignition key cycle to ensure that the SRS is functioning properly. When the SRS warning light comes on, the driver is directed to the "Workshop" to address the problem. This not only serves as a warning to get the vehicle repaired, but also as a warning that the SRS may not function properly in the event of an accident.

"Visit the Workshop"

If this warning message appears in the driver's information display, or after a four- to 20-second bulb check the Airbag or SRS warning light stays on, the SRS self-diagnostics have determined that there is a fault in the system. There are many DTC (Diagnostic Trouble Codes) associated with SRS. It is your job to determine what code is setting and what testing procedures need to be implemented. Your Star Diagnosis, or Compact III, can pull these codes for you and even help you step-by-step along a diagnostic trouble tree with the use of WIS.

When pulling codes from the SRS, you will notice that there are "B" codes. As you may know, the Society of Automotive Engineers (SAE) implemented a program to homologate automotive service information among the various manufacturers that sell vehicles in the United States. You should also know that when searching for diagnostic information either in the vehicle itself, or in service information, that DTCs have been broken down into several categories, such as:

• PXXXX	Powertrain
• BXXXX	Body
• CXXXX	Chassis
• UXXXX	Communication
• Etc.	

Since the SRS is part of the body, you will find that its DTCs are "B" codes. If you would like to retrieve codes from the SRS, you need to select "Body." The next pull-down menu should display SRS or Airbag. Upon retrieving codes you will notice all of these codes are "B" codes unless you have a communication fault. All "U" codes are for a failure in communication with one of the other control units. There are two different codes available from the SRS, first is the "Stored Code" and second is the "Active Code." The stored code is a problem that was detected using the SRS control unit's failure criteria, but is not currently a failure. These problems still need to be addressed, but conventional diagnostics will probably yield no failed components at this time. Intermittent electrical connections and/or system voltage issues could flag this type of code. Diagnostic testing should include more in-depth procedures such as voltage drop to arrive at any useful conclusion. The active codes are just that, active. They are hard faults and are occurring at that moment. Here, straightforward diagnostics should find the cause of the DTC.

Yellow connectors and harness tape indicate that this is airbag system wiring. This is a two-wire squib for the door-mounted airbag. If you had a fault code for this airbag, you would open this connector and measure resistance between it and the SRS control unit.

Once you have retrieved a DTC, you will need to look up the proper testing procedures for this/these code(s). Here is where a paid subscription to **www.startekinfo.com** can provide manufacturer-specific, accurate and pertinent testing for this particular problem. When dealing with vehicles around the 2000 model year, you can look up service information in the "Launch Manuals" selection under Service Info, or in WIS-Net. There, you will be asked to select the chassis of the vehicle you are working on. Once you have selected the chassis, look at the left side of the screen and you will see a list of the various sections of the service repair manuals. At the top of that list should be "Body and Accessories" just above "Chassis and Drivetrain." Select "Body and Accessories" and you will now see a pull-down menu of the various sections. Select Volume 5.1 and on the right side of the page you will see another list of chassis to choose from. Once you select a chassis within a model production year (under selection 16), there will be displayed an additional list of diagnostic service information to choose from. The list is broken down into three sections, Diagnosis, Electrical Test Program (ETP), and Control Unit Coding. Diagnosis gives you trouble code tables, data PID actual values and a symptom-based trouble tree among some other choices. ETP gives you component location and step-by-step trouble tree testing for each circuit in the SRS. Keep in mind, these testing methods are based on being a properly equipped shop with the special service tools, such as factory scan tools and breakout boxes, that allow you to precisely follow the test procedures.

Accident Damage

If the vehicle has been in an accident, self-diagnostics indicate sensor data that can be recalled to help indicate what components need to be replaced and what sensors have failed. Obvious repairs include SRS components that have deployed, or have received physical damage. You do not have to replace the control unit, or other parts that were not damaged or deployed, unless otherwise instructed by the party responsible for repairing the vehicle, such as an insurance company. Obviously, if an airbag has gone off, it's going to need to be replaced. Since the vehicle is obviously being driven at the time of the accident, the driver's side airbag is going to deploy. Since the airbag is getting replaced, we also recommend replacing the clock spring. What's a clock spring?

Since the steering wheel must turn to direct the vehicle and the driver's side airbag is in the steering wheel, a device is needed that allows the firing charge to make it to the airbag no matter what position the steering wheel is in. The clock spring performs this task. It has an electrical connection on the steering column side. This is what carries the signal from the SRS control unit. This side of the clock spring is

In the unfortunate event of a collision, the SRS works so fast the bags are fully deployed by the time an occupant makes contact with them.

mounted solidly to the steering column. A flexible band of wire is mounted in the clock spring and carries the current through to the other side. This side is solidly mounted to the steering wheel. It is the flexible band of wiring that maintains the electrical connection while the wheel is being turned, not the brushes you might expect from having seen cruise or radio controls mounted in the steering wheel. Since the steering wheel is used every time the vehicle is driven, this flexible band gets expanded and retracted constantly. Although engineers take every precaution to build a component that will last, it will eventually wear out. Given sufficient use, it will finally break and the connection will be lost. This can also happen if mechanical work outside of the vehicle is performed. The act of changing a power steering gear can damage the clock spring if precautions are not taken. If the steering knuckle is not carefully removed (and we know how hard that can be sometimes) excessive steering shaft movement can be transmitted up the steering column and damage the clock spring.

Another simple diagnostic test is to clear the clock spring code. If the code returns right away you have an open in the "Squib" circuit. This is more than likely the clock spring, so test that first. If the code does not come back right away, simply turn the steering wheel and see if the code returns. If it does, you can now be more certain that the clock spring has failed, narrowing your search for the solution to the code. Mercedes-Benz recommends that you remove the airbag from the steering wheel and insert a fixed resistance between the two terminals in place of the airbag. Then, measure resistance from either the steering column through the clock spring, or from the SRS control unit. At this point you can turn the steering wheel and see if the resistance changes. If it does, then you need to replace the clock spring.

Used or reconditioned airbags?

Mercedes-Benz does not recommend the installation of salvaged, used or reconditioned airbag system components since they can strongly compromise the safety features of the vehicle, leading to an increased injury or even death risk to the occupants.

Used or reconditioned airbag components do not ensure the same safety features as new components, due to the following;

1. History of the component is unknown (pre-existing damage, removal or reconditioning processes, etc.)

2. Airbag components are specifically developed for each vehicle, working together with other safety systems (e.g. safety-belt, sensors, etc.), resulting in the fact that not every airbag is compatible with every vehicle.

3. During the life-cycle of a model, several enhancements may have been introduced (new regulations, new developments, new parts, etc.). Salvaged, used or reconditioned airbag components do not ensure the fulfillment of the latest requirements.

For all of the above reasons, Daimler AG strongly recommends that no salvaged, used or reconditioned airbag component be installed on any Mercedes-Benz in the interest and safety of all parties (drivers and vehicle's occupants, insurance companies, repairing workshops liability).

Next time, we'll look at the Emergency Tensioning Device (ETD), further testing and checklists.

FIRE...

. . . on all eight with www.startekinfo.com.

Mercedes-Benz USA Dealer Workshop Services is the source for all the technical information needed to support, service, and maintain Mercedes-Benz vehicles. Mercedes-Benz workshops rely on DWS products and services for getting jobs done quickly and more efficiently. Our products include:

- STAR TekInfo with WIS-net (Workshop Information System)
- Electrical Troubleshooting Manuals
- Installation Instructions
- Technical Bulletins
- Campaigns
- Mercedes-Benz Special Tools
- Maintenance Manuals and Sheets
- STAR Service Manual Library CDs
- WIS and DAS software updates
- Star Diagnosis System (SDS)
- Operator's Manuals and COMAND Manuals
- Mercedes-Benz Equipment
- Inventory of technical publications

STAR TekInfo
Dealer Workshop Services
Engineering Services, Mercedes Benz USA, LLC.

Mercedes-Benz

Small Repair, Big Opportunity

One of the benefits of owning a Mercedes-Benz is the timeless style it exhibits. With bodies and interiors sculpted like artwork, it's no wonder their owners take pride in them. Unfortunately, in the real world things happen. Stones are thrown up from the roadway, careless passengers spill things, wheels contact curbs, and road grime and salt attack those nice rims. How are we going to help our appearance-conscious customers?

Mercedes-Benz has the answer. The Small Repair Program was instituted earlier this year to allow Mercedes-Benz dealers and Mercedes-Benz Certified Collision Repair shops to handle minor repair jobs at their facilities without a large investment in time or money. This comprehensive system provides the tools necessary to repair surface damage to alloy rims, windshields and interiors by means of easy-to-use and conveniently-packaged kits.

Sticks and Stones

The windshield repair kit has all the components needed to fix cracks and stone chips. Resins are used to seal the glass, and polish takes care of any pitting. All the necessary tools, such as syringes and drill bits, are included to complete the job. Keep in mind that this kit is only intended to repair minor problems outside of the driver's field of vision, and are not meant to take care of a problem that has failed a state safety inspection program.

Wheels

No part of the vehicle is more noticeable than those alloy rims. Unfortunately, even the most stunning wheels are bound to be damaged. The rim repair kit comprises cleaners, fillers, activators and the tools to apply them. An array of colors allows you to color-match the surface of the rim and provide a finish just like a new rim at only a fraction of the cost.

Inside Job

The interior repair kit is extensive. It's designed to handle blemishes in the vehicle's interior paneling and upholstery. It can even go so far as to repair exterior plastic components such as the bumper. Fillers, reinforcement material and applicators are only some of the materials supplied. Included in the kit are color-matching compounds that will blend in with the original colors and textures of the interior. Hard and soft plastics can be repaired along with leather and vinyl.

Teamwork

Mercedes-Benz has teamed up with Reliable Automotive Equipment to provide these kits to you. They amount to a cost-effective solution for small repair jobs that will restore the finish that every Mercedes-Benz deserves. To further support this small repair program, Reliable Automotive Equipment includes a training DVD with each kit, and peer-to-peer training is also available. To order these kits, contact your local authorized Mercedes-Benz dealer.

Enticingly graceful and dynamic. Strong support, too.

QUALITY FIT PERFORMANCE VALUE **WARRANTY** SERVICE

*Every part comes with the reassurance of a strong 12-month/unlimited-mileage limited warranty with additional coverage for engines and transmissions**

The part is just part of the story. The precise fit and superior performance of a Genuine Mercedes-Benz Part is a given. But equally important is that each Genuine Mercedes-Benz Part – down to the last nut, bolt and gasket – comes with the unmatched technical support and expertise from your dealer and Mercedes-Benz. All evidence of our constant dedication to supporting your business in more and better ways than anyone else. And that's the best part. **Visit mbwholesaleparts.com or contact your dealer.**

Unlike any other.

Mercedes-Benz

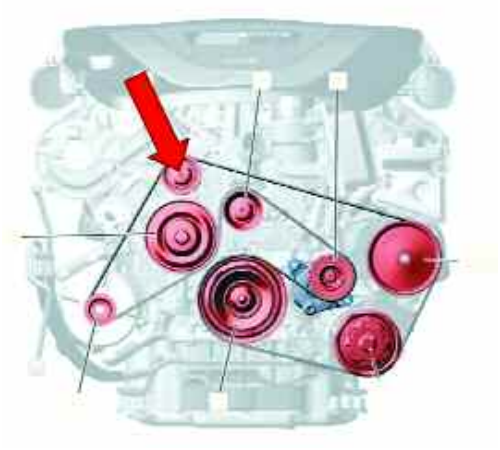
**See your Mercedes-Benz dealer for details and a copy of the Mercedes-Benz Replacement Parts Limited Warranty.*

FACTORY SERVICE BULLETINS

Whining/High-Pitched Whistle Coming From Front of Engine

All Light Truck Models Equipped with Engine M272 or M273

A whining or high-pitched whistling noise coming from the front section of the engine may be caused by a faulty upper idler pulley. To resolve, replace the upper idler pulley with a new unit. The pulley is supplied as a package containing the mounting bolt, dust cover and spacer. Fit the spacer between the timing case cover and guide pulley.



Parts Information

Quantity	Part Name	Part Number
1	Tightener Pulley	A272 202 08 19

Knocking Noise in Rear Door When Operating Power Window

Model 164.122/172/175/177 186/822/871/886, up to VIN A258996, Model 251.122/156/165/175/177, up to VIN A058266

A knocking noise that occurs when the power window is operated downward and reaches the lower limit position may be caused by a broken plastic limit stop. To remedy, perform the following.

1. Remove door lining. Refer to WIS document AR72.12-P-1010GZ (164) or AR72.12-P-1010RT (251).
2. Remove door module. Refer to WIS document AR72.12-P-0103GZ (164) or AR72.12-P-0103RT (251).
3. Remove broken limit stop from door.
4. Install new limit stop (Figure 1).
5. Reinstall door module. Refer to WIS document AR72.12-P-0103GZ (164) or AR72.12-P-0103RT (251).
6. Reinstall door lining. Refer to WIS document AR72.12-P-1010GZ (164) or AR72.12-P-1010RT (251).
7. Renormalize power windows.

Parts Information

Quantity	Part Name	Part Number
1	Limit Stop	A164 730 00 28

GENUINE MERCEDES-BENZ PARTS... NEARBY

Alabama

Dothan
Mike Schmitz Automotive
334-794-6716

Hoover
Crown Automobile
205-985-4200

Huntsville
Mercedes-Benz of Huntsville
256-837-5752

Mobile
McConnell Automotive
251-476-4141

Montgomery
Jack Ingram Motors
334-277-5700

Tuscaloosa
Leigh Automotive
205-556-1111

Alaska

Anchorage
Mercedes-Benz of Anchorage
907-277-3383

Fairbanks
Auto Service Company
907-456-6217

Arizona

Chandler
Mercedes-Benz of Chandler
480-403-3400

Phoenix
Phoenix Motor
602-264-4791

Phoenix
Schumacher European
480-991-1155

Tucson
Mercedes-Benz of Tucson
520-886-1311

Arkansas

Fayetteville
Mercedes-Benz of Northwest Arkansas
479-521-7281

Little Rock
Riverside Motors
501-666-9457

California

Anaheim
Mercedes-Benz of Anaheim
714-777-1900

Arcadia
Rusnak/Arcadia
626-447-1117

Bakersfield
Mercedes-Benz of Bakersfield
661-836-3737

Belmont
Autobahn Motors
650-637-2333

Beverly Hills
Mercedes-Benz of Beverly Hills
310-659-2980

Buena Park
House of Imports
714-562-1100

Calabasas
Mercedes-Benz of Calabasas
818-591-2377

Carlsbad
Hoehn Motors
760-438-4454

Chico
Courtesy Motors Auto Center
530-893-1300

El Dorado Hills
Mercedes-Benz of Eldorado Hills
916-567-5100

Encino
Mercedes-Benz of Encino
818-788-0234

Escondido
Mercedes-Benz of Escondido
760-745-5000

Fremont
Fletcher Jones Motor Cars
510-623-1111

Fresno
Mercedes-Benz of Fresno
559-438-0300

Glendale
Calstar Motors
818-246-1800

Laguna Niguel
Mercedes-Benz of Laguna Niguel
949-347-3700

La Jolla
Heinz Gietz Autohaus
858-454-7137

Los Angeles
Downtown L.A. Motors
213-748-8951

Manhattan Beach
Carwell
310-303-3500

Modesto
Modesto European
209-522-8100

Monterey
Mercedes-Benz of Monterey
831-375-2456

Newport Beach
Fletcher Jones Motor Cars
949-718-3000

Oakland
Mercedes-Benz of Oakland
510-832-6030

Palm Springs
Mercedes-Benz of Palm Springs
760-328-6525

Palo Alto
Park Avenue Motors
650-494-0311

Pasadena
Rusnak/Arcadia
626-795-8004

Pleasanton
Mercedes-Benz of Pleasanton
925-463-2525

Riverside
Walter's Auto Sales & Service, Inc.
951-688-3332

Rocklin
Von Housen's Motors
916-630-8877

Sacramento
Mercedes-Benz of Sacramento
916-924-8000

San Diego
Mercedes-Benz of San Diego
858-279-7202

San Francisco
Mercedes-Benz of San Francisco
415-673-2000

San Jose
Beshoff Motorcars
408-239-2300

San Jose
Smythe European
408-983-5200

San Luis Obispo
Kimball Motor
805-543-5752

San Rafael
R.A.B. Motors
415-454-0582

Santa Barbara
Santa Barbara Auto Group
805-682-2000

Santa Clarita
Mercedes-Benz of Valencia
661-753-5555

Santa Monica
W.I. Simonson
310-526-4700

Santa Rosa
Smothers European
707-542-4810

Signal Hill
Mercedes-Benz of Long Beach
562-988-8300

Stockton
Berberian European Motors
209-944-5511

Thousand Oaks
Silver Star A.G.
805-371-5400

Torrance
Mercedes-Benz of South Bay
310-534-3333

Van Nuys
Keyes European
818-461-3900

Walnut Creek
Mercedes-Benz of Walnut Creek
925-937-1655

West Covina
Mercedes-Benz of West Covina
626-859-1200

Colorado

Colorado Springs
Mercedes-Benz of Colorado Springs
719-575-7950

Denver
Murray Motor Imports
303-759-3400

Littleton
Mercedes-Benz of Littleton
303-738-7700

Westminster
Mercedes-Benz of Westminster
303-410-7800

Connecticut

Danbury
Mercedes-Benz of Danbury
203-778-6333

Fairfield
Mercedes-Benz of Fairfield
203-368-6725

Greenwich
Mercedes-Benz of Greenwich
203-869-2850

Hartford
New Country Motor Cars
860-278-2000

New London
Carriage House of New London
860-447-3361

North Haven
Mercedes-Benz of North Haven
203-239-1313

Delaware

Milford
I.G. Burton
302-424-3042

Wilmington
Mercedes-Benz of Wilmington
302-995-2211

Florida

Clearwater
Lokey Motor
727-530-1661

Coral Gables
Mercedes-Benz of Coral Gables
305-445-8593

Cutler Bay
Mercedes-Benz of Cutler Bay
305-251-0345

Daytona Beach
Mercedes-Benz of Daytona Beach
386-274-4775

Fort Lauderdale
Mercedes-Benz of Fort Lauderdale
954-462-4381

Fort Myers
Mercedes-Benz of Fort Myers
239-433-8300

Fort Pierce
Mercedes-Benz of Fort Pierce
772-466-7000

Fort Walton Beach
Quality Imports
850-863-2161

Gainesville
Duval Motorcars
352-332-7571

Jacksonville
Brumos Motor Cars
904-724-1080

Lakeland
Central Florida Eurocars
863-688-8111

Maitland
Mercedes-Benz of Orlando
407-645-4222

Melbourne
Mercedes-Benz of Melbourne
321-956-0600

Miami
Mercedes-Benz of Miami
305-919-8000

Naples
Mercedes-Benz of Naples
239-643-5006

Orlando
Mercedes-Benz of South Orlando
407-367-2700

Pembroke Pines
Mercedes-Benz of Pembroke Pines
954-517-8600

Pensacola
Centennial Imports
850-432-9903

Pompano Beach
Mercedes-Benz of Pompano
954-943-5000

Sarasota
Mercedes-Benz of Sarasota
941-923-3441

St. Petersburg
Crown Eurocars
727-526-3738

Tallahassee
Capital Eurocars
850-574-3777

Tampa
Mercedes-Benz of Tampa
813-870-0010

West Palm Beach
Mercedes-Benz of Palm Beach
561-689-6363

Georgia

Albany
Albany Motorcars
229-883-2040

Alpharetta
RBM of Atlanta - North
678-637-2333

Athens
Mercedes-Benz of Athens
706-549-6600

Atlanta
Mercedes-Benz of South Atlanta
770-964-1600

Atlanta
RBM of Atlanta
770-390-0700

Atlanta
Mercedes-Benz of Buckhead
404–846-3500

Augusta
Mercedes-Benz of Augusta
706-860-1111

Columbus
Mercedes-Benz of Columbus
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