INSIGHT

HELLA'S MAGAZINE FOR THE INDEPENDENT AFTERMARKET

ISSUE 12

HELLA GUTMANN, DIAGNOSTICS WITH A DIFFERENCE

ALSO IN THIS ISSUE

- Starters & Alternators for every requirement
- Checkpoint: Safe Holidays
- New Products: Hella launches new SONNE™ paint
- News: Meet the Team...

HELLA

BEHR HELLA SERVICE

HELLA GUTMANN SOLUTIONS

sonne

HELLA GUTMANN SOLUTIONS

NOW, EVEN DUMMIES CAN'T IGNORE ADAS

With Advanced Driver Assist Systems (ADAS) becoming a common feature of many modern cars, independent garages are facing a new challenge.

Autonomous Emergency Braking (AEB) and Lane Departure Warning (LDW) are already standard on models from Ford, Mercedes-Benz, Volkswagen and Volvo.

What's more, from 2016 only cars equipped with AEB will qualify for a 5 star Euro NCAP safety rating. Combine this with the fact that many insurers are already offering big discounts for AEB-equipped cars and even a dummy can see that ADAS will soon be the norm.

With an ADAS-equipped vehicle, the camera and sensors must be accurately calibrated after many everyday workshop procedures including wheel alignment, axle geometry or windscreen replacement. Until now, this vital procedure could only be carried out by main dealers.

However the new CSC-Tool from HELLA GUTMANN SOLUTIONS is a universal calibration tool for camera-based ADAS. It's compatible with a wide range of vehicle models, easy to use and integrates with mega macs diagnostic devices, so results can be saved and printed as a permanent record that calibration has taken place.

So don't listen to the dummies who say that ADAS won't take off, invest in the CSC-Tool now.

To find out more call 01295 662402 or email hgs.support@hella.com

www.hella-gutmann.co.uk

DEAR READER,

Welcome to issue 12 of HELLA's INSIGHT magazine.

We have changed the format to bring you more technical focused articles and with the new branding and dedicated segments for each product group we hope your experience will be enhanced when reading INSIGHT. Your feedback is very welcome.

With summer nearly here, we can start thinking of the opportunities the season can offer us. Although traffic jams and caravans will affect the roads, it presents the prospect for the pre-holiday servicing, air conditioning checks and overheating engines needing repairs.

With a comprehensive range of Engine Cooling and A/C products in stock, including the new range of Husky AC Service Stations, BEHR HELLA SERVICE will continue to support our customers during this holiday season.

Summer 2016 will also see HELLA represented at a number of industry shows including the inaugural UK Automechanika show held at the NEC, Mechanex in Manchester, the Mining show in Hillhead and not forgetting Automechanika, Frankfurt. At these shows, we will be showcasing our technical leading edge OE products including Lighting, Electronic sensors and Vehicle Diagnostics alongside our comprehensive ranges on Rotating Electrics, Bulbs, Batteries and Wiper Blades.

If you're attending any of these shows, please come to our stand and be part of the HELLA family.

Matthew Say
Managing Director
HELLA Limited

INSIDE THIS ISSUE

WE WOULD LIKE TO HEAR FROM YOU...

To comment on any INSIGHT article or to let us know if there are topics you'd like us to cover in future issues contact us at: **insight@hella.com**

For more information on HELLA products or anything featured in this magazine, please contact our customer service team on **01295 662400** or email: **hella.sales@hella.com**

EXPERT VIEW FROM BILL JOHNSON

SALES DIRECTOR

Over the past few years, we have seen the consumer demanding more efficiency from their vehicles. This has led to the trend of vehicle manufacturers producing vehicles with smaller engines, lower fuel consumption and reduced emissions. This has been achieved by introducing a large number of sensors and actuators that control various vehicle management systems.

With diagnostic support from our Hella-Gutmann Division, technical information from the Hella Techworld portal and the Hella OE ranges of product sensors and actuators, Hella are the ideal partner for the independent workshop.
A growing population and consequent demand for independence will continue to see the demand for fuel efficient vehicles, which in turn are fuelling the market growth.

At Hella, we have seen a huge increase in sales for these types of products and the latest independent reports show the growth in the actuators and sensors market will continue growing at a rate of 11.2% until 2022.

For more information on the Technical product ranges Hella supply, please contact our customer service team on 01295 662400 or email hella.sales@hella.com

STARTERS AND ALTERNATORS FOR EVERY REQUIREMENT

"HELLA knows not everyone will want a remanufactured unit fitted on their car – some customers will want brand new, especially with start/stop systems..."

Cars might be more reliable than they used to be, but starter motors and alternators still need replacing, and being distress purchases, replacing quickly! The HELLA range is designed to fit your customer base with both OE replacements and remanufactured units.

HELLA's Premium remanufactured range provides the ideal solution, as it offers a comprehensive range of original equipment (OE) quality starters and alternators. With a new pricing structure and a universal surcharge price across the entire range, it also represents a cost-effective and simple exchange solution.

But HELLA knows not everyone will want a remanufactured unit fitted on their car – some customers will want brand new, especially with technologies such as start/stop systems, where a new replacement is the only way to go.

HELLA's complete rotating programme ensures you have a comprehensive range available – and the ability to say 'yes' every time a customer's car needs a replacement starter motor or alternator. See our online product catalogue for the full range – **www.hella.com/startersalternators**.

"With over 2,000 part numbers, the HELLA Premium remanufactured range provides the ideal solution."

DON'T GO ROUND IN CIRCLES WITH ROTATING ELECTRICS FAULTS

Starter motors and alternators won't last forever, so when one stops functioning, what are the signs to help you diagnose the fault?

HELLA's technical information will help you get to the root cause whenever you're dealing with a troublesome unit. Often it's not the starter motor or the alternator that's at fault, but other factors, many of which are the result of an electrical overload.

The main cause of overloading is a short-circuit in winding, and brushes and commutator are likely to be affected. If, for example, the starter motor engages but turns slowly – or doesn't engage at all – there are several possibilities: Sticking brushes; worn brushes; dirty or worn commutator; defective windings. In all cases HELLA's technical pages offer the solutions to carry out a high-quality repair that will get your customer back on the road as soon as possible.

When it comes to alternators HELLA recommends using a multi-meter to get to the cause of the problem. In many cases the ignition light will remain illuminated when the engine is running, which might require a new alternator, but the fault can also be caused by the regulator or a short circuit.

Whatever work you're doing on an alternator, it's important not to disconnect, fit or short circuit terminals when the engine is running.

For more technical information visit www.hella.com/startersalternators

STARTER FAULTS

'PASTING UP'

Look for: Damaged starter pinions; increased noise.
Cause: Contaminants in clutch housing and lubricating grease on armature.
Effect: Starter pinion disengages too slowly.

STARTERS WITH FERRITE MAGNETS

Look for: Broken magnets.
Cause: Impact (e.g dropping the unit onto a hard surface).
Effect: Destruction of magnets, resulting in failure of unit.

STARTER OVERRUN

Look for: Tarnishing of the one-way clutch/pinion; scuffing on the armature shaft; damaged armature windings; burnt coil on the solenoid switch.
Cause: Jammed ignition switch; short circuit in wiring; starter motor remains in operation after engine has started.
Effect: Destruction of commutator and windings; overheating of coil; complete failure of unit.

ALTERNATOR FAULTS

CORROSION DAMAGE

Look for: High level of corrosion on contacts and terminals.
Cause: Excessive water entry (e.g. driving through deep water).
Effect: Loss of power; high noise levels, or failure from bearing damage.

SHORT CIRCUIT DAMAGE

Look for: Lack of solder on power diodes and stators; charred rectifier bodies.
Cause: Faulty battery; incorrect polarity reversal.
Effect: Failure of unit. (No power output.)

BEARING DAMAGE

Look for: Play in the rotor; increased noise.
Cause: Excessive vibration; water entry; over-tension of drive belt.
Effect: Increased noise; damage to the alternator housing.

OIL FOULING

Look for: Oil film on housing, windings, slip rings and carbon brushes.
Cause: Leaking engine oil lines and seals.
Effect: Reduced unit performance, resulting in failure.

MORE THAN MEETS THE EYE

There's more to headlight design than just making something that looks good – today's drivers expect their car's headlights to be extremely powerful, lighting the way whatever the weather. Car designers want headlights to be stylish too, complementing the looks of the car and helping create the more streamlined shapes needed to increase fuel efficiency.

HELLA's headlight history goes back more than 100 years to 1908, when it introduced the first electric headlight. Up to then a car's lighting was powered by acetylene gas, being more of a case of being seen than seeing ahead. Electric lighting improved things greatly, with projection headlights launched in 1983 and, in 1992 the introduction of xenon types.

More recently HELLA has pioneered the first all-LED headlight and matrix LED technology with glare-free main beam.

This means when it comes to any vehicle lighting, HELLA is your first choice each and every time. And it's not just headlights: HELLA has rear lamp units, indicators and even interior lighting in its line-up.

"HELLA's headlight history goes back more than 100 years to 1908, when it introduced the first electric headlight..."

SAFELY BACK ON THE ROAD

Many caravans might already be out of their winter storage and back on the road, but have owners checked to see whether their leisure battery and tail lights are working correctly?

After several months' lack of use it's important to check all the lights are working, and that the battery has enough power to run the internal lights, water pump and heater.

HELLA's comprehensive range of replacement bulbs means there's no excuse for a caravan not to be seen clearly: With applications for tail, stop, fog and number plate lights, your customers can travel with complete peace of mind their caravan is visible, even in the worst of weather on fast-moving roads.

With modern leisure vehicles featuring more technology and electrical appliances than ever before, buying an National Caravan Council (NCC) Verified Leisure Battery gives consumers confidence that the battery they purchase for use is fit for purpose and will perform as advertised.

Hella's range of leisure batteries are all verified by the NCC. The standard specifications include labyrinth-lid technology, allowing safe emissions from the caravan or motor home; and clear state of charge indicators enabling straightforward and quick assessment of the battery's condition.

Product registered and
VERIFIED
www.thencc.org.uk

EXPERT VIEW FROM NEIL HILTON

HEAD OF BUSINESS DEVELOPMENT, GARAGE EQUIPMENT

Despite ADAS technology already being in the mainstream, the majority of workshops are unaware that calibration should take place following many basic repairs, or they don't have the tools to complete the repair. Failure to calibrate advanced driver assistance systems could lead to serious driveability issues which puts drivers at risk. Concerns about liability for technicians and workshops who fail to ensure the system is working correctly are also looming large for the repair sector.

"Most garages and repair specialists consider such technology to be a thing of the future but Mercedes, BMW and Volkswagen Group have been manufacturing cars with camera technology for several years. It now features in Ford, Volvo, Nissan, Mazda, Honda, Subaru, Lexus models and Toyota. Only two years ago it would be unusual to see a car in the workshop loaded with this technology, but today it is commonplace.

Workshops have a responsibility to calibrate the camera and sensors after even a straight forward workshop procedure such as wheel alignment or windscreen replacement. With electronic systems, including safety systems, reliant on camera technology it's vital that they keep pace to protect their business and themselves. Insurance companies will be looking to specialists to perform a quick, cost effective and safe repair backed up with documented evidence of a successful calibration. If independent Workshops and Bodyshops can't deliver this service because they are out of touch, the work will no doubt go to main dealers."

Some new cars may have six image processing devices and seven radars, some may have a single sensor, but few will have none.

The new Calibration and Sensor (CSC) tool, available from HELLA GUTMANN SOLUTIONS, is the only universal calibration tool for camera and radar-based ADAS. To find out more contact our technical team on 01295 662402 or email hgs.support@hella.com

HELP WITH DRIVER ASSISTANCE SYSTEMS

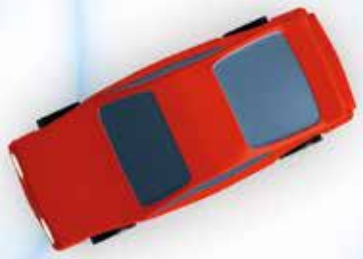
Roads are increasingly crowded and drivers need to be more aware of their surroundings than ever.

But with many distractions it's easy to get into potentially dangerous situations, whether it's when the car is changing lanes, or the road surface is slippery, or when heavy traffic means it's difficult to keep a safe distance from the car in front. Today's systems are a far cry from servo-assisted brakes and power steering, and they combine driver assistance with a road safety function. INSIGHT explains the technologies on offer and their various names and acronyms.

HELLA's driver assistance systems (DAS) have moved on considerably from anti-lock brakes and rain-sensitive windscreen wipers, and the latest types are aimed at making driving safer and smoother.

Adaptive Cruise Control (ACC) is cruise control with an automatic braking and acceleration facility: Cruise control systems have traditionally relied on the driver to brake when needed, and then re-set the system to go back to the desired speed. Based on adaptive cruise control, it's usually fitted with start/stop to offer the most relaxed urban driving.

"HELLA's driver assistance systems (DAS) have moved on considerably from anti-lock brakes and rain-sensitive windscreen wipers, and the latest types are aimed at making driving safer and smoother...."



Emergency Brake Assist offers increased braking when it's most needed, and thanks to on-board radar and cameras, can detect when an incident could happen. The driver is given an audible or visual warning and the braking system pressure is increased. If, however, the driver doesn't react to those warnings the system activates its partial braking, and then full braking force if needed.

Active Lane Tracking Assistant is designed to stop a car wandering from one lane into another. Using cameras that take their bearings from lane markers, the system warns the driver if their car is drifting out of the lane. If required, the system has corrective measures, but these can be over-ridden by the driver's actions.

IT'S ALL IN THE NAME

Over the last few years, more and more terms and abbreviations for driver assistance systems (DAS) can be found in catalogues and work instructions. Below are some of the manufacturer specific terms used for the most recent systems.

ADAPTIVE CRUISE CONTROL SYSTEM

Typically abbreviated ACC, depending on the manufacturer, this system is also called Automatic Distance Control ACC (VW), ASCC (Kia), MRCC (Mazda), Distronic Plus (Mercedes), Active Cruise Control (Citroën and Mini) or Adaptive Cruise Control (Subaru).

START-STOP SYSTEM

Most manufacturers use some combination of ACC and stop-and-go. ISG (Kia), i-stop Idling Stop system (Mazda), EyeSight with pre-collision braking (Subaru), Automatic Distance Control ACC with vehicle stop function (VW) and Intelligent Start Stop System (Land Rover) also describe this helpful added level of assistance. The start/stop system is part of Distronic Plus on Mercedes vehicles.

EMERGENCY BRAKE ASSIST

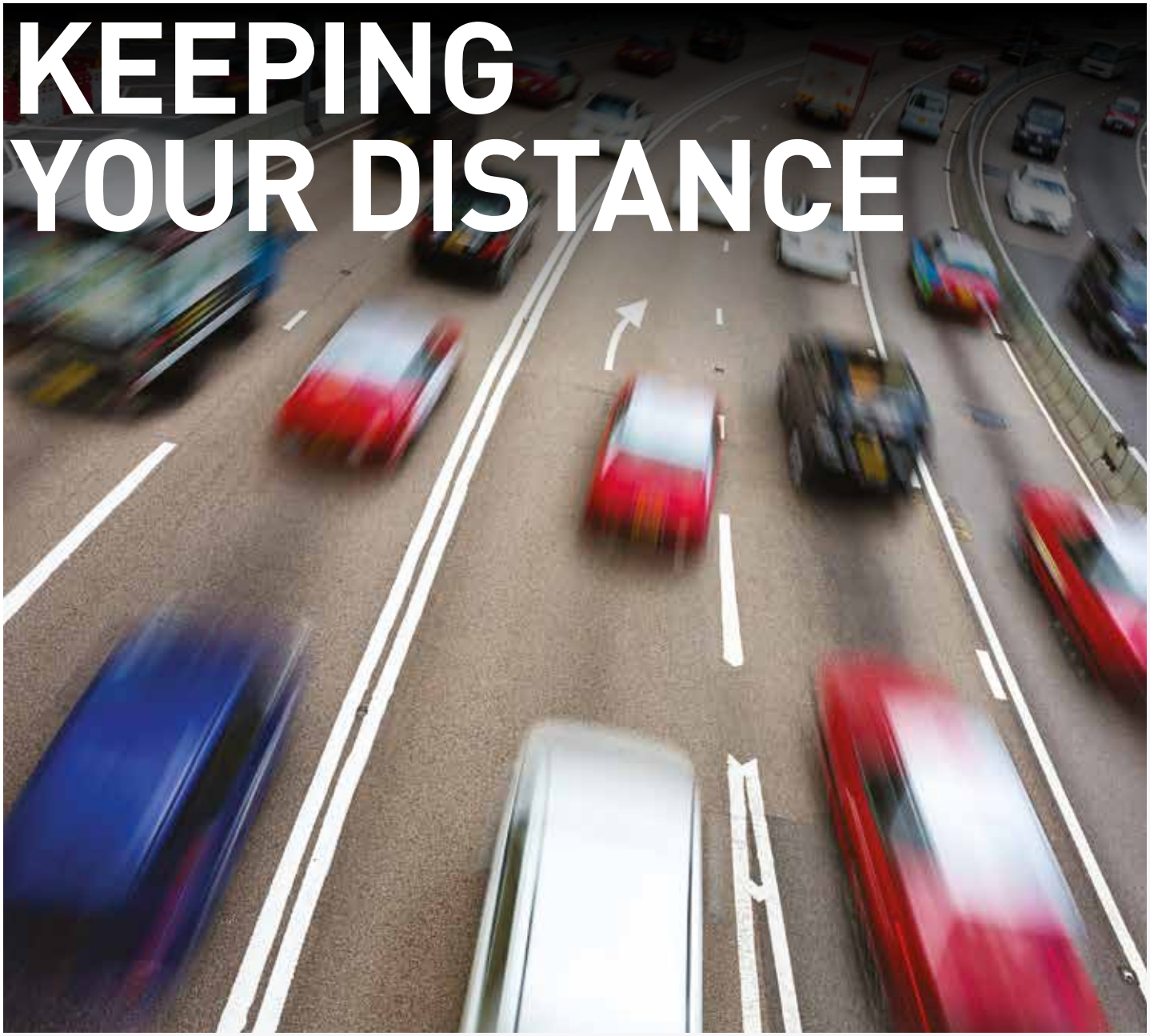
In many brands, the pure warning function acting as the first phase before a collision usually has its own name, like Driver Alert (Volvo), Front Collision Warning System FCWS (Hyundai), City Brake Control (Fiat), Drive Assist (Citroën) and Active Protection (BMW).

Brake assists that actively engage have names such as Emergency Brake Assist (Land Rover, Jaguar, Renault, Subaru), Collision Warning System (Mini), Forward Collision Mitigation (Mitsubishi), Front Assistant (Skoda), Radar Brake Support RBS (Suzuki), pre sense front/plus/city (Audi), Active City Brake (Citroën), Pre Crash System (Lexus), Pre-Collision System PCS (Toyota), Emergency Brake Assist EBA (Ford), Forward Collision Warning FCW (Jeep), Autonomous Emergency Braking AEB (Hyundai, Kia), Smart City Brake Support SCBS (Fiat, Mazda), Collision Prevention Assist (Mercedes), City Braking Function (Mini), Active Safe PAS (Porsche), Front Assist (Seat, VW) and City Safety (Volvo).

(ACTIVE) LANE TRACKING ASSISTANT

Manufacturers choose names such as Lane Departure Warning System (BMW, Porsche, Land Rover), Lane Keep Assist (Fiat, Jaguar, Subaru), Lane Departure Alert (Lexus), Lane Assist (Seat), Lane Assistant (Skoda), Lane Departure Warning System LDWS (Citroën) and Lane Keeping System (Ford) for these systems. The word "lane" finds its way into virtually every system name, including Active Lane Assist (Audi), Lane Assist (VW), LaneSense (Jeep), Lane Keeping Assist System LKAS (Honda, Hyundai), Lane Departure Warning System LDWS (Kia), Lane Assist System LAS (Mazda) and Lane Keeping Aid LKA (Volvo). The steering assist system is part of Distronic Plus on Mercedes vehicles.

KEEPING YOUR DISTANCE



If you're working on a car fitted with adaptive cruise control, do you know how to recalibrate it? INSIGHT guides you through the process on a VW Touareg, using HELLA's mega macs and the CSC Tool.

First, it's important to understand the system's basic principles: All radar systems measure the distance from the car to an object with radar signals. Different frequencies are used depending on whether the system is set up for medium-distance or long-distance readings.

You might have to re-set the system if you're doing some front-end work, such as changing a radiator, which can involve removing the grille and front bumper for access. A radar sensor will need adjusting if the car has been repaired after accident damage or if the car has had changes to its front or rear suspension

All post-2010 VW Touaregs are fitted with ADC, and that means they have two radar sensors in the lower portion of the front which are used to measure distances. If they are removed, it is essential they are replaced accurately, otherwise the system will not work properly.

HELLA's CSC tool, which was introduced for camera calibrations, can now be used with radar sensors when the optional radar attachment is installed. By scrolling through the CSC tool's simple menu it's easy to find the ACC settings, which takes a technician through the readjustment process step-by-step.

The recalibration requires a radar plate, which mimics the road surface and helps adjust the angle of the car's radar sensors. This is a potentially tricky task but the CSC tool provides information on where to place the sensor and how to adjust it so the radar system can function properly.

CALIBRATION MADE EASY – USING MEGA MACS

If you're new to Adaptive Cruise Control systems, mega macs can take you through the recalibration process, step-by-step. In this example, using a VW Touareg, we show you how...

As is the case for camera calibration, the CSC Tool must be aligned parallel to the rear axle, even for radar adjustment.

mega macs provides extensive information and checklist for carrying out the task properly in the **Diagnostics > Basic settings > Teach** in **Adaptive Cruise Control** menu.

The current VW Touareg is equipped with two radar sensors, which must be adjusted one after the other. First, mega macs inquires about the desired sequence.

The angle adjustment plate (radar reflector) features a mount that can be attached in three different positions, making it possible to mount it at a positive upward angle (Position 1), a precise vertical angle (Position 2) or at a downward angle (Position 3).

The distance measured from the brand logo on the vehicle to the centre of the vertically mounted plate is 120 +/- 2.5 cm according to mega macs.

For vertical calibration of the sensor, the plate is positioned directly in front of the sensor, initially in Position 1. mega macs initiates the measurement.

To do so, mega macs requests that the plate be mounted in Position 3. Based on the reference measurement that follows, the electronic control unit detects the vertical position of the radar signal. Horizontal calibration is carried out according to the same principle.

mega macs clearly displays what kind of corrections must be carried out, such as **Rotate Screw 1 (bottom left) a quarter turn to the right.** Once the second radar sensor is correctly positioned, mega macs initiates the teach-in process of the signal in the electronic control unit.

In the case of older VW models (including VW Touareg models older than 2010), a laser attachment (also part of the CSC Kit Radar I) has to be used. This can simply be fixed to the angle adjustment plate magnetically.

RADAR SENSORS: FREQUENTLY ASKED QUESTION

WHEN IS IT NECESSARY TO RE-ADJUST/RE-CALIBRATE A RADAR SENSOR?

- After radar sensor replacement or dismantling/ installation
- After post-accident repairs to the body geometry
- After changes to the vehicle level at the front or rear axle
- After a suspected impact on the sensor
- If the electronic control unit detects exceeded tolerance levels for the measuring field
- After the impact carrier has been dismantled

WHY DO YOU DIFFERENTIATE BETWEEN "ADJUSTMENT" AND "CALIBRATION"?

Many radar sensors can be adjusted vertically and horizontally using two screws. This is similar to headlamp adjustments. This is purely a manual adjustment. However, the new position must then be taught into the electronic control unit, which automatically calibrates the Driver Assistance System (DAS). Other radar sensors are not equipped with mechanical adjustment features. If the system detects an error, the measuring field must be calculated again and a compensation value configured in the electronic control unit. In this case, only calibration takes place.

HOW CAN YOU DETECT A RADAR SENSOR?

Some radar sensors do not have a visible curve. Depending on the supplier, the sensor is often just a black, rectangular plastic housing. mega macs specifies the exact position in the vehicle.

ARE THERE DIFFERENT TYPES OF OPERATING PRINCIPLES?

In principle, all radars measure distance to an object via radar signals. Depending on the defined measuring distance, however, carrier signals with different frequencies are used as "means of transmission". Medium-range radar systems (up to approx. 60m) generally operate at 24 GHz while long-range radar systems (up to approx. 250m) use 76.5 GHz.

WHAT KIND OF GARAGE EQUIPMENT IS NEEDED FOR THE ADJUSTMENT/CALIBRATION PROCESS?

Requirements include a diagnostic unit such as a mega macs PC, mega macs 42 SE, mega macs 56 or mega macs 66, whose software supports the radar-based DAS in the respective vehicle, and the CSC Tool with supplementary radar sensor adjustment equipment. The latter is available as an option. The CSC Kit Radar I features the crucial angle adjustment plate as well as a laser attachment. The CSC Kit Radar II (case) offers a special adapter for adjusting Mercedes radar sensors.

WHY DO SOME RADAR ADJUSTMENTS REQUIRE A LASER ATTACHMENT?

In these systems, the electronic control unit does not initiate measuring field detection via its own radar signal. Instead, this is determined by the vehicle manufacturer and the programming of the system controller. To establish the measuring field, the laser attachment is magnetically fixed to the angle adjustment plate of the CSC Tool and the laser beam is aimed at the mirror, which is integrated into the radar sensor. The mirror reflects the beam back to the scaling system of the laser attachment. The radar sensor is adjusted using screws so that the laser dot hits a pre-determined area on the scaling system which has been specified by the mega macs.

WHICH MANUFACTURERS USE THIS SYSTEM, AND HOW MANY VEHICLES ARE AFFECTED?

There are quite a few vehicles which require radar sensor adjustment via laser. These include many models from Volkswagen, Seat, Skoda and Mercedes. For this reason, we have included the laser attachment as part of the CSC Kit Radar I. For Mercedes radar sensors, an additional adapter (CSC Kit Radar II) must be used.

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HELLA Limited
Unit 6, Appletree Industrial Estate
Chipping Warden, Oxon OX17 1LL
Tel.: (01295) 662400
E-mail: hella.sales@hella.com
Website: www.hella.co.uk

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EXPERT VIEW FROM STEVE HUDSON

HEAD OF BUSINESS DEVELOPMENT, BEHR HELLA SERVICE

Today, virtually every vehicle in the marketplace has been factory-fitted with an air-conditioning (AC) system. And with the arrival of summer, this is traditionally the busiest time for AC servicing. In addition, workshops should also consider the associated replacement parts as a welcome source of revenue.

All through the process, every part in the system represents a potential additional sale. When replacing the compressor for example, look too at the receiver dryer and the thermo expansion valve and don't overlook all the associated 'O' rings, oil, dye and flushing fluid commodities. Offering the correct oil should also be considered as an added value and will demonstrate to them your commitment to a high standard service and attention to detail.

Similarly at this time of year, incorrect engine coolant levels can result in a rise in demand for replacement water pumps. Comprehensive ranges of AC oils and of water pumps are available from HELLA. To find out more contact our customer service team on 01295 662400 or email hella.sales@hella.com

KEEP YOUR COOL

In the not too distant past, air-conditioning was only fitted in the most luxurious, expensive and powerful cars. It kept the cool-looking occupants cool in a way a conventional ventilation system simply couldn't.

In more recent years air conditioning units have become smaller and require less power to run them. While they could consume up to two bhp in a 1970s American car, even today's smallest-engined hatchbacks are likely to have air conditioning fitted as standard.

Nowadays, air conditioning systems have developed more precise temperature and speed controls, commonly known as climate control. Rather than set speeds and temperatures marked on the controls, they can be altered more variably. At the same time air conditioning systems have become more complex incorporating dual and quad zones giving occupants more comfort.

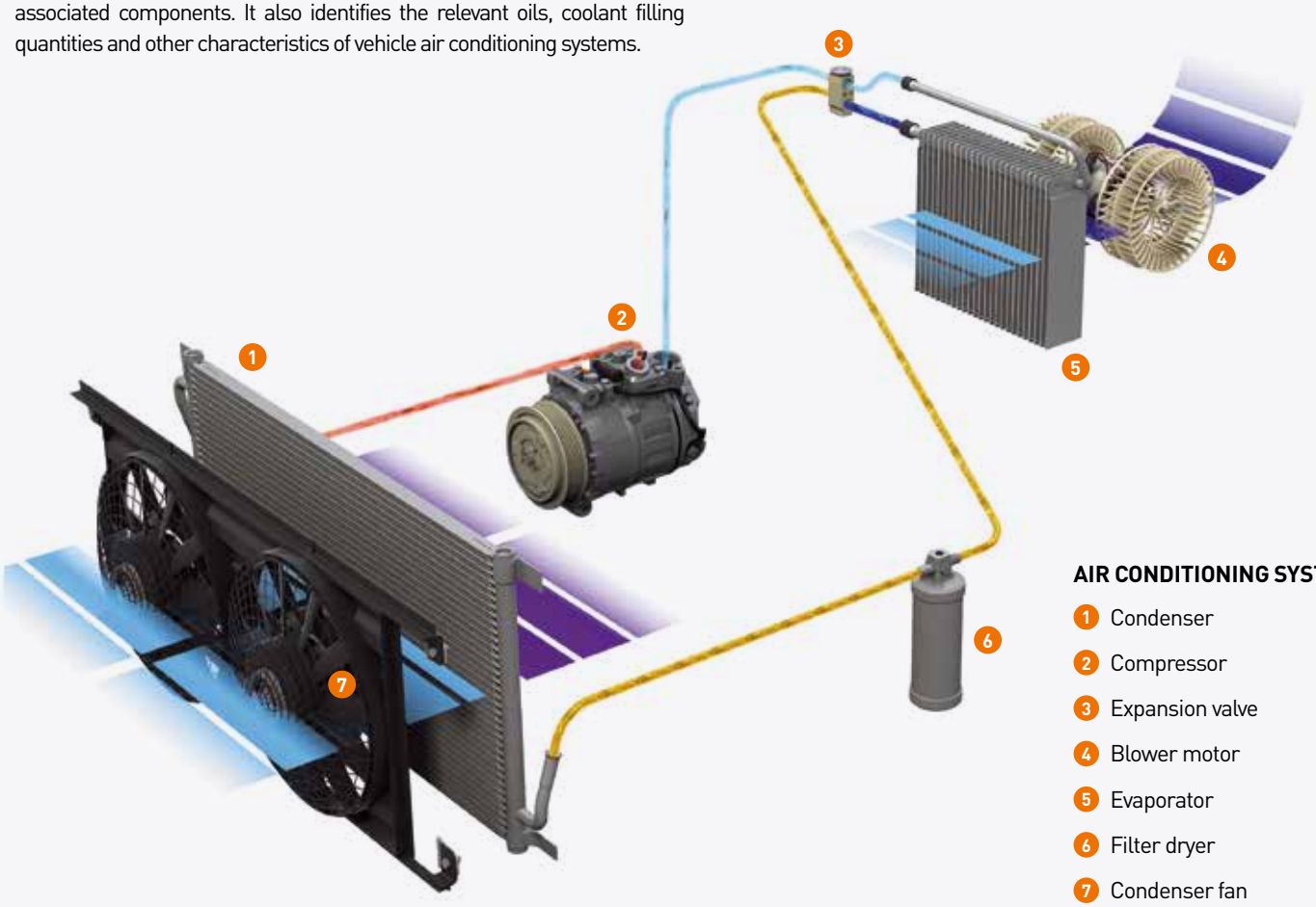
Furthermore, the latest systems use continuously running compressors, driven by the engine's serpentine belt, with output controlled through an electrical signal.

This design means greater fuel efficiency, but also there's no noticeable 'lurch' felt through the accelerator pedal when the system

is switched on. Additionally, because the system's refrigerant is constantly running, O rings don't dry out in the winter, reducing the risk of them having to be replaced.

Even the most modern air conditioning system will need servicing. As part of the repair stages, Behr Hella Service has a comprehensive range for a technician to guarantee a first time fit solution.

To further assist technicians, BEHR HELLA SERVICE has a Compressor App for smartphone and tablet (available in Apple and Android), providing convenient, practical access to all the relevant and important information relating to the specification, application and installation of compressors and associated components. It also identifies the relevant oils, coolant filling quantities and other characteristics of vehicle air conditioning systems.



AIR CONDITIONING SYSTEM

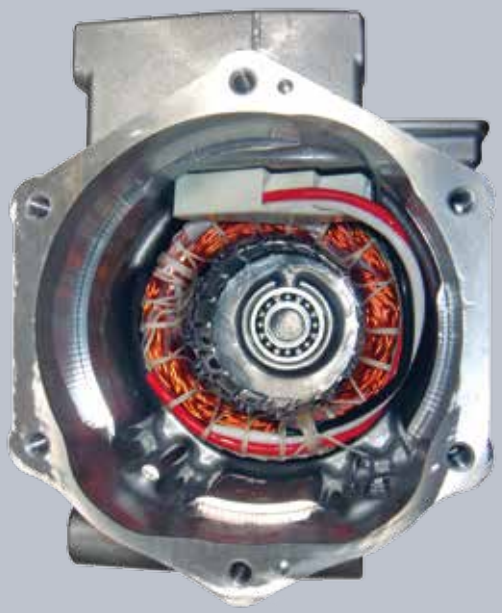
1. Condenser
2. Compressor
3. Expansion valve
4. Blower motor
5. Evaporator
6. Filter dryer
7. Condenser fan

E STANDS FOR ELECTRIC – THE HYBRID CAR SYSTEM

When it comes to hybrid cars the air-conditioning system is designed differently so that it can run when the engine isn't running. In some instances the air-conditioning unit will also provide cooling to the hybrid systems' batteries.

The compressors used in hybrid cars are high voltage and must be filled with special POE oils which have high levels of electrical resistance and an insulating effect. You shouldn't consider using a conventional oil because its lower resistance can have a negative effect on the service life of the electrical windings. What's more, in some cases the wrong oil will ultimately cause the on-board diagnostic system to generate an error code that switches off the electric compressor.

Toyota Prius: The electric drive is integrated into the air-conditioning compressor



"Hybrid cars are high voltage and must be filled with special POE oils which have high levels of electrical resistance and an insulating effect."

MORE FREEDOM FOR THE PERFECT SERVICE

What keeps a car's engine cool? There are plenty of components that make up the cooling system. Without the water pump keeping the coolant flowing the engine would soon overheat and the journey comes to an abrupt end. BEHR HELLA SERVICE explains.

Both coolant and oil keep the engine cool, but the coolant takes care of the block, while moving components are looked after by the oil.

And despite how much more complicated engine design becomes, water pumps are still doing the same job, moving coolant from the radiator, where its temperature will have dropped, back around the block.

More recently cooling systems have been designed so that coolant only goes to the block when the engine has warmed up: In the past coolant would flow from the moment the engine started, and this meant achieving optimum operating temperature took longer and used more fuel.

On modern engines, once the operating temperature is reached, a valve opens to complete the cooling circuit, making the engine more economical and delivering performance earlier.

Another recent development is the electronically-controlled water pump, which operates independently of engine speed. Being more efficient than more traditional designs (and helping to lower fuel consumption) they are being fitted in more new cars.

For more information about water pumps or any BEHR HELLA SERVICE product contact the customer services team via email: hella.sales@hella.com or telephone 01295 662400.

NEW PAINT LINE SET TO MAKE A BIG SPLASH

With its aftermarket product range comprising of over 40,000 items, HELLA has offered distributors and independent repairers a powerful portfolio, covering a great deal of the market, for many years.

Best known for supporting the repair market and offering a choice of solutions, Hella is now extending that choice to the collision repair sector by introducing a full, VOC compliant, range of refinish paint products.

The Sonne™ brand from Hella is the ideal alternative for refinish distributors and collision repairers.

Following significant success in Europe, Hella Sonne™ is introducing the range to the UK refinish market, allowing repairers a greater choice, control of costs and, ultimately, improved profitability.

Hella will partner with the best refinish service providers in the UK to support the growing 'non-specified' or 'free to choose' (F2C™) refinish sector, and is currently finalising distributor appointments.

Sonne™ is a fully VOC compliant, high performance, high quality range of car repair coatings. The assortment has been carefully selected to ensure maximum profitability for the repairer. The technology is world class, Colour accuracy, availability and consistency are second to none and our digital colour tools are state of the art.

With the Sonne™ brand, Hella provides you with the freedom to choose and control: **Your provider, your product, your profit.**

For more information about the Sonne™ range or any HELLA product contact the customer services team via email: hella.sales@hella.com or telephone 01295 662400.

HELLA ON THE PODIUM

HELLA-supported Aston Martin Racing took second and third places at the 2016 World Endurance Championship (WEC) opener.

Silverstone Circuit, where the series got underway, was kind to the 'home' team with the number 98 car, crewed by Paul Dalla Lana, Pedro Lamy and Mathias Lauda seeing off stiff opposition to gain a much-deserved second.

Just behind was the number 95 car of Darren Turner, Marco Sorensen and Nicki Thim. The crew enjoyed a trouble-free run and steered through the traffic to achieve a podium place.

"With the team learning and continuing to develop the V8 Vantage GTE, a third place in GTE Pro and second in Am constitutes a result that we're happy with. There's more progress to be made but we're comfortable with our performance at this stage of the season," says Aston Martin Racing team principal, Paul Howarth.

Next stop in the WEC calendar sees the team crossing the Channel to Belgium for the 6 Hours of Spa.

"There's more progress to be made but we're comfortable with our performance at this stage of the season..."

ASTON MARTIN RACING TEAM PRINCIPAL, PAUL HOWARTH

CONGRATULATIONS GO TO...

Our latest competition winner Adam Hilton, Shrewsbury GM. He was the lucky winner of VIP tickets to the Silverstone event on Sunday 17th April 2016 and enjoyed corporate hospitality for the day whilst watching the Endurance racing.

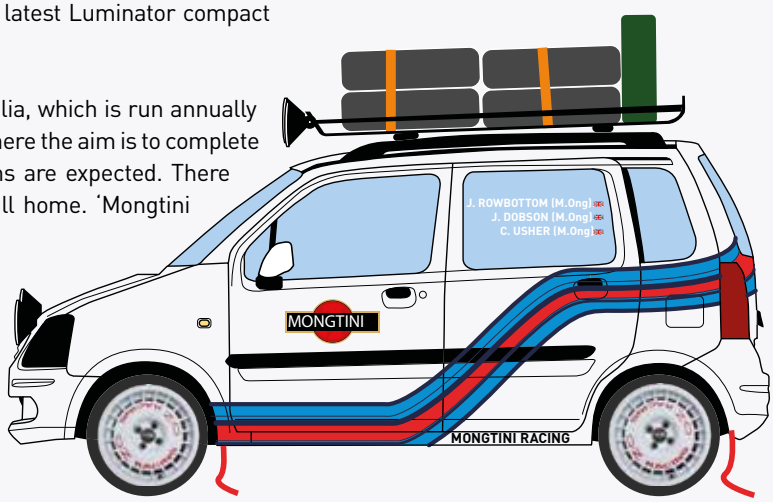
HELLA ON WHEELS

Three mechanical engineering students, Josh Dobson, Jack Rowbottom and Charlie Usher have decided to venture east this summer, all in aid of charity.

"It's not a race. We're not going to be going all 'Colin McRae' this summer."

The team are taking part in the Mongol Rally to raise money for Cool Earth charity. Their efforts cannot be completed alone and the 3-man team called out for support. We were suitably impressed by their endeavour and agreed to donate our latest Luminator compact LED spotlights to help them navigate tricky routes in the dark.

The Mongol Rally is a 10,000 mile journey from London to Mongolia, which is run annually and is now in its 15th year. Over 350 teams participate each year, where the aim is to complete the journey in a 'cheap' vehicle where breakdowns and problems are expected. There is no GPS, no backup support and in some places, no phone call home. 'Mongtini Racing' has decided to embark on this journey in a Vauxhall Agila.



What can go wrong?

You can follow the three on their adventure via Twitter: #shakenandstirred or Facebook: facebook.com/mongtiniracing

To find out more about the Cool Earth charity visit: www.coolearth.org

MEET THE TEAM...

Matt Roberts

Matt Roberts

1. What was your first industry job?

I always knew I would follow in the footsteps of my Dad and get into the motor trade. I started out as an apprentice Panel Beater and Sprayer within a Commercial Vehicle accident repair centre.

2. What would be your specialist subject on mastermind?

As I am a bit of a petrol head, anything from modified to supercars. I have showed various cars at events over the years.

3. Describe your ideal day away from the office in three words.

Sun, Football, and Friends (do I need to include my girlfriend in here somewhere?...oops!)

4. Have you ever met anyone famous? If so, who?

When Leeds United were playing Champion's League Football (back in the good days) I spent a lot of time with most of the team. I have met Alan Smith, Rio Ferdinand, and James Milner. Outside of football I have also met the one and only "Mr Agadoo" (Dene Michael) from Black Lace, (don't deny it you all know the song!). I have sound engineered for him a couple of times at events and keep in touch with him occasionally to see how he is getting on with his latest projects.

5. Weirdest place you've ever visited?

York Dungeon has to be up there on the list. Very interesting to visit, you definitely have to have a certain type of character to entertain the visitors.

6. What do you enjoy most about your role?

Every day is different within my role. I get to meet lots of new faces and develop some long-term working relationships. Due to HELLA having such a wide product portfolio I am constantly learning new things and have a very supportive customer base. I am lucky to have a strong team of people behind me that are helping me to develop my career.

Grant Anderson

Grant Anderson

1. What was your first industry job?

First experience of the aftermarket was Fast Fit, Tyre and Exhausts. I ended up being a Centre Manager for Kwik Fit.
After this period I gained an Area Sales Manager Role in the Independant Aftermarket, and after Area Roles with FAI Automotive and WAI Global I now have found myself working for HELLA. I bring almost 17 years of Independent Aftermarket experience to the role.

2. What would be your specialist subject on mastermind?

Would happily try to answer questions on Formula 1 World champions since 1980.

3. Describe your ideal day away from the office in three words. – On the beach.

4. Have you ever met anyone famous? If so, who?

Jackie Stewart, Formula 1 champion and shotgun champion. Probably the one the I most admired. On a wet Sunday morning in Silverstone, I followed him into the Drivers' Paddock to get an autograph, then was asked to leave by security!

5. Weirdest place you've ever visited?

Grew up in Edinburgh, it has a wonderful town under the city. Just shows that class and poverty was very provident on occasions, and I think that it's a weird place because of the under ground living conditions.

6. What do you enjoy most about your role?

HELLA lets me develop both existing customers and prospects. I'm always able to have a real reason to meet with a customer and to look to develop sales growth. We also have a great back up team, we all pull together to "just get on with the job in hand".

WELCOMING NEW MEMBERS...

Chris Griffin

Meet the new recruits to the HELLA family. We have 3 new faces joining the company, with appointments in Finance, Garage Equipment sales team and a newly appointed position - Pricing Manager.

Chris Griffin, Head of Pricing & Tender Management. Chris worked at First Line for over 18 years in various roles from Marketing to Product Management and finally pricing. He brings a wealth of experience to the job and the industry.

Wendy Bailey, Purchase Ledger Controller. Wendy worked at a PR agency for 23 years in finance. HELLA attracted her as a large well-established company with a strong team environment.

Eric Ware, Business Development Manager for the South West, Wales & Midlands region. Eric has worked in the motor trade for almost 30 years and he joins the company from his most recent position at Delphi.

HELLA ON TOUR 2016

HELLA hits the road again! We will be attending a number of shows throughout the rest of 2016. Our scheduled events are listed below so make sure you come and see us on stand. We look forward to welcoming you.

Date	Event	Location
7th – 9th June 2016	Automechanika	NEC, Birmingham
28th – 30th June 2016	Hillhead Mining Show	Hillhead Quarry, Buxton
13th – 17th September 2016	Automechanika	Frankfurt, Germany
8th – 9th November 2016	Mechanex, South	Sandown Race Course, Esher, Surrey

Technology with Vision

THE INTERNATIONAL SYMBOL FOR OE QUALITY

HELLA's long standing commitment to quality is just one of the reasons that many of the world's leading vehicle manufacturers choose HELLA as an OE partner.

Quality is also an intrinsic feature of each and every one of the 38,000+ replacement parts within HELLA's diverse aftermarket product portfolio, which is why leading wholesalers and garages choose HELLA too.

To find out more about our range of products please contact our customer services team on 01295 662400 or email hella.sales@hella.com