



ISSUE 14

INSIGHT

HELLA'S MAGAZINE FOR THE INDEPENDENT AFTERMARKET



PURE PERFECTION

ALSO IN THIS ISSUE

- Oil Level Sensors
- Headlamp adjustment

- Colour is everything
- WIN a HUSKY 1000





THE BEST INSURANCE FOR YOUR BUSINESS

Safeguard your business by equipping your workshop for ADAS.

Advanced Driver Assist Systems are already standard features on new models from Ford, Mercedes-Benz, Volkswagen and Volvo, and increasingly popular options on many more.

With ADAS-equipped vehicles, the workshop has a duty of care to calibrate the sensitive camera and radar heads before returning the vehicle back to the customer, even after relatively minor repairs and procedures such as wheel alignment, axle geometry or windscreen replacement.

Thankfully, the CSC-Tool from HELLA GUTMANN SOLUTIONS now enables technicians to calibrate both camera and radar-based ADAS. It's cost-effective and easy to use, compatible with a wide range of vehicle models and integrates with mega macs diagnostic devices, so results to be saved and printed as a permanent record that ADAS calibration has taken place.

So protect your customers and safeguard your business with the CSC-Tool.

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

www.hella-gutmann.co.uk





DEAR READER,

Welcome to our Summer INSIGHT Magazine.

As usual, you will find many interesting articles and news updates regarding innovations and business potential. The landscape of our Industry continues to change at pace. We therefore feel it's more important than ever to keep you advised of these changes and what it means for you.

You will also see that we have added content regarding our new Filter Alliance with HENGST. The Alliance was officially announced during a press day at Wembley Stadium in April. Since the launch demand has been high, with an ever increasing customer portfolio. HELLA Hengst allows us to provide you with a Premium Filter, backed by two of the Worlds leading brands. HENGST OE customers include the likes of Mercedes, Audi, BMW, Volvo, GM, VW, Bentley, Porsche, to name only a few. Please feel free to contact us for more information.

Furthermore, we are delighted to announce that we will launch a new concept to support our Behr Hella Service partners. From June we will roll out a new Behr Hella Service Academy, allowing us to meet and train the end users. The Academy will be provided free of charge and will ensure all those that attend are equipped with the very latest updates and knowledge. Register your interest now at www.strengthenyourpotential.com

Finally, my continued thanks for your ongoing support of our brands. We look forward to see many of you at the various shows throughout the UK and Ireland during the Summer and Autumn.

Matthew Say
Managing Director
HELLA Limited

INSIDE THIS ISSUE

04 – 05 | Vehicle electronics

How HELLA has its finger on the PULS.

06 | Headlamps

Shining a light on a world first.

07 | Daytime running lights

The lights to be seen with...

08 – 09 | HELLA Sonne paints

Colour is everything.

10 | Pure Genius

HELLA Hengst filters.

11 | Breathe easy

With HELLA Hengst cabin filters.

12 – 13 | HELLA Hengst

A reassuringly German alliance.

14 – 15 | Headlamp adjustment

It's a question of safety.

16 – 17 | All round camera kits

Lights. Cameras. Calibration!

18 – 19 | Taking charge

Indirect Integrated Charge Air Cooling.

20 | The quality of oil

The importance of oil in the compressor.

21 | Strengthen Your Potential

Behr Hella Service Advanced Training Academy.

22 | Competition time

Win a HUSKY 1000 for your garage.

23 | Meet the team...

People profiles and say "hello" to our new HELLA family members.

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 next decade we will see technology increase at an even greater rate with the acceleration in autonomous driving technology, including advances in artificial intelligence, sensors, cameras, radar and data analytics, are set to transform not only how we drive but how we are driven.



If you look at many car manufacturers they estimate the first highly to fully automated vehicles will hit the market between 2020-2025. Trials are already underway on the UK roads. This technology is also available in the commercial vehicle market with the self-driving autonomous Volvo FMX trucks already being tested in the Boliden mine in Kristineberg, Sweden.

HELLA is a leading supplier of the radar and lane assist sensors that allow the semi-autonomous vehicle to operate safely and are fitted to today's vehicles. This is another example of how HELLA electronics are the driving force in vehicle technology. For more information on Electronic sensors, please ask your local BDM or contact our Customer Service Team on 01295 662400 or email hella.sales@hella.com



PACKAGED ULTRASONIC OIL LEVEL SENSORS: HAVING OUR FINGER ON THE PULS

In today's fast-moving world, we naturally expect safety and comfort from our cars. Environmental friendliness is therefore a key concern when choosing a new vehicle.

Drivers are not only interested in low fuel consumption figures – and the cost savings associated with this – but are also far more eco-aware than in the past. What they want are lower emissions, less pollution and better fuel economy.

For over 18 years, HELLA has been working with vehicle manufacturers to meet these customer expectations. In particular,

HELLA is recognised as the market leader for engine oil management sensors, providing innovative solutions for the latest demands.

Oil sensors in vehicles ensure that the engine cannot run with too little oil without this being noticed. The tried-and-trusted technology of ultrasonic sensors works on the running-time principle and records the filling level continuously during the trip.

When the engine is running, the filling level is significantly lower than the filling level when the engine is at a standstill. A dipstick records the oil level of a mobile engine only in the standstill mode. However,

the oil level sensor will continuously measure providing information about the oil level whether the engine is running or switched off.

Continuous monitoring of the oil level while the engine is running, makes it possible to prevent the oil level falling below the minimum level, so ensuring that the oil film is not interrupted (which would damage the engine). Marginal influences such as an inclined position of the vehicle and lateral and longitudinal acceleration are compensated by an averaging out in the vehicle's electronic control unit.

Oil sensor functions improve overall fuel economy and maintain proper engine oil conditions in various driving situations. Modern engine oil management systems provide real-time information to help reduce the total cost of ownership (e.g. extended oil change intervals, reduced fuel consumption). If, for example, the oil level becomes critically low or the oil temperature extremely high, the sensor will alert the corresponding warning signal in time for the driver to react.

That's why HELLA integrates its multi-chip module (MCM) technology in every oil sensor. In addition to the basic field of oil management, including oil pressure and temperature, HELLA is developing a combined sensor. This sensor integrates the two basic functions at one mounting location; fuel temperature and pressure detection. This innovative concept minimises assembly, installation and housing costs while improving overall functionality and robustness.

In addition to product development, HELLA also focuses on sensor applications in the general vehicle system. Supporting manufacturers in the ongoing development of this system is one key way in which HELLA boosts its market leadership in oil sensors.

The development of these sensors continues through our OE operations and all new cars are fitted with the most up to date Packaged Ultrasonic Oil Level Sensors (PULS) as manufacturers look to increase the lifetime of the engine and extend oil change intervals. This in turn reduces engine oil consumption creating

cost savings for customers and environmental benefits for all.

Uniquely, HELLA is the only manufacturer to produce this model of sensor.



HELLA ADVANTAGES

- **Leading market position with more than 70 million sensors in the market and an annual volume of more than 11 million oil sensors (PULS+OPS)**
- **Over 18 years' experience in engine oil monitoring and sensor applications** Sensors in the system ensure compliance with EURO 5/6 standard to meet CO₂ regulations in future engines and reduce fuel consumption
- **Optimized temperature balance with precise temperature measurement**
- **Proven multi-chip module (MCM) technology as standard in all oil sensors**
- **Ultrasonic level measurement makes a mechanical dipstick superfluous and warns if fill level is too low**
- **Continuous monitoring of dynamic and static oil level**
- **Global system development and application support from design to production**

THE GOLDEN SENSOR WINNERS

HELLA is proud to announce details of the winners of the Golden Sensor competition

GOLD SENSOR WINNERS – EACH WERE AWARDED £2,000



Steve Beasley & Lee Bradbury
(co-owners of Bridge Garage Services)

Lee Bradbury, co-owner of Bridge Garage Services, Hemel Hempstead

Lee excitedly commented on his win: *"I know HELLA is an OE manufacturer, which is one of the reasons I ordered the oil sensor through our regular motor factor, Allparts, but I never expected that we would win £2,000! In an ever changing market, our biggest challenge is the constant advancement of technology and being able to keep up with it. To make sure we plan for the future, we're going through some major changes at the garage, such as expanding our work space and building a customer-friendly reception area, so the £2,000 is more than welcome!"*



Craig Woolmer

Craig Woolmer, owner of A&C Auto Repairs, Essex

SILVER SENSOR WINNERS – ALL RECEIVED THE LATEST STATE OF THE ART MICROWAVE

Luke Downing from Launceston in Cornwall

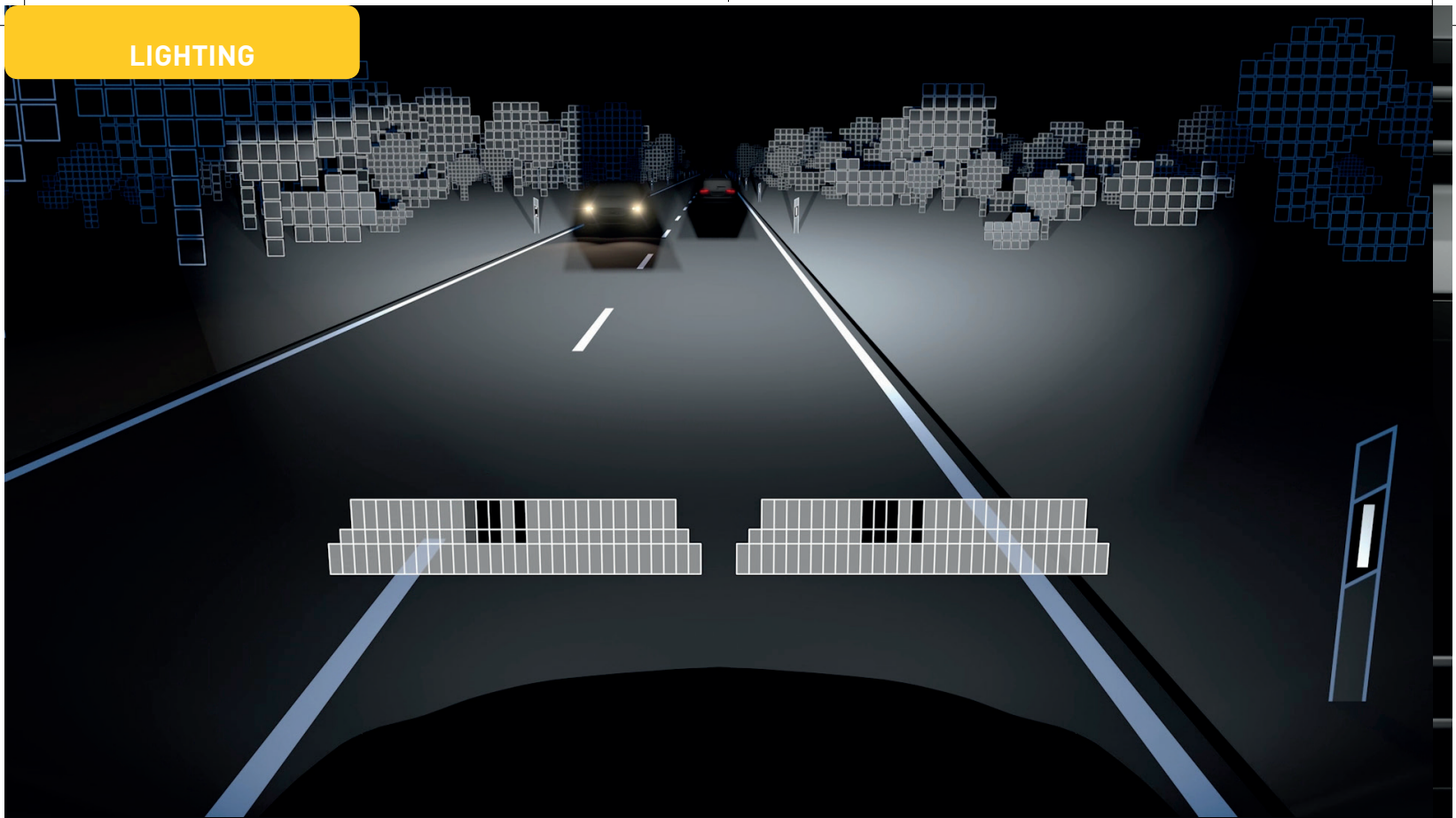
Our first winner in the competition commented: *"Having become familiar with HELLA during my degree course at Plymouth University, I know it's a brand that I can trust, so it was normal for me to order a HELLA air mass sensor, as I knew the quality would be first rate and the part would fit and perform as intended. Although it might cost a little more than some others, you get what you pay for it pays to use a product you know you can rely on."*

Nicholas Bowman of Village Car Repairs based in Crookham Village, Hampshire

John Straughan, JS45, Berwick upon Tweed



CONGRATULATIONS TO THE WINNERS AND THANK YOU ALL FOR TAKING PART



SHINING A (HEAD)LIGHT ON A WORLD FIRST

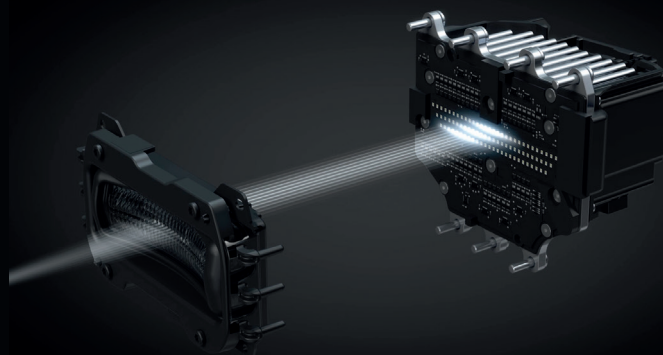
Nowadays, it seems as if the march of automotive technology is relentless. But in the midst of all this rapid change, HELLA has not forgotten the importance of the once-humble headlamp.

Reinforcing HELLA's position as a leading innovator in automotive lighting technology, our latest multi-beam LED headlamps made their debut on the newly-launched Mercedes-Benz E-Class. This is a world first for HELLA, as they are the first headlamps to be fitted with variable configuration high- and low-beam function.

Developed in partnership with Mercedes-Benz, these revolutionary new multi-beam lighting units employ a total of 84 individual controllable LEDs each, and are able to adjust their light distribution depending on traffic, weather and other road conditions.

Packed with the latest in advanced driver assistance technology to improve road safety, the 'Adaptive Highbeam' feature gives the driver the maximum illumination of the road ahead at all times, yet at the same time sensing multiple on-coming vehicles and instantly 'reshaping' the spread of light so as not to dazzle. And the newly-developed adverse weather feature reduces reflections caused by standing water – an advance made possible by selectively dimming individual LEDs from the 84 fitted.

The new multi-beam LED headlamp is just the latest example of how HELLA's award-winning lighting technology is benefiting motor manufacturers and drivers alike.



LIGHTS TO BE SEEN WITH

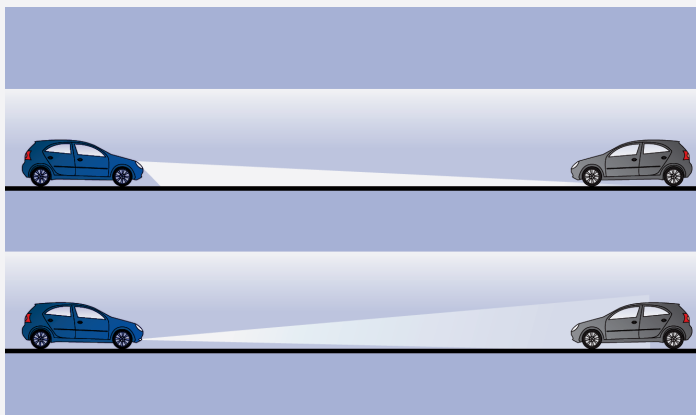
Daytime running lights for passenger vehicles have almost become an everyday sight on our streets. Since 2011, new passenger cars and light commercial vehicles have been supplied with daytime running lights as a legal requirement; and commercial vehicles and buses since 2012. Today these lights are also being retrofitted to more and more older vehicles.

SO WHAT ACTUALLY ARE THE ADVANTAGES OF DAYTIME RUNNING LIGHTS?

Research shows that daytime running lights are likely to significantly reduce multiple vehicle daytime accidents and fatalities. Vehicles are more visible and therefore will be seen sooner by other road-users, giving that crucial additional reaction time. Seeing and being seen - in terms of lighting technology is quite literally as different as day and night.

Whereas low beam light is designed as an active visual aid for night-time drives, daytime running light is used as passive signal light - developed so you can be seen in the daytime.

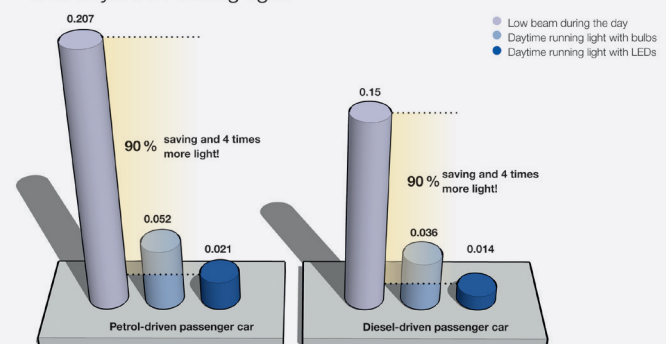
1. HELLA daytime running light for passenger vehicles - developed so you can be seen in the daytime
2. HELLA low-beam light, developed for visibility at night



An official study carried out by the BAST (Federal Highway Research Institute) revealed that up to 90% less additional fuel is consumed when driving with daytime running lights than when driving with the low beam lights switched on. In addition to the financial benefits, there is also the same savings potential with regard to CO₂ emissions. In short: daytime running lights for cars are not only safer, they are also more economical and friendlier to the environment than a conventional low beam.

HELLA offers a comprehensive range of daytime running lights, from subtle and refined through to strikingly different. Whether you require innovative LED technology, tried-and-tested standard solutions or vehicle-specific products, we have the perfect solution for nearly every passenger and light commercial vehicle. Although the requirements are many and varied, our daytime running lights do however have one thing in common: The tried-and-tested compelling HELLA quality which you can completely rely on. And every day we strive to do this in a new way.

Comparison of performance between low beam and daytime running light



Source: BAST (Bundesanstalt für Straßenwesen - Federal Institute for Roadway)

For more information on our range visit www.hella.com/daytimerunninglights/en. To find out details on pricing and availability contact our Customer Service Team on 01295 662400 or email hella.sales@hella.com

EXPERT VIEW FROM PAUL TREDGOLD

HEAD OF PAINT DIVISION



The accident repair & refinish industry is consolidating at a rapid pace causing uncertainty for some but also creating opportunity for others. The last few years has seen global coatings manufacturers and UK based distributors make acquisitions to strengthen their position in the market. These developments have led to a supermarket style approach where all products are available to every distributor but offering little value as the price is being driven down which is adversely affecting the service and support available to the end user. The smart business owners have embraced the changes and have taken control of their business.

HELLA Sonne is complementing these business owners by creating a concise network of independent distributors that are focused on the "free to choose" accident and refinish markets and are creating value for their customers bodyshops, while safeguarding their own future. HELLA Sonne and our partners are passionate about providing high quality compliant coatings, maximising value for all and focusing on the perfect finish. At the same time, we are changing the perception of the "value brand" with speed, accuracy and consistency, one job at a time.

If you are interested in finding out more, register your details at www.sonnepaint.com or call our Customer Service Team on 01295 662400.



COLOUR IS EVERYTHING...

When Ford produced the first road going vehicle back in the early 1900's Henry Ford famously quoted that "you can have any colour - as long as it is Black"! Little did he know that over 100 years after his famous quote, colour would be available in solid, metallic, pearl and xirallc and the ways in which refinishers achieve the correct colour match during the body repair process, would have advanced so far.

Paul Tredgold, Head of Paint Division, explains how colour identification and accuracy has evolved over the decades.

The first thing seen by a customer when collecting their most prized possession after an accident, is the colour. This element is arguably the most critical when undertaking body repairs to a vehicle, and definitely the easiest to spot when it is wrong.

When I started out my working life as a vehicle painter, identification and colour accuracy was a tricky business and often a very frustrating part of the repair process for one or two reasons. Firstly, the colour

tools available were limited dependant on the brand of paint used by the repairer. And secondly as an apprentice, I had real trouble actually "seeing" the colour or more importantly the shade required to use for an acceptable repair.

Colour tools back in the 1980's were often printed inks that gave an indication of the colour but would often not reproduce to the colour tool used and therefore many minutes and sometimes hours were

spent undertaking “actual” spray-outs of each shade of a particular colour to ensure the vehicle was correct when painted. This was a costly process in time and paint used and would often end up with very little productivity for some time. All spray-outs were kept for future reference so the next time a vehicle of the same colour entered the bodyshop, you were ready and would not require the same process to be undertaken.

Throughout the 1990’s colour tools became more accurate but still relied on the painter to choose the correct shade and if he or she were not competent in “seeing” colour, problems and loss of time could hinder production. The tools were now mostly coated using the actual product and not ink reproductions, which greatly enhanced the accuracy of the finished colour.

With the advances of technology the first spectrophotometers entered the refinishing markets a decade or so ago but were not easy to use or very accurate. They initially gave “ball park” readings that required the painter to tint the paint to create an acceptable shade for use. The problem here is that it is an art to be able to tint colour and record what you have used in the creation. Something which takes time to perfect.



SONNE VISION SPECTROPHOTOMETER

Today, Sonne has the very latest spectrophotometers available to end user bodyshops and distributors, greatly improving the whole process, accuracy and efficiency surrounding the refinishing of vehicles. The painter is only required to polish the panel correctly prior to taking a reading of the area to be matched and download the formulation ready to mix the correct shade. This ensures that when the vehicle is painted it will be returned to its pre-accident condition with an invisible repair. What’s more, all colours downloaded can be recorded on the computer for future use making the process even slicker should the vehicle require any additional paintwork.

Consumers have much more choice in colour when purchasing a new vehicle today. Thankfully with Sonne’s technology, the refinisher can take comfort they will be able to accurately provide a formulation easily, efficiently and accurately, ensuring a right first time repair to every vehicle... because we know, colour is everything!



NEW TO RANGE HIGHLIGHTS...

HELLA Sonne has introduced three new products to enhance and expand the Sonne range. Each product is made from the highest quality materials and continue to provide an excellent cost/value benefit for the distributor and the bodyshop end user.

ANTI-SCRATCH CLEARCOAT

Introduced to complement the existing range of clearcoats. This product has a range of hardeners and thinners that can be used to ensure success and performance in the most challenging environments on any job from a full respray to smart repairs and everything in between. The Fast Hardener has a 30 minute bake time; whilst the Extra Fast Hardener is 15 minutes bake only.

FADE-OUT THINNER

to enable the fast and invisible “melt in” of local repairs and clearcoat edges. Compatible with all Sonne clearcoats.

ACCELERATED THINNER

Released in March 2017 to complement Sonne’s 420 compliant clearcoat increasing production capability, efficiency and driving down costs due to reduced bake time required.

AND...

NEW TIN SIZES

New tin sizes – In addition to the new products highlighted above, HELLA Sonne has listened to the demands of our distribution partners and bodyshop customers and introduced new tin sizes for our most popular hardeners and thinners. We believe that this will be more user friendly and assist in reducing costs to the bodyshop.

For more information on these new products and the SONNE range, contact Customer Service Team via email: hella.sales@hella.com or telephone 01295 662400

EXPERT VIEW FROM CARSTEN LUTTERMANN

FILTERS

Experts are unanimous: Regular replacement of the cabin filter is crucial for effective operation.

There's no doubt increased traffic levels on roads worldwide has had an impact on air quality. These roadside pollutants can reach a car's driver and passengers through its ventilation or air conditioning ducts. Prolonged exposure to high pollution whilst driving is not only unpleasant, it can have a serious effect on the health of the vehicle's occupants. Micro-organisms accumulate inside the car, potentially multiplying to much higher concentrations than normal. Such a high level of bacteria inside the vehicle can lead to a range of irritating health problems including more serious issues like asthma and allergic reactions.

It's important for workshops to communicate the benefits of regular cabin filter replacement to their customers.

All of these issues are potentially avoided by fitting a high quality cabin filter. Just as important, regular replacement is essential in order to ensure continued efficiency. Failure to change the cabin filter regularly can cause clogging preventing bacteria and pollutants from being filtered effectively. A clogged cabin filter also inhibits the flow of fresh air, causing difficulty with de-icing, misting up of windows, and combats the threat of driver and passenger fatigue.

HELLA Hengst supplies original equipment quality filters made to the high specifications and requirements of vehicle manufacturers so you can be sure that your customers will breathe easy all year round.

To find out more about our complete HELLA Hengst range, contact customer service on 01295 662324 or email hella.hengst@hella.com



PURE GENIUS!



Are you looking for OE quality replacement filters? Now you can order them from HELLA too!

We're pleased to announce a hugely significant alliance with renowned high quality filter manufacturer Hengst, enabling us to supply the very best in air, cabin, fuel and oil filtration products to the UK aftermarket through our established distribution network, as well as expanding our product offering to our customers.

60 years filter design and manufacturing experience, you can be sure that Hengst filters are of the same outstanding quality as every HELLA-branded product. And coming from the same source, ordering couldn't be easier too!

The HELLA Hengst alliance guarantees high levels of quality, availability and aftersales support to the aftermarket. With nearly

Look for the HELLA Hengst branding the next time you need to order replacement filters, or speak to your HELLA representative.



DISCOVER WHY MERCEDES-BENZ, BMW, VW, GM, PORSCHE AND MORE TRUST OUR ORIGINAL FILTRATION EQUIPMENT →

HELLA Hengst supplies original equipment quality filters made to the high specifications and requirements of vehicle manufacturers.

TAKE A DEEP BREATH



Cabin filters: The best way to beat pollen, dirt and other impurities

All garage technicians know regular replacement of the cabin filter is crucial for effective operation. This is because cabin filters prevent harmful particles down to 3µm (0.003 mm) or allergenic pollen from finding their way into the vehicle. In conjunction with air-conditioning, filtration also helps to keep vehicle occupants alert. UK experts estimate that today almost one in four of us suffer from hay fever compared to one in eight in the early Eighties. High concentrations of pollen can accumulate in vehicles alongside dust, soot and exhaust gases. This can lead to acute problems for allergy sufferers and asthmatics, and may even have a negative effect on their ability to concentrate.

As a development partner and series supplier, HELLA Hengst supplies original equipment quality filters corresponding to the high specifications and requirements of vehicle manufacturers. High-quality materials and excellent machining ensure effective functional operation. Their extensive portfolio includes particle filters that absorb pollen, dust and soot, as well as activated

carbon filters that also keep unpleasant odours at bay. Both types of filter have demonstrated their ability to achieve 100 percent efficiency.

OPPORTUNITIES FOR THE WORKSHOP

Cabin filters provide an opportunity for additional workshop business, ask your customers about a cabin filter check as part of their regular service. Vehicle manufacturers usually specify cabin filter replacement anywhere between 12,000 to 15,000 miles, or once a year. HELLA Hengst recommend replacing the filter twice a year if the vehicle is used intensively – in the Spring, as a great deal of impurities have accumulated over the winter, and in the Autumn they remove pollen and dead leaves.

Modern vehicles have cabin filters located in a variety of places depending on the vehicle manufacturer, making it difficult for installers to service or replace them. HELLA Hengst provides easy-to-follow installation instructions for all cabin filter types, including their locations, in every product pack.

Practical experience: Good reasons to replace the cabin filter regularly

- Replace the filter at least once a year or, if you drive a lot, twice a year.
- Only in this way can you guarantee an effective filtration of fine dust, pollen etc. from the air. The air quality inside the vehicle has a major effect on the concentration and health of the occupants.
- A regular filter replacement protects the motor of the fresh air fan, as the air stream can flow freely.
- Unfiltered or poorly filtered air can leave behind an unsightly film of dirt on the inside of the windscreen.
- Minimised exposure to odours




Hengst
FILTER

OIL FILTERS

With over 120 different filter media, we have the right solution for every application

✓ A clean solution

- High dirt absorption capacity
- Pressure and temperature resistance
- Significantly reduces risk of damage to engine components
- Precise fitting accuracy for easy installation
- Vibration resistance under extreme operating pressures



✗ Features and consequences of low quality Oil Filters



Corrosion/abrasion

inadequate lubrication leading to risk of engine damage

- Particles reach the combustion chamber
- Piston damage through poor filtration
- Critical damage to the pleats and the filter media
- Deformed end caps reducing filter efficiency


Hengst
FILTER

FUEL FILTERS

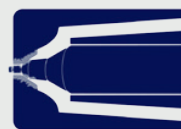
State of the art material increases the filter tolerance for optimum engine performance

✓ Save fuel and stay mobile

- Latest filter materials effectively remove dirt particles
- Injection system is protected thanks to high degree of water separation
- Significantly longer replacement intervals
- Reduces fuel consumption and emissions
- Resistance to aggressive fuels and high injection pressures



✗ Features and consequences of low quality Fuel Filters



Particle abrasion/ erosion

Inadequate fuel filtration leading to risk of injection system failure

- Potential for increased fuel consumption
- Up to 40% performance loss or complete injection system failure
- Serious engine damage
- Increased emissions


HELLA HENGST

A REASSURINGLY GERMAN ALLIANCE

Contact customer service on 01295 662324
email hella.hengst@hella.com
www.hella-hengst.com

HELLA Hengst AIR FILTERS

Special paper embossing ensures maximum filter performance

✓ The engine can breathe

- High quality filter paper ensures efficient dirt separation to protect against engine wear
- Longer service life
- Filter media resistant to moisture
- Flame-retardant filter media prevent engine fires
- Precise fitting ensures the filter efficiency is guaranteed



✗ Features and consequences of low quality Air Filters



Unfiltered Dirt

Dirt, fine dust and water can get straight into the combustion chamber

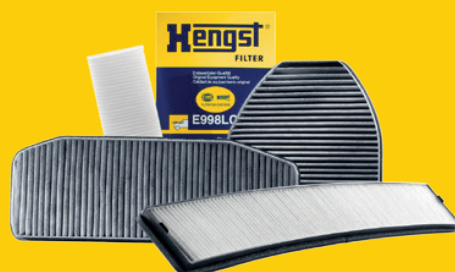
- Impaired engine performance
- Water contamination
- Reduction in the effective filter surface
- Complete loss of filtration capacity possible

HELLA Hengst CABIN AIR FILTERS

Protection against everyday dirt and impurities to provide a healthy environment within the vehicle

✓ Ideal climate

- Filters more than 99% of all particles and harmful substances
- Passengers are protected against pollen, fine particles, allergens and germs
- Minimisation of exposure to unpleasant odours
- Prevents condensation formation whilst driving
- Quick and easy installation thanks to detailed fitting instructions



✗ Features and consequences of low quality Cabin Air Filters



Poor air quality

Limited protection against particles and pollutants can lead to:

- Allergic reactions
- Fatigue and loss of concentration
- Unpleasant odours
- Misting of the windscreen reducing driver vision

EXPERT VIEW FROM NEIL HILTON

HEAD OF BUSINESS DEVELOPMENT, GARAGE EQUIPMENT

With the constant and rapid development of vehicle headlamp systems on modern vehicles, this presents serious challenges when simple procedures including beam adjustment or replacement are required.

Vehicle lighting has been transformed from Tungsten-Halogen-Zenon-HID-LED Matrix and the latest addition Laser Matrix, the latter has a range of 650 metres.

Modern lighting must have strict control systems to avoid blinding other road users, this includes auto levelling using ride height sensors, round corner systems using steering angle sensors and auto high beam using windscreen mounted cameras.

A simple headlamp replacement is now a complex procedure as the component needs to be adapted first using basic settings on the Hella Gutmann Diagnostic device, then calibrated by either the CSC Tool (if camera controlled) or the new HGS SEG V Camera based Beamsetter in conjunction with the diagnostic device for systems without a camera.

Many vehicle manufacturers already use a variety of these systems on their models and workshops need to be aware of the requirements when working or servicing vehicles which have any kind of modern adaptive lighting fitted.

To find out more about these products, contact our technical team on 01295 662402 or email hgs.support@hella.com



HEADLAMP ADJUSTMENT:

A QUESTION OF SAFETY

In Germany the Ministry for Traffic and Digital Infrastructure has set very detailed framework conditions for inspecting headlamps during their General Inspection (HU) – the equivalent to an MoT in the UK. As the UK is bound to follow Germany's lead, Hella Gutmann Solutions offers this technical walkthrough as a guide to best practice.

Over recent years, much has been said and written about the headlamp adjustment platform of the future. And rightly so as the increasing use of headlamp technologies and light assistance systems means increasing requirements when it comes to inspecting and adjusting headlamps.

THE KEY QUESTIONS ARE:

- Can the existing headlamp adjustment unit be used still?
- Will measures (construction or technical) be required to achieve the required evenness and inclination of the vehicle placement platform?
- What waiting periods are to be expected for technical acceptance?

PLACING THE SEG IV ON HEIGHT-ADJUSTABLE TRACKS

It's well known that old and inexact devices cannot lead to correct configurations, this is only possible with exact measuring (analogue or camera-based) headlamp adjustment platforms, such as the latest versions of the SEG IV- and SEG V-series by Hella Gutmann. However, the SEG should be set as level as possible. The German guidelines require a platform with maximum deviations of one millimeter per meter. This can be achieved via the height-adjustable track system by Hella Gutmann. When using a camera-based SEG V, such a track system won't be necessary since the device makes use of a calculated compensation.

A guideline-conforming headlamp adjustment platform must use markings and an expert must do the work. But there is no requirement to keep the platform unused. If the platform is not used for headlamp adjustments, it can at all times be used as general workspace. The real challenge at some workshops will be in meeting the required

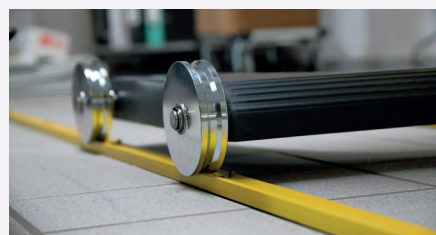
evenness and inclination of the ground. Hella Gutmann's levelling board system offers a practical solution meaning there's no need to redo the floor or purchase an exactly levelled lifting platform.

LEVELLING THE VEHICLE PLACEMENT PLATFORM FROM ABOVE VIA AN ADJUSTABLE BASE

The corrosion-resistant and robust construction made of steel and aluminium pressure die-casting consists of various segments and can be comfortably mounted in an hour. This will require a maximum of eight borings. Under certain conditions, mounting the system is possible without any screw fastenings.

Individual boards can be adjusted variably via adjustable (and always readjustable) screws from above. The system's construction is so stable that at a maximum axle load of 2.5 tons, no deformation of the platform occurs and/or no inadmissible deviations on the components.

The car system consists of six height adjustable board elements of 600mm width. In neutral position, the height above workshop ground is less than 100mm. 16 adjustable elements per lane allows for individual height adjustments between 0 and 30mm. The base plates mounted onto the access ramp adjust to the height.

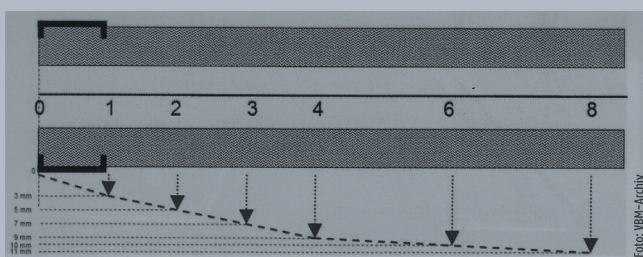


The conversion kit to the height-adjustable track system for the SEG IV-series contains suitable rolls.

The leveling bar allows for easily and economically creating a vehicle placement surface according to regulations. Adjustments can always be made from above.



16 adjustable elements per lane allows for individual height adjustments between 0 and 30mm. The base plates mounted onto the access ramp adjust to the height.



This is the unevenness that the vehicle platform may have according to HU headlamp guideline

GERMAN THOROUGHNESS OR TREND?

The guidelines for inspecting the adjustment of vehicle headlamps during the General Inspection came into effect in Germany on January 1, 2015 and must be implemented by January 1, 2018.

The aim is to gain exactness in measuring headlamp settings. In order to ensure this, all HU test centres, including workshops eager to meet this status, will need a guideline-conforming and marked lighting test platform.

AMONG THE KEY REQUIREMENTS ARE:

- standard-conforming, wear-free marking of placement platform
- Inclination of the platform of less than 1.5 %
- Maximum unevenness of 3 to 11mm (depending on length)
- The firmness of lanes must be ensured at all times
- Expert inspection upon completion and routine inspection every two years

LIGHTS. CAMERAS. CALIBRATION!

With advanced camera-based driver assistance systems becoming a more common feature these days, Hella Gutmann Solutions has updated their CSC (Camera and Sensor Calibration) tool to provide greater vehicle coverage for the benefit of workshop customers.

Initially only compatible with Mercedes-Benz and Volkswagen Audi Group models, the CSC tool now boasts static calibration capabilities for vehicles produced by 19 manufacturers, including Honda, Subaru and Toyota. In addition, updates to our mega macs software, supporting dynamic camera calibration, resulting in coverage of 28 manufacturers – equivalent to over 95% of models available in Europe – and making the CSC a powerful and comprehensive workshop tool.



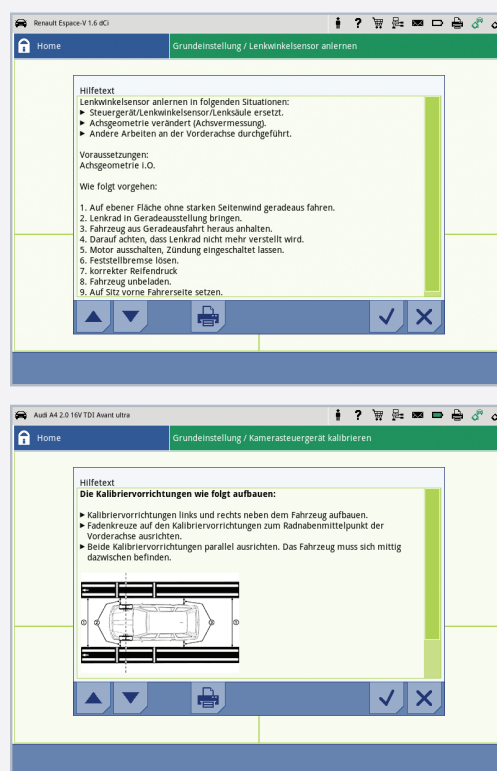


In 2015, Hella Gutmann Solutions increased the scope of their CSC system by introducing additional modules to enable the adjustment and calibration of radar systems and cameras across a wider range of vehicle manufacturers.

The addition of three extension kits allows precise calibration of the ambient camera system and rear view camera in conjunction with the mega macs software.

The CSC tool now boasts static calibration capabilities for vehicles produced by 19 manufacturers, including Honda, Subaru and Toyota

Precise calibration of a vehicle's assistance cameras and systems is critical in ensuring they provide accurate feedback to the driver, especially where partially autonomous functions – such as active parking assist – are concerned. Recalibration may be required after the replacing of an external mirror for example, or the repair of small dents, chassis adjustment, or the flashing of the ambient camera control unit. This is where mega macs comes to the aid of the workshop technician, by providing an easy-to-follow, step-by-step process that enables the correct calibration of all assist systems to the vehicle manufacturer's specifications – and thus giving peace of mind to you and your customers.



← mega macs provides comprehensive, easy-to-follow guidance at every stage of the calibration process

EXPERT VIEW FROM STEVE HUDSON

HEAD OF BUSINESS DEVELOPMENT, BEHR HELLA SERVICE



THERE ARE LOTS OF OILS AVAILABLE, WHICH ONE IS RECOMMENDED?

Oil plays an important role in the air conditioning system: no matter whether it's required when the compressor is replaced or for refilling during the air conditioning service. Like blood in the human body, the oil fulfills "vital" tasks in the air conditioning system.

Crucial for safe and permanent operation of the system, however, is the use of a high-grade compressor oil. The use of low-quality or even the wrong oil leads – just like with the engine – to increased wear, premature compressor failure and loss of warranty/guarantee.

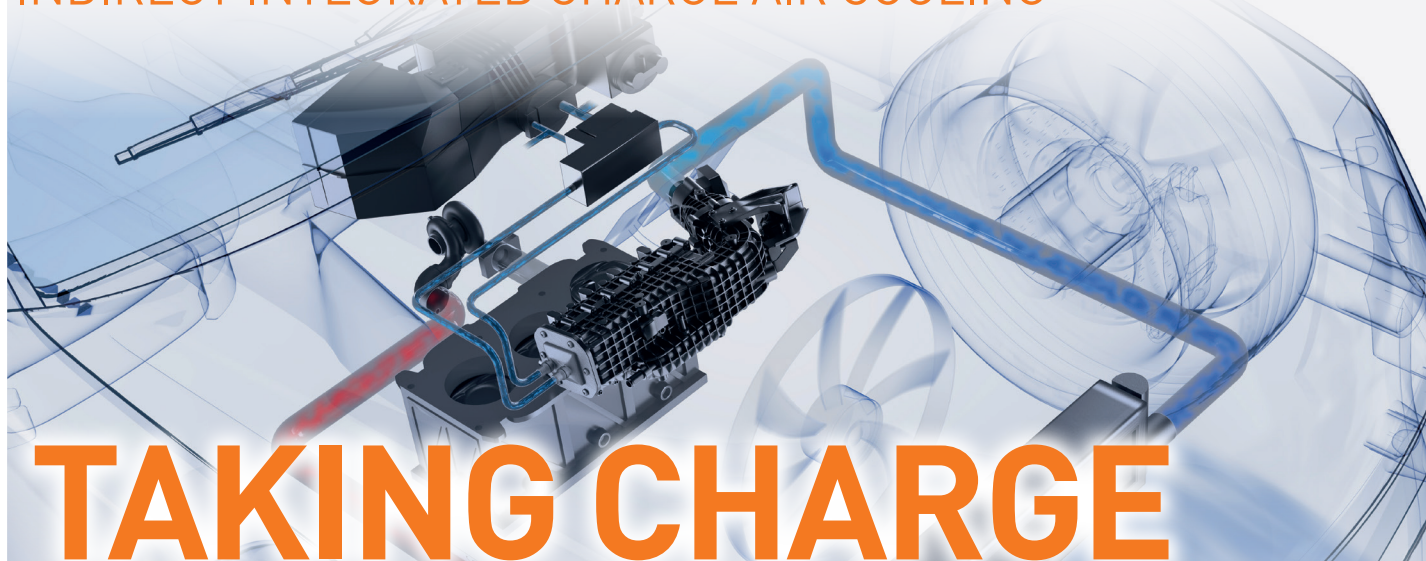
The wrong selection of oil can lead to damage. Vehicle or manufacturer-specific instructions must be followed carefully.

But it's not only the quality, but the quantity of oil in the system that is of great importance. Too little oil leads to poor lubrication of the compressor, causing component temperature to increase and oil scorching on the suction side of the compressor. Too much oil in the system will increase the load on the piston-crank system, which can lead to a block in the body of the thrust bearing and the hard front piston co-pivotable skid plate.

Find out about our oils and which oil goes with which compressor in our compressor app. Simply download from iTunes or the Google Play Store!

To find out more contact our Customer Service Team on 01295 662400 or email hella.sales@hella.com

INDIRECT INTEGRATED CHARGE AIR COOLING



TAKING CHARGE

The trend towards downsizing, that is, reducing displacement while maintaining engine performance, but with better fuel economy, is one of the main approaches to the ongoing development of the combustion engine. The required charge air management perfectly illustrates the technological advantages of Behr Hella Service.

In practice, downsizing means turbocharging, and therefore requires effective cooling of charge air because hot charge air presents disadvantages, such as lower density, greater nitrogen oxide formation due to higher combustion temperature, increased tendency to knocking in gasoline engines, and a greater thermal load on the engine components.

Up to now, charge air is still primarily cooled directly with external air. This means that it is fed to the front end of the vehicle after exiting the compressor, then flows through a directly cooled charge air cooler, and is then returned to the engine.

INDIRECT CHARGE AIR COOLING HAS DISTINCT ADVANTAGES

For the indirect variant, the charge air is cooled by a coolant, which is then re-cooled by external air in a separate low-temperature coolant circuit. The indirect charge air cooler can be located close to the

engine, between the compressor and the throttle valve. Despite its greater complexity, indirect charge air cooling has distinct advantages over conventional direct cooling:

- **Improved packaging:** the Low Temperature cooler required can be made more compact for the same power output, thus opening up critical installation space in the front end of the vehicle. At the same time, the large-volume charge air hoses used for direct charge air cooling are replaced by much thinner coolant lines. This greatly simplifies integration of the engine in various vehicles.
- **Lower pressure loss:** due to its reduced volume, indirect charge air has up to 20 percent less pressure loss. This results in greater density recovery and higher volumetric efficiency in the cylinder.

- **Greater thermal inertia: in case of a sudden change in load, such as under strong acceleration on the freeway, the engine has cooler air available for a significantly longer period of time. This has a positive effect on performance, and is evident in the dynamic responsiveness of the engine.**

For these reasons, and despite the greater complexity of the system, indirect charge air cooling is being used more often, even in high-volume production models.

ALL THE ADVANTAGES AND MORE

In the next step, indirect charge air cooling is shifted even closer to the engine: the integrated indirect charge air cooler is installed in the intake pipe. This eliminates all the charge air lines, and amplifies all the advantages of indirect charge air cooling.

The pressure drop over the shorter charge airline can be reduced by up to 80 percent in comparison with direct charge air cooling. The responsiveness, density recovery and packaging are further optimised. Manufacturing is also simplified considerably by integrating the charge air cooler in the intake pipe. This results, for example, in optimum leak tightness of the system.

In the course of downsizing, charge air cooling will grow in significance, while the share of indirect charge air cooling will continuously increase. The new integrated concept will gain acceptance in the next few years and Behr Hella Service has a comprehensive range to support this growth.

To find out more contact our Customer Service Team on 01295 662400 or email hella.sales@hella.com

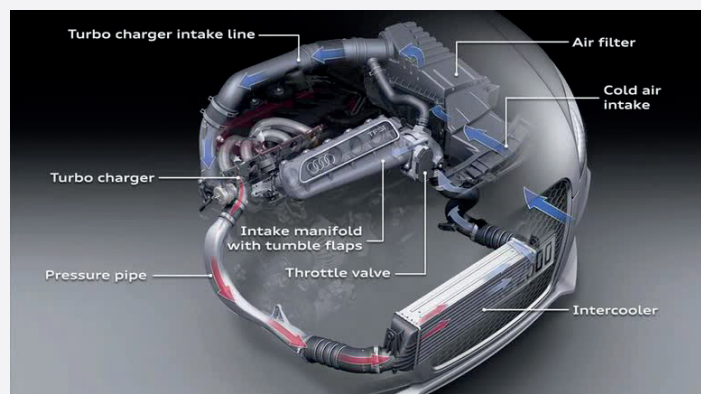


image © VAG Group



Our Premium Line parts will give OE quality for increased performance and service life.

MORE CLARITY WITH PREMIUM LINE

Behr Hella Service is aiming to increase customer choice and demystify our comprehensive thermal management product range by launching a new Premium Line in 2017 that covers 4,500 part numbers, alongside our 'Standard' range of 3,000 part numbers.

In a move that's sure to benefit customers when specifying the right part for their precise needs, the Standard range will continue to provide matching quality for an economic repair, whereas our Premium Line parts will give OE quality for increased performance and service life. And for added ease of use and recognition, distinctive Premium Line branding will appear on all product packaging and catalogues – both printed and electronic.

With air conditioning season upon us, look out for Behr Hella Service's new Premium Line of thermal management parts.



THE IMPORTANCE OF HIGH QUALITY OILS IN A COMPRESSOR

BEHR HELLA SERVICE REINFORCES THE QUALITY OF OIL

As good practice, oil in the air-conditioning system should be refreshed at a service or replaced when the compressor is changed.

Every compressor is pre-filled with oil to stop dirt, debris and moisture from entering the system. Before first fit, the old oil needs to be drained and refilled with a specific formulation and quantity of oil. Technicians should therefore check vehicle manufacturer oil specifications, as the use of low quality oil, the incorrect amount or even the wrong oil could lead to increased wear, premature compressor failure and invalidation of the warranty.

Behr Hella Service offers a comprehensive range of oils, including PAG 46, 100 and 150, as well as PAO oil 68 and PAO oil 68 plus UV. The PAG oil is used by many vehicle and compressor manufacturers intended for the R134a refrigerant, however, Behr Hella Service provides specialised PAG oils, 46 YF and 100 YF, which are suitable for both R134a and R1234yf refrigerants. PAG oils easily mix with R134a and are suitable for lubricating the air conditioning system of most passenger car and commercial vehicle applications. As PAG oils are hygroscopic – absorb moisture – open oil containers must be resealed immediately and any residual oil will have a limited shelf life.

PAO oil 68 and 68 plus UV are high quality oils, which are not hygroscopic and contribute to increasing the performance of the air conditioning system. Moreover, using these Behr Hella Service oils maintains the full warranty entitlement for compressors. While PAO 68 remains mainly in the compressor, where the oil is needed, a small amount of oil also circulates throughout the system because it lightly combines with the refrigerant. The resulting oil film inside the components makes a better seal, reduces friction between the moving parts of the compressor, increases operational reliability and reduces noise, cycle times and energy consumption.

In addition, PAO 68 plus UV incorporates a highly effective contrast agent for UV leak detection, which preserves the oil's positive properties and avoids negative effects on the system components or servicing equipment. It is also suitable as the sole oil for the entire

system, as it can be used in all PAG applications, irrespective of the formulation.

For more information, please call our Customer Service Team on: 01295 662400 or email hella.sales@hella.com

PAG OIL

PRODUCT CHARACTERISTICS

- Fully synthetic, hygroscopic oils based on polyalkylene glycol
- Used by many vehicle and compressor manufacturers for airconditioning systems intended for the refrigerant R134a, this oil is available in a variety of viscosities
- New special PAG oils 46 YF and 100 YF, both suitable for refrigerants R1234yf or 134

PAO OIL 68 AND PAO OIL 68 PLUS UV

PRODUCT CHARACTERISTICS

- **Not hygroscopic:** unlike other oils they do not absorb moisture from the air
- Can also replace the different PAG oils currently used (observe usage overview!): You now only need to stockpile one oil instead of three
- Has already been successfully used for 15 years
- Contributes to an increase in air conditioning performance No adverse effects on components of the air conditioning cycle (also applies to use in air conditioning service stations / confirmed by manufacturer using the sealed tube test compliant with the ASHRAE 97 standard)
- This oil is available with (PAO oil 68 Plus UV) or without (PAO oil 68) an added contrast agent
- Using PAO oil 68 and PAO oil 68 Plus UV in compressors from Behr Hella Service maintains your full warranty entitlement.

FIND THE RIGHT OIL QUICKLY AND ON THE GO



iTunes



Google Play

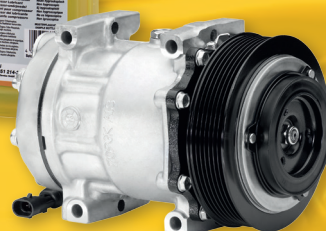


To assist with the varying filling quantities for the PAG and PAO oils, Behr Hella Service's free compressor app, which is available to both iOS and Android users, provides garages with accurate quantities of refrigerants and oils, making it easier and safer for the technician to service a compressor.

THE PERFECT MATCH



Order a compressor and receive a FREE bottle of PAO 68 UV Plus oil*



*Offer available while stocks last

STRENGTHEN YOUR POTENTIAL

Become a thermal management expert



BEHR HELLA SERVICE

ADVANCED TRAINING ACADEMY

REGISTER YOUR
INTEREST AND WIN
A HUSKY 1000 A/C
SERVICE STATION
WORTH OVER £2000!
TURN TO PAGE 22
FOR DETAILS



Knowledge is power. HELLA's focus is on you and your skills to ensure you stay one step ahead.

FREE to join

- Practical Courses
- First Class Technical Support
- Regional Training Centres
- Regular Product Updates
- Approved Network Membership
- Future Proof Your Business

APPLY TODAY!

STRENGTHEN**YOUR**POTENTIAL.COM





In Association with


BEHR HELLA SERVICE
 ADVANCED TRAINING ACADEMY

WIN A HUSKY 1000 A/C SERVICE STATION FOR YOUR WORKSHOP, WORTH OVER £2,000!

To enter simply register your interest in the Behr Hella Service Advanced Training Academy and you will be entered into a prize draw for the chance to win one of the latest HUSKY 1000 Air Conditioning Service Stations for your workshop, worth £2,250!*

For more information on the Behr Hella Service Advanced Training Academy and to register your interest please visit strengthenyourpotential.com

HURRY! The Prize Draw closes 31st August.
The winning entry will be announced on 1st September! GOOD LUCK!

* Terms & conditions apply, see website for details.

The HUSKY 1000

The HUSKY 1000 is a compact and portable fully automatic air conditioning service station for R1234yf refrigerant, ideal for mobile AC technicians. Competitively priced yet packed with a range of useful features, the HUSKY 1000 offers excellent value.

It's quick and easy to use – simply select the vehicle from the wide range of passenger cars and commercial vehicles within the integrated database, connect the service hoses and open the high and low pressure valves. The HUSKY 1000 will do the rest and an audible alert notifies the user when the process is complete.

The HUSKY 1000 features electronic scales for refrigerant and oil, and an easy scale locking system for mobile applications. An optional printer and a range of other accessories make the HUSKY 1000 easily upgradable.

KEY FEATURES:

- Compact and portable air conditioning service station for R1234yf refrigerant
- Compatible with a wide range of passenger car and commercial vehicle models
- User-friendly operation

MEET THE TEAM...



Matt Jarrett

Matt Jarrett, HELLA Employee of the Year 2016

Throughout the year, HELLA employees nominate colleagues who have gone above and beyond their call of duty. In 2016, Matthew Jarrett, was presented with the Employee of the Year award.

1. Where do you most want to travel, but have never been, and why?

I would like to go on a cruise, anywhere hot... or just travel the UK coastlines, great places to visit.

2. What does your perfect day look like, other than working at HELLA?

I like spending time with the family, days out, chilling out at home.

3. What would be your specialist subject on mastermind?

I love watching movies old and new, so movies it would have to be.

4. What do you enjoy most about your role?

We have such a wide range of products, I enjoy the technical calls, I like a challenge.

5. Who would you want with you if you were stranded on a deserted island? And why?

Wow! It would be Angelina Jolie, just for her great personality and sense of humour????????

6. Would you rather watch sports or play sports?

I cannot even run a bath so any physical sport is out. So watch sport it is!!

7. What does a typical work day look like for you?

Fast paced, busy, challenging. Hands on.

8. How did it feel winning Employee of the Year?

Over the moon, a great honour to win it... Everybody at HELLA works so hard, they all deserve it!



Michael Bennion

Michael Bennion, Asst. Warehouse Manager

1. Where do you most want to travel, but have never been, and why?

America, extremely varied and there's so much to see.

2. What does your perfect day look like, other than working at HELLA?

As a bass player in a band, doing a concert in front of 1000's of people.

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

A few to be honest, notably half of Led Zeppelin, Jimmy Page and Robert Plant.

4. What do you enjoy most about your role?

Problem solving, trying to find new ways of doing things that can improve our service for both ourselves and our customers.

5. Who would you want with you if you were stranded on a deserted island? And why?

A raft making expert.

6. What does a typical work day look like for you?

The inside of a warehouse.

WELCOMING NEW MEMBERS...

Meet the new recruits to the HELLA family. We have 4 new faces joining the company...



Bryan Knott

BRYAN KNOTT, Head of Commercial Vehicles. Bryan has worked in the industry for more than 30 years and is a well-respected member of the aftermarket, after having central roles with several blue chip manufacturing companies. Bryan is continuing his career progression by returning to the company in a new position as Head of Commercial Vehicles, a particular area of specialism for the business.

MARK ADAMS, Head of Product Management. Mark joins HELLA after being the UK and Ireland sales manager for Trico Europe. He has been in the aftermarket for many years and brings with him considerable knowledge and experience across many product sectors.



Mark Adams



Riccardo Sorano

RICCARDO SORANO, Business Development Manager - Garage Equipment, South West & Wales. Riccardo joined in February from a stint as Regional Trainer and Business Development Manager for Euro Car Parts.

BARRY ROBINSON, SOE Quality Engineer. Barry is an experienced Quality professional returning to HELLA having previously worked for Hella Manufacturing for approximately 18 years.



Barry Robinson



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 45,000 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 service team on 01295 662400 or email hella.sales@hella.com

hella.sales@hella.com

BEHR 
S E R V I C E

 **GUTMANN**
S O L U T I O N S

sonne