



Automotive
Parts Distribution Ltd

SMART CHOICE

ISSUE 71 • NOV - JAN 2023/24

THE SMART CHOICE FOR TODAY'S TECHNICIAN!

"Dashing through the snow..."

bringing car parts to your door, with the best deals here in town, and so much stock in store.

A treat is yours to enjoy, when you spend £50 or more today.*

Oh, what fun you'll have, with our chocolate giveaway."



*T&C's - Promotion starts December 1st. Receive a free chocolate grab bag when you spend £50, or more, on one invoice during the promotional period, whilst stocks last. Grab bag varieties will vary. We reserve the right to end or withdraw this promotion at any time without notice.

IN THIS ISSUE

125 YEARS
OF BRAKING
EXCELLENCE
WITH FERODO



FIND & FIT. FAST!
WITH YUASA



ADVANCED START
STOP SYSTEM
OVERVIEW FROM
HELLA



ABINGDON: 01235 424 319 BATH: 01225 424 221 GLASTONBURY: 01458 832 915
HIGH WYCOMBE: 01494 321 636 MAIDENHEAD: 01628 561 368 NORWICH: 01603 486 020
READING: 01189 110949 SWINDON WESTMEAD: 01793 821 715 EXPORT: 01777 700 075



Automotive
Parts Distribution Ltd

FERODO®

ENHANCING THE EXPERIENCE OF REPAIR PROFESSIONALS

FERODO®, DRiV Motorparts OE braking brand, is committed to helping workshops capture EV brake service opportunities

Wind the clock back 125 years. British industrialist, Herbert Frood invented brake pads when he produced the first materials designed to stop horse-drawn carts loaded with quarry stone in the Derbyshire Peak District.

**125
YEARS
OF BRAKING
EXCELLENCE**

FERODO®



Today, his legacy, Ferodo brake pads are OE fitted on almost 25 million vehicles per year. This seal of approval gives confidence to independent workshop owners, technicians and fleet professionals looking to restore like-new braking performance.

Driven by an enduring commitment to R&D, Ferodo scientists and engineers at dedicated research centres in Chapel-en-le-Frith, UK and Bad Camberg, Germany continue to explore new material formulations, pad designs and other innovations that enhance stopping power, minimize noise and dusting, and extend pad and disc life. These targets help keep every brake product in step or beyond fast-changing OE specifications.

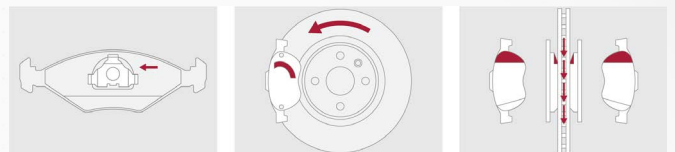
Each innovation, whether significant – such as noise-reducing radial chamfers designed to meet the unique demands of each corresponding vehicle model – or seemingly minor, such as improved printing on the pad backplate, shares the goal of enhancing the experience of repair professionals to help them demonstrate their expertise and value in every job.

Among many recent pad improvements are:

- **Chamfered directional brake pads:** The addition of a parallel transitional surface at the leading edge of directional brake pads helps eliminate uneven wear and reduce noise.



- **Metal shim with cut-out:** This new shim material and half-moon-shaped cut-out allow the caliper piston to contact directional pads at an optimal angle for reduced noise and more consistent wear.
- **Directional arrow on backplate:** The printed arrow helps technicians install directional pads in the correct position, avoiding costly comebacks.



ASK A GURU

Garage Gurus is the technical support service behind the FERODO brand, designed to help provide the skills, training and knowledge that are required to efficiently complete



quality repairs, optimise customer satisfaction and reduce warranty claims. In the last 12 months, its team of experts has delivered training to over 40,000 people and helped solve 15,000 issues for customers.

SCAN TO GET MORE

By scanning the QR code on a Ferodo box, technicians can access a menu of Garage Guru services including 'on-call' telephone support along with a range of free content that includes installation guides, technical tips, diagnostic videos and 100+ learning courses.

Importantly, scanning the QR code also confirms that the part is a genuine product, providing the reassurance that you are fitting quality, safe, and extensively developed parts to a customer's vehicle. Should the QR code reveal that a part is a counterfeit, the user will see a page where they are able to report the issue directly.



Technical and training content is continually updated in line with customer feedback and the expert insight of the Garage Gurus master technician team, who use their industry knowledge to identify trends and emerging technologies that may affect mechanics in their everyday roles. For instance, the subject of electric vehicle maintenance is one that they may require assistance with, and the Gurus have developed extra material to better support the needs of technicians in this subject area.

OE DNA - FACT: Ever since the Austin 7 rolled off the factory floor in 1922, we have been dedicated to Original Equipment (OE) braking power. And that dedication shows: today 1 in 4 new cars leaving the factory stops with us. We are the OE choice for nearly 25 million vehicles a year.

Factory fitted as Original Equipment to: - Abarth, Alfa-Romeo, Audi, Bentley, BMW, Buick, Cadillac, Chrysler, Citroën, Dacia, Fiat, Ford, GM, Hyundai, Isuzu, Jaguar, Lamborghini, Lancia, Land-Rover, LDV, Maserati, Mazda, Mercedes-Benz, Mini, Mitsubishi, Nissan, Opel, Peugeot, Renault, Seat, Skoda, Smart, Tesla, Toyota, Volkswagen & Volvo.



CD Shock Absorbers

Original equipment quality

Manufactured to ISO and TUV standards

Advanced Technology

Advanced Nitrogen gas-charged technology

Comprehensive range

500+ references covering all popular cars and light commercial vehicles

2 year warranty

Aftermarket prices



CD Coil Springs

Original equipment quality

Made to ISO and TUV standards

OE specification steel

The latest in OE-specification spring steel to ensure strength and integrity

Advanced protection

Coatings to protect against corrosion

Comprehensive range

500+ references, all popular vehicles

2 year warranty

Aftermarket prices



ROTATING ELECTRICS POWERING PROGRESS

Rotating electrics have evolved significantly in recent years, with the development of integrated Starter/Alternator units, replacing the traditional separate Starter and Alternator model.



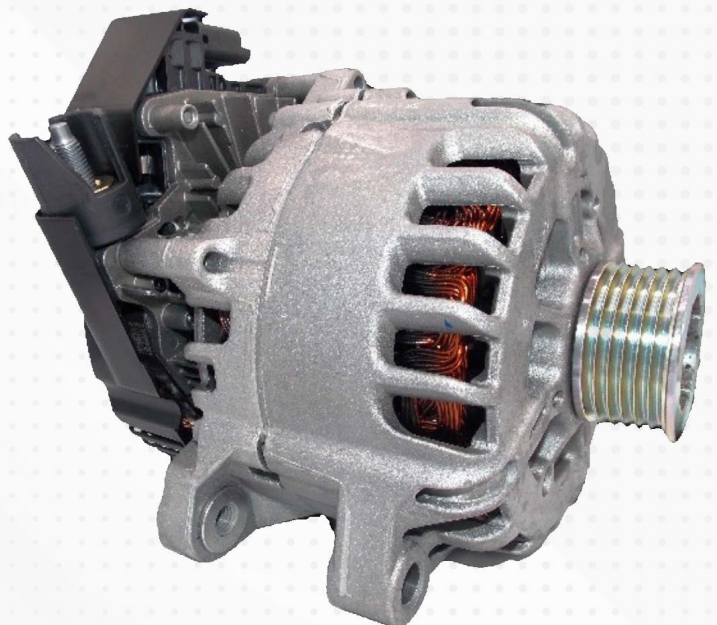
Integrated starter/alternator systems are now able to produce anywhere from 5–20 kW. This substantial increase in available electric power enables many new luxury, performance, and convenience features, providing 'on-demand' power, where and when it is required. The combination of mechanical engineering, computer aided design, and modern electronics enables vehicle designers to re-engineer and replace traditional mechanically driven components with electric units. Any accessory that is belt-driven can be powered by an electrical equivalent, such as water pumps, power steering systems and even AC compressors. This has created the need for more power output from the vehicle charging system, which the higher power integrated starter alternators are able to provide. Another feature of these units is the reduction in noise when starting the engine, especially on vehicles equipped with start-stop, as the engine is turned via the belt, as opposed to a traditional mechanical starter motor. These systems also increase the starting speed of the engine, improving efficiency and driver comfort.

An added bonus is that these systems are generally lighter, or around the same weight as a separate starter and alternator design, which is crucial in modern vehicles to comply with ever-demanding emissions targets.

Founded back in 1998 by the current MD, John Boyes, Autocharge originally specialised in the remanufacture of starters and alternators.

In 2015, they made the decision to phase out remanufactured units and supply only new ones. Removing all the remanufacturing equipment and old core storage enabled Autocharge to create more space, increasing their stocking capabilities to satisfy the demands of a rapidly growing customer base. They now keep an impressive 6,000-plus part numbers in their range and pride themselves on being able to obtain and stock many OEM units for later model applications.

So, in summary, when you buy an Autocharge unit from us, it's brand new, high quality and is ISO9001 and BER14001 certified.



**AA7908 : COMBINED STARTER /
ALTERNATOR FITTED TO VARIOUS
MAKES AND MODELS, E.G. CITROEN, DS,
FIAT, PEUGEOT, TOYOTA & VAUXHALL**

FITS MEDIUM SIZED CARS, SUV's & LCV'S



REVIVING EXCELLENCE: INSIDE CARWOOD'S PRECISION-DRIVEN TURBO REMANUFACTURING PROCESS



As an approved turbo supplier to the likes of Jaguar Land Rover, Mitsubishi, Perkins, CAT, Isuzu, Agco and the Ministry of Defence, quality is built into every stage of Carwood's remanufacturing process; a process which it likens to the production of the original component – the only difference being that it returns a used part to its original condition, instead of producing a brand new one. Carwood tells you how...



It all starts with the old part, the core. On receipt at its turbo facility in Nottinghamshire, each unit is carefully assessed, to ensure its suitability for remanufacturing. After all, having good core at the start, is key to ensuring a quality finished product at the end. Any products with housing damage, stress fractures, cracks, high levels of corrosion, evidence of chemical attack or other contamination are rejected. Electronic, pressure or vacuum actuators are fully checked too.



Once selected, the unit is stripped down – each component part is individually inspected with only suitable cast housings and non-wearing machined parts passed on to the multi-stage cleaning process.



All reusable components undergo a solvent/bio wash, hot wash and torrent wash, along with aluminium oxide, glass bead, and in some cases, steel shot blasting of the turbine housings. During the cleaning process, technicians take care to ensure the critical faces are always protected. At the end of the cycle the cast iron, turbine and bearing housings are treated with rust inhibitor.



After cleaning, the components are inspected once again to ensure they meet the original specification and tolerances. This includes a full surface visual inspection, crack detection and measurements. All mating faces are machined or finished to give a superior and flat finish. Cast housings are sprayed with a second rust inhibitor for added protection.



Carwood trained technicians then start the process of putting the units back together again, replacing all wearable parts with like-for-like OE. Over 95% of Carwood turbos are fitted with a brand new central housing rotating assembly (CHRA). Others have new journal and thrust bearings, piston, retaining and O-rings, and shaft nuts, replaced as standard. CHRAs are balanced using a vibration sort rig (VSR) to minimise vibration and assembled into the turbine and compressor housings, along with the other components.



Of course, no product will leave its factory, until it has gone through the same demanding test schedule as the OE product. Variable vane turbochargers are mounted and tested on either a Turbo Technics Vane Test Rig (VTR) or G3 Power, where the actuators and variable vanes are set and calibrated to OE specification for optimal performance when fitted to the vehicle.

Finally, calibration anti tamper paint is applied to external fastenings, shaft and actuator set nuts. The now good-as-new turbo is visually and physically checked one last time, apertures are sealed with protective caps, and the units are packed in rust proof, thermally sealed bags, along with gasket and fitting kits - ready to be delivered to you.

Through this meticulous, OE-driven approach, Carwood can be sure that every one of its remanufactured turbos has been returned to the VM's original factory specification. Providing a same-as, or even better-than-new product, with a same-as-new warranty, that's kinder to the environment, and your customer's wallet.

Ball Joint Production and Structure

Guiding you through every twist and turn in the road



The ball joint is a critically important part of every vehicle's suspension system. This vital multi axial-connecting component is a feature of most control arms, stabilizer links, tie rod and tie rod ends. Its purpose is to be the connecting point to the vehicle's steering and suspension system to the road wheels. The spherical ball pin and socket design of the ball joint enables the suspension to travel up and down as the road surface conditions continually change, as the vehicle is driven through the twists and turns of the road. febi ball joints are produced with high quality materials, in accordance to the original equipment standards, for optimum performance and durability. This ensures accurate wheel alignment, eliminating suspension noise and improving chassis handling.



Casting/housing

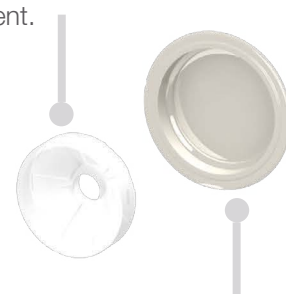
The ball joint housing is designed precisely to meet the load and function requirements of each application. This can be as a suspension ball joint - bolted or riveted to the control arm - or where a ball pin is pressed into the ball joint housing and fixed on one side across the geometry of the ball joint. The other side is secured by a retaining ring, or as a built-in ball joint (used in many forged and cast control arms and links).

Clamping rings

Spring steel clamping rings ensure the security of the rubber boot - supporting the static and dynamic sealing areas of the ball pin.

Acetal bearing

Polyoxymethylene (also known as acetal, polyacetal or polyformaldehyde) is an engineering thermoplastic used in precision steering and suspension parts, which require high stiffness, low friction and excellent dimensional stability ensuring smooth axial movement.



Steel cap

To finalise the assembly of the ball joint components, the steel cap - which is resistant to impact and corrosion - is sealed in place by a rolling process applied to the edges of the ball joint housing, protecting the parts inside.

Ball pin

febi ball pins are manufactured in line with the original equipment specification, meeting the required load demands of each steering and suspension joint. The light alloy steel used has increased wear resistance, surface hardness and service life - through creation of a hardened surface layer while maintaining an unaffected core microstructure. This produces a ball joint which is harder, stronger and safer - resulting in the required strength for the safety of the driver and passenger/s; achieving greater vehicle agility, stability and driving dynamics.

Protective rubber boot

The Chlorophene rubber boot is one of the most important components of a ball joint. The boot ensures that the ball joint assembly is protected against moisture, road debris and is resistant to heat, oil and weathering from the direct effects of sunlight. It is able to seal the joint in every position of the ball pin and at any angle of deflection.



SOLUTIONS
DRIVEN BY YOU

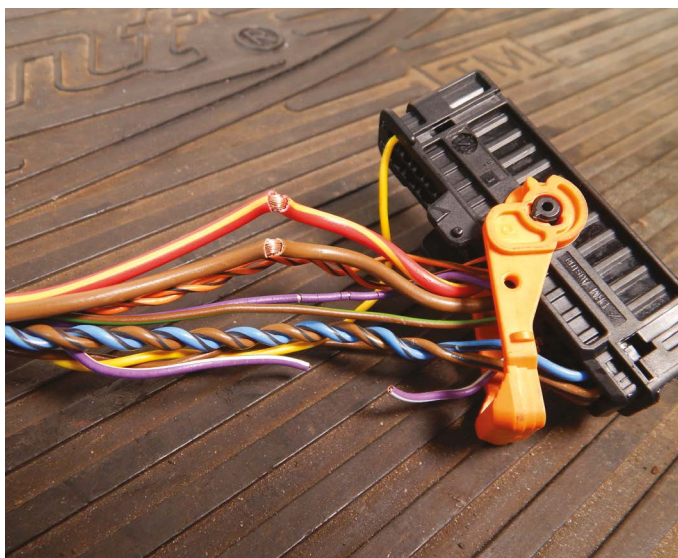
www.febi.com

Rely on tested OE matching quality spare parts from febi. The entire range of ball joints can be found at: partsfinder.bilsteingroup.com.

bilsteingroup®

Loss of Communication

Wiring Harness Repair for the Skoda Yeti



Diagnosing electrical faults can be challenging, but with the right tools, information, and knowledge, a fault can be tracked down and repaired. All vehicles have many built-in management systems which monitor and act on the information to make the vehicle safe, economic, and comfortable including many features which we think of as standard. The featured vehicle is the popular Škoda Yeti. The owner reported having issues with the right-hand rear door not locking and the electric window not working.

After carrying out the initial check of all the door functions, it was confirmed that the central locking or door window controls were not operating in the right-hand rear door. Once the fault was established, information was checked to see how the central electric system worked. Each door has a control unit fitted which regulates the functions within the door. These control units are linked to each other from rear door to front door. These are then connected to the vehicle's central electrics control unit.

First, it was necessary to check if there were any fault codes logged. As suspected, a fault was recorded for the door control module: "right, rear, no signal / communication". This confirms that the control module was not functioning correctly, but why? Was this a case of a faulty control unit? It is very easy to replace a part based on a fault code description. However, it makes logical sense to confirm all findings before ordering any parts.

After the right rear door trim panel was removed, the 20-pin connector was identified at the control unit. This required testing before condemning the control unit. Terminals 18 & 19 are the power supply and terminal 30 is ground. These were checked and load tested and found to be in good working condition. However, testing the Local Interconnect Network (LIN) bus communication between the front door control unit and the rear at terminal 10 with an oscilloscope revealed that there was no signal.

LIN is a low-speed, single-wire serial data bus used to control low-speed, non-safety-critical functions on a vehicle, especially windows, mirrors, door locks, etc. In this case, there was a loss of communication between the rear door and the front control units.

After removing the right-hand front door trim panel and checking the wiring, the fault was found to be a broken wire between the 'A' pillar and the door. All wiring looms that connect between the vehicle's body to the doors – or any other hinged point – are subject to a lot of movement, bending, and stretching to the point where the insulation cracks, therefore exposing the copper wire. This can lead to an open or a short circuit in the system.

With the fault identified, the option was to either repair or replace the wiring loom. A febi wiring repair kit was chosen, which comes supplied with a new multi-plug, connectors, and enough new

silicone insulated wire to cover vehicles fitted with all options. The silicone insulation is more resistant against thermal stress and stays flexible at any temperature. This flexibility helps to prevent cable breaks in the future. The wires are tinned and are extra fine, making them more flexible and prevents corrosion for a reliable repair. Each wire was cut to size and the insulation stripped. Then, the joining connector was crimped into position, attaching the original loom to the new wire. After crimping, the crimp connector must be shrunk with a hot-air blower in order to prevent moisture from penetrating.

Note: During each repair, ensure that the crimp connectors are not positioned immediately next to each other if there are multiple wires to be repaired. Arrange the crimp connectors slightly offset to ensure that the wiring loom does not become too big. When repairing CAN bus lines, they must have the same length when undertaking the repair and no cable piece should be longer than 50mm without twisting the cables.

After successfully joining all the wires and allocating them to the correct positions within the multi-plug, fabric insulation tape (107140) was applied to hold the loom together before being refitted to the vehicle. With the repaired loom fitted, the integrity of the LIN communication was checked for a good quality signal followed by the clearing of all fault codes and testing of the door functionality.

All of the vehicle's interior trim was refitted and the vehicle was ready to be handed back to the owner. Making this an economic repair, as there was just one part of the cable broken, there was no need to replace the complete wiring harness.

Rely on tested OE matching quality spare parts from febi. The entire range of wiring repair kits can be found at: partsfinder.bilsteingroup.com.

 SOLUTIONS
DRIVEN BY YOU

www.febi.com

bilsteingroup®



WATER PUMPS

ENGINEERED TO OUTPERFORM.

Guaranteed to match or surpass OE Quality.

#**BESTUNDERPRESSURE**

 ENGINEERED
IN GREAT BRITAIN



ENGINE TEST RIG SIMULATING REAL LIFE MOVEMENT.

Each BGA Water Pump is thoroughly tested on bespoke built engine simulation rigs to strict Quality Control standards before release to the market. Highlighted here, is endurance testing of the bearing used in Water Pumps - one of the most important elements.

Excessive vibration can cause catastrophic issues else where in the pump. The Mechanical seal & in some cases belt damage can occur from this fault mode.

From rigorous testing, BGA have identified OE faults and re-engineered the BGA pump to avoid premature failure.

www.bgautomotive.co.uk

4BG
GROUP



made for mechanics

Driving to make oil selection simpler and safer for mechanics

The adoption of manufacturer-specific engine oils is a response to evolving engine technology being guided by environmental regulations.



Each vehicle manufacturer may take a different approach to the construction and materials used in its engines, influencing what type of oil is required. In simple terms, modern engines require modern, OEM approved, high-performance engine oils.

Why choosing the right oil matters

Topping the list is engine performance. The correct oil for a vehicle needs to not only properly lubricate engine parts but also reduce friction and wear and tear. In contrast, choosing the wrong oil could result in reduced power output, decreased fuel efficiency and sluggish acceleration. The engine may also not operate at its optimal temperature and efficiency, leading to decreased overall vehicle performance.

You are also at risk of oil leaks, which can damage engine components, create safety hazards and result in unwanted mess.

Also, incompatibility between the oil and the engine can lead to sludge and deposits forming, clogging vital engine components and reducing efficiency. If that's not challenging enough, selecting an oil that doesn't meet the manufacturer's specifications could potentially void a vehicle's warranty, resulting in expensive repair bills.

Comma oil is made for mechanics

By choosing Comma Performance Motor Oil, you can rest assured that your purchase is original equipment manufacturer (OEM) approved and has

undergone extensive testing to ensure full compliance. Choosing the right motor oils and lubricants for vehicles is essential to ensure optimal performance, longevity, and safety.

Workshops can research product recommendations through **commaoil.com**, which are supported by Comma's 100% Compatibility Guarantee promise.

Simply input a registration number, or search by make and model, to find the perfect product profile for that vehicle. These factors provide significant benefits for garages and workshops, as they allow them to use Comma oil in their customers' vehicles with complete peace of mind.

For vehicle-specific product recommendations, scan the QR code or visit our website.

commaoil.com





**VEHICLE
ELECTRONICS**

WHAT'S AT THE HEART OF EFFECTIVE ENGINE MANAGEMENT?

Increasingly complex engine designs require constant monitoring and measuring to ensure engine management systems are optimising performance. Engine sensors and valves are central to fulfilling that function. That's why when dashboard warning lights appear and fault codes are identified examination of the various sensor functions will often be the first port of call in spotting the underlying issue, because no matter how complex things may get between wiring looms and actuators, it all starts with sensors.

It probably comes as no surprise to the technician that Niterra's range of NTK sensors and valves has continually expanded to meet the needs of today's ever more complex engine management systems.

In addition to our world leading range of Lambda sensors, NTK offers a one stop solution that includes NOx, EGT, MAF/MAP, Camshaft and Crankshaft sensors and more recently Exhaust Gas Recirculation (EGR) valves too.

So now when a sensor replacement is identified as the potential solution to the issue, NTK has made the job simpler with an extensive range of OE quality sensors from the name you, and most of the world's car manufacturers know and trust.



FOCUSSING ON EGR VALVES

One of the biggest challenges for the EGR valve is soot deposits which can cause unstable idling, hesitant pick up, insufficient power and of course illumination of the engine management light. If any of the above characteristics are being experienced then it's worth checking for the following:

- ☒ Clogged air filter
- ☒ Defective MAF/MAP sensor
- ☒ Defective injectors
- ☒ Worn spark plugs or damaged glow plugs
- ☒ Abnormal oil entering the combustion chamber (e.g. worn valve guides or cylinders/rings or via the turbocharger) can also be the cause of rapid clogging of the EGR valve
- ☒ Oil vapour produced during combustion can also lead to very rapid build-up of carbon in the EGR valve.

Another factor worth bearing in mind when assessing possible causes is how the vehicle is being used. Repeatedly driving short distances could be an underpinning factor so it's always worthwhile asking the question.

Optimising performance of the engine management system delivers tangible benefits for the vehicle owner including improved fuel economy and reduced emissions. The kind of tangible benefits that every customer appreciates. That's why putting NTK sensors and valves at the heart of engine management will always pay dividends.



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Niterra UK Ltd YouTube



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Niterra UK Ltd



ngkntk.com/uk



IGNITION
PARTS

READY. STEADY. GLOW!

NGK glow plugs are renowned for their fast start, reliability, and ability to perform in the most arduous conditions... and with the changing and extreme weather that reliability spells customer satisfaction.

As an indispensable part of the exhaust and emissions system, they are essential for maintaining low emissions and play a part in preventing the clogging of the exhaust gas recirculation valve and even help with the regeneration cycles of the diesel particle filter.

Niterra UK, home of the market leading NGK portfolio says glow plug replacement should be part of the winter service and recommends that instead of changing one faulty glow plug at a time, workshops should look out for their customers by recommending a full set be replaced.

If one plug has failed, it is extremely likely that the remaining plugs will suffer a similar fate shortly after, not only because the amount of wear will be similar throughout the set but that a struggling glow plug can be further stressed by the high performance of a brand-new glow plug.

By replacing the full vehicle set the customer can see and feel the benefits straight away-starting and cold drive quality will be kept at optimum operation, fuel efficiency can immediately improve, and the customer will save what could be multiple trips to the garage.

GLOW PLUG TIPS

Removal and fitting

As glow plugs are often installed in engines for many thousands of miles, they can be difficult to remove sometimes. If there is doubt that a glow plug can be removed without damage, then if accessibility, circumstances, and time permits, apply a penetrating oil around the glow plug and then a squirt of engine oil. The vehicle should continue to be used and tackle the job another day shortly after to allow the oil to penetrate and do its work.

When it comes to glow plug replacement it always pays dividends to play it safe

NGK original equipment (OE) glow plugs:

- ✓ Start diesel engines quickly
- ✓ Offer an excellent post-glow function
- ✓ Have a long service life
- ✓ Offer the latest technology

Remove the glow plug whilst the engine is still hot, following your work place's health and safety precautions to protect your hands from high temperatures.

To avoid damage to a new glow plug, follow the installation advice on the NGK packaging. Always install onto the taper seat by hand and do not over tighten the glow plug - or the terminal if the electrical connection is secured via a nut.

Why you should fit-OE specification glow-plugs

Avoid budget alternatives as the engine management system can quickly detect the performance is not within the correct parameters for the application, leading to a range of fault symptoms for the vehicle owner.

All NGK glow plugs are engineered to match or exceed OE specifications. It pays dividends to choose our OE quality glow plugs for an aftermarket service to ensure the fitting and performance is the correct specification to the vehicle.



THERMAL MANAGEMENT EXPERTISE AND PRACTICAL SUPPORT FROM NISSENS

Nissens Automotive (Nissens) has decades of thermal management experience and has therefore developed a comprehensive engine cooling range alongside its air conditioning (AC) programme, all of which are manufactured to Nissens Genuine Quality standards, to provide workshops with premium grade replacement parts, which operate to the same performance levels as the original and so give them an aftermarket solution they can depend on.



Every vehicle powered by a combustion engine, and that therefore includes hybrids, needs effective thermal control of the engine, which means not only cooling to prevent overheating, but also the quickest possible build up in temperature to reach and then be maintained at the optimum level.

Naturally, the combustion process causes very high temperature ranges, exposing the engine's block and its equipment to extremely high thermal stress. Furthermore, turbocharged combustion systems also need

sufficient air cooling to obtain the right charge performance, and manual gearboxes, as well as power transmission units, all need active thermal management to ensure each component is operating at its design temperature to ensure the optimum performance of the whole powertrain.

To achieve these sometimes conflicting objectives increasingly requires electrical sensors, which itself reflects the growing number of electronically controlled components utilised in modern vehicle design. As a result, Nissens

added engine coolant and oil temperature sensors to its range of thermal management solutions and these introductions mirror the company's ongoing focus on vehicle electrification and follows its launch of high voltage AC compressors, E-actuated turbochargers, EGR valves, fans, fan clutches, blowers and electric water pumps, in its electrified parts portfolio.

Naturally, precise product identification, technical information, along with detailed drawings and complete pictures, as well as further information,



such as sensor type, thread size and connection shape data, is easily accessible via the Nissens online catalogue, which also contains imagery of each part.

Sensors are, however, only part of the story, as components as diverse as radiators, oil coolers, fans, expansion tanks, water pumps all play their part in the thermal control side of engine management, which is why, for the past nine decades, Nissens has been dedicated to deliver a comprehensive product range to the automotive engine cooling system.

It is the radiator, however, that is the most crucial part of the cooling system, as ultimately it is the component that protects the engine from excessive heat and ensures its optimal performance. Therefore, only a replacement

product of the correct design and highest quality is able to undertake this role effectively for the long term, and it is Nissens that independent workshops can rely on to provide just such a solution.

In common with the many other products in its comprehensive range, Nissens radiators are developed, manufactured, and thoroughly tested to the Genuine Nissens Quality standards previously mentioned. This not only ensures the radiator is of premium quality, but it is also an easy product to install, provides excellent thermal performance and will deliver reliable operation for optimal engine thermal control, over the long term.

The company's technical knowhow, manufacturing experience and deep insight

in thermal systems mean that it is flexible and able to meet the emerging market needs and can supply a wide range of premium quality engine cooling components.

Finally another huge benefit for workshops is that the impressive Nissens product portfolio of more than 4,500 parts, covers everything from the fast moving to the more exotic brands from European, Asian and American vehicle manufacturers, with in excess of 17,700 OE numbers, encompassing radiators, intercoolers, cooling fans, water pumps, oil coolers, expansion tanks, fan clutches and now, temperature sensors.

TRAINING

To further support the independent sector to be profitable at all levels, Nissens offers education in various forms, from live onsite sessions, through online self-learning courses, to technical marketing materials in both print and digital formats. It has also further expanded its training concept (NTC), an educational solution for automotive professionals in the field of air conditioning, engine cooling, efficiency, and emissions, to leverage their technical skills, with a series of free live webinars conducted by their product specialists. In addition to receiving a huge amount of knowledge, participants may engage in Q&A sessions and share their experience. Nissens also offers free online training through its portal at: ntc.nissens.com

YUASA WARNS WORKSHOPS MIGHT BE FITTING THE WRONG BATTERIES TO VEHICLES OVER WINTER

Yuasa are highlighting the risks of using general battery lookup systems to find replacement vehicle batteries. The battery brand, manufactured by GS Yuasa, are recommending workshops refer to their industry-leading online trade lookup tool, fit.yuasa.com, to avoid serious issues caused by incorrect application.



Battery replacement is no longer a simple task. Fitting the wrong one to a vehicle can lead to damaging consequences, usually resulting in breakdown and a very short battery service life.

Furthermore, batteries fail more in winter than at any time of year so the likelihood of seeing battery related failures in the garage is much greater. Therefore, it is even more important to make sure the right battery is fitted, to avoid any extra costs of getting the vehicle back into the workshop and also having an unhappy customer because they couldn't get away for their Christmas break!

With modern day vehicles becoming ever more complex, most new models use next generation start-stop technology and are produced with a vast array of specification options. Many will have additional auxiliary batteries to accompany the main starter unit. Although there are many different lookup systems accessible to workshops, most cannot account for these multiple variables.

First launched in 2012, Yuasa's trade battery lookup website is the original and most comprehensive solution available. It accounts for all these different factors. That is why it's the most accurate, trusted, and well-used system in the industry.

When searching on most other battery lookup systems, the results can show multiple and dissimilar choices for a vehicle. Users can be presented with an array of different specifications with no obvious correct suggestion, causing uncertainty. These confusing results may lead to doubt and incorrect batteries being fitted, resulting in complications and premature failure.

With fit.yuasa.com, users are guaranteed to find the exact battery on every occasion, helping technicians save valuable

time and money, whilst boosting their own customer service and reputation.

This is primarily due to GS Yuasa's unrivalled database which is updated daily by dedicated technicians. Furthermore, the manufacturer works with garages to obtain feedback on inaccuracies in the data. Together this makes fit.yuasa.com by far the most accurate lookup tool in the industry.

James Douglas, European Group Marketing Manager said: *"There are many ways to find the right battery, but none are as accurate as ours. Since its launch in 2012, we've helped over 350,000 mechanics and technicians all over the country save time and money by finding over three million batteries."*

Our online trade battery lookup has by far the most comprehensive database in the industry, with over 100,000 unique vehicle models listed. We urge all garages, distributors, technicians and mechanics to proactively use our lookup system to prevent unnecessary battery related failure due to the wrong battery being fitted.

Finding the right battery is just the start though, once correctly found, users can download detailed fitting information. Data such as battery location on the vehicle, accurate fitting times and location of on-board diagnostics (OBD) if appropriate. This is complemented by full OE level step-by-step fitting instructions that can be printed for convenience. Garages can additionally use the online fitting system to help with customer quotations and other enquiries."

Yuasa's powerful system is extremely user friendly and ultra-fast. The system is completely free to use and can be accessed online at fit.yuasa.com or simply by pushing a Yuasa USB Smart Button.

Find & fit. Fast! with Yuasa's online trade battery lookup system today. Visit fit.yuasa.com



Wiper Blades

Prepare for any weather with Bosch wiper blades

The story of Bosch wiper-blades began in 1926 when the first electric wiper system was launched. Since then, constant innovation has resulted in a comprehensive and diverse product range which offers a solution for almost every vehicle. Many years of experience in development and production make the difference. The result is reliable performance and a high level of safety, in any weather.

Development, production and quality tests:

Development and innovation

High comfort, pioneering design

- All components are developed in a vehicle specific manner and the wiper system is adjusted down to the last detail by means of latest tools
- At the wind tunnel, Bosch tests e.g. different wind conditions and speeds

Large-batch production

Special Bosch rubber compound received numerous awards

- Consistently high series-production quality of the rubber compound ensured by sophisticated analyses at the laboratory prior to release for production
- Durable wiper rubber thanks to its high resistance to wear, UV radiation and aging as well as to its high thermal elasticity

Performance and resilience tests

Bosch performs stringent performance and resilience tests as basis for the consistently high quality of Bosch wiper blades. Our wipers are engineered and tested to perform in all driving conditions without damage.

- **Performance Tests** - Including: Wiping Quality, Noise Level, High Speed Quality & Impact Resistance
- **Environment Tests** - Including: Corrosion Resistance, Temperature Cycle, Heat Aging & UV Resistance
- **Over-stress Tests** - Including: Freezing & Snow-Load
- **Chemicals Tests** - Including: Chemical Resistance



Bosch wiper blades for electric and hybrid vehicles:

Electric and hybrid vehicles are continuing their expansion in 2023 in the European market, despite another difficult year in terms of car sales. The request for spare parts for these vehicles, from both car drivers and workshops, is seeing a constant increase.

Wiper blades for EV and HEV application highlights:

BRAND	MODEL	FITMENT PERIOD	AEROTWIN SET SHORT CODE	FITMENT POSITION
AUDI	e-tron	09.18->	A 622 S	FRONT
BMW	i4 Gran Coupé	11.21->	A 606 S	FRONT
FORD	Mustang Mach-E	09.20->	A 296 S	FRONT
HYUNDAI	Ioniq 5	07.21->	AR 652 S	FRONT
POLESTAR	Polestar 2	03.20->	A 860 S	FRONT
TESLA	Model 3 and Y	09.16-> / 09.19->	A 871 S	FRONT



Did you know?

Aerotwin wiper blades from Bosch are available with a new, 100% plastic-free and recyclable packaging. From this, more than

350 tonnes of plastic are saved each year.

A great example of a sustainable packaging solution!





Simon's SPECIALIST STUFF

A selection of hard-to-find niche parts that are available!

PART NO: 125-0006



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

AIRBAG CLOCK SPRING

TO FIT: Nissan

PART NO: 175-0059



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

REAR BUMP STOP

TO FIT: Ford

PART NO: 175-0061



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**REAR SUBFRAME
BUSH (SINGLE)**

TO FIT: Nissan

PART NO: 260-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

BLOWER MOTOR OEM

TO FIT: PSA Group

PART NO: 260-0003



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

BLOWER MOTOR OEM

TO FIT: Vauxhall

PART NO: 349-0012



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**EXPANSION TANK
(COOL) INC CAP**

TO FIT: Ford

PART NO: 349-0019



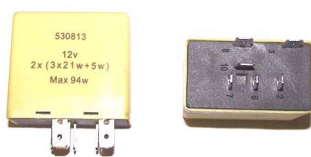
**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**EXPANSION TANK
(COOL) INC CAP**

TO FIT: Dacia/Renault

PART NO: 364-0001



364-0001



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

FLASHER UNIT (RELAY)

TO FIT: Vauxhall

PART NO: 364-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

FLASHER UNIT (RELAY)

TO FIT: Ford

PART NO: 375-0016



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**FUEL FILTER INC
HOUSING**

TO FIT: PSA Group/Toyota/Mitsubishi

PART NO: 390-0001



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

FUEL OVERFLOW PIPE

TO FIT: Ford

PART NO: 390-0004



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

FUEL OVERFLOW PIPE

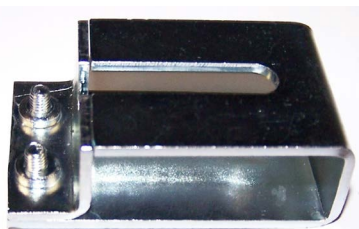
TO FIT: VW



Simon's SPECIALIST STUFF

A selection of hard-to-find niche parts that are available!

PART NO: 414-0008



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

GEAR CABLE CLAMP

TO FIT: Renault

PART NO: 414-0015



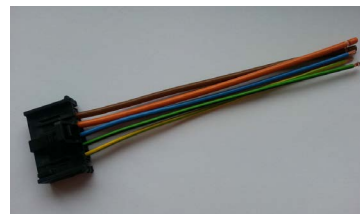
**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

GEAR LEVER / LINKAGE

TO FIT: PSA Group

PART NO: 442-0023



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**HEATER RESISTER WIRING
LOOM (END ONLY)**

TO FIT: Alfa Romeo/PSA Group

PART NO: 442-0025



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**HEATER RESISTER WIRING
LOOM (END ONLY)**

TO FIT: Renault

PART NO: 474-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

IGNITION SWITCH

TO FIT: Ford

PART NO: 478-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**STEERING
COLUMN SWITCH**

TO FIT: Vauxhall

PART NO: 554-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

DOOR HANDLE HINGE

TO FIT: Fiat

PART NO: 555-0006



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

HEADLAMP SWITCH

TO FIT: VAG

PART NO: 584-0025



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**TANK UNIT, UREA
INJECTION - ADBLUE - OEM**

TO FIT: PSA Group

PART NO: 668-0002



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

**LOWER STEERING
COLUMN**

TO FIT: Renault/Vauxhall/Nissan

PART NO: 783-0001



**HOT
PRICE!**

CALL FOR
OUR BEST
PRICES!

WHEEL BOLT

TO FIT: BMW/Mini/Toyota

PART NO: 800-0054



**HOT
PRICE!**

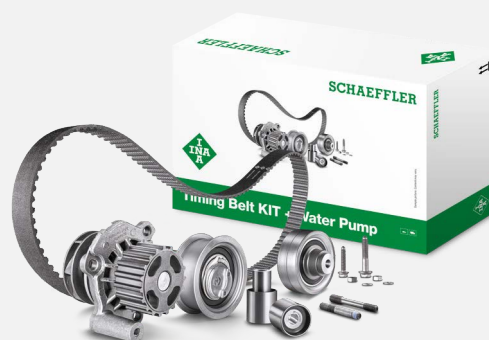
CALL FOR
OUR BEST
PRICES!

WIPER LINKAGE CLIP 10 PK

TO FIT: Various



SCHAEFFLER
REPXPERT



GET YOUR TIMING RIGHT!

BELT DRIVE SYSTEM BEST PRACTICE FOR WORKSHOPS

Schaeffler is a leading supplier of Timing belt kits under the INA brand, and we go to extreme lengths to ensure that each of our kits contains all the OE quality parts required to carry out a complete and professional OE equivalent Timing Belt service.

When we talk about the best time to change a Timing Belt, there are a number of factors to take into account, rather than just what's recommended in Autodata or Haynes Pro, or whichever other service information provider you use. Some timing belt change recommendations do not specify an actual mileage, but a time span, e.g. 5 years, and we have also seen mileage change periods reducing, as is the case with some of the belt-in-oil applications.

One area which is often ignored is the use of the phrase 'Arduous conditions', also mentioned in your service provider's additional information section, but what are 'Arduous conditions'? In simple terms, they can be anything which places additional load on the Timing Belt system, either by increased weight, abnormal temperatures, or higher mileage, especially over a short time. Some official examples of 'Arduous conditions' are shown below:

› Taxis / Hire Cars

The most obvious are taxis, which are subjected to high mileage driving, often doing many repetitive short journeys over a long period of time - i.e. day and night shifts.

› Delivery Vans

The COVID pandemic led to a massive shift to online purchases, all of which need to be delivered by someone in a van. These vehicles are carrying out door-to-door deliveries sometimes numbering in the hundreds each day, adding extreme loads to the timing drive system.

› Overloading

You only have to look in any hotel car park to see how many overloaded vans are parked up there for the night. Extra weight means extra load on the engine, which leads to increased load and wear on the Timing Belt system and associated components.

› High speed driving

Sustained high speed driving also increases the load placed upon the timing system.

› Towing a trailer or caravan

Once all the comforts of home have been added to a caravan's weight, many of them become overloaded and add immense pressures on the whole engine and drive train, which of course has a direct effect on the life of the Timing Belt drive system.

By now you can see how many different and seemingly innocuous scenarios can affect the Timing Belt system lifespan, all not only based on fact, but also representing an opportunity for you to increase business and profitability at your workshop.

Another consideration is the MOT test. The latest recommendation from the DVSA is shown below, which basically states that the MOT tester must establish (amongst other things) the condition of the Timing Belt and its ability to survive the 'smoke test'. The tester is perfectly within their rights to refuse to carry out the MOT test if they believe the belt is in an unsatisfactory condition, or no service history is forthcoming – which can be both a curse and a business opportunity.

DVSA MOT inspectors manual extract:

Do not carry out a smoke test if the engine is not in a safe condition. You must make sure it's safe by asking the vehicle driver *and* carrying out a brief examination of the engine.

The smoke test should not be carried out if:

- › *there is insufficient oil in the engine*
- › *the engine oil pressure is too low*
- › *there is abnormal engine noise*
- › *the governor has been tampered with*
- › *the camshaft belt is in an unsatisfactory condition*



Towing / overloading / high speed driving

EuroFlo

ULTRA PREMIUM EMISSION SYSTEMS

EuroFlo looks at the impact of winter weather on your emission system

'It's the most wonderful time of the year'...Well that's what the song says anyway.

The days are getting shorter, the weather is getting colder and Christmas is on the horizon. Maybe it will be a snowy one this year?

It sounds lovely, but the cold season's arrival comes with its own set of challenges for both drivers and their vehicles. Beyond the slippery roads and frosty windshields, one often overlooked aspect of winter's toll is its impact on our cars' exhaust systems. While it may not be as immediately noticeable as a snow-covered windscreen, the effects of winter weather on these crucial vehicle components can be significant and costly.

Corrosion Concerns:

Winter brings with it a potent cocktail of corrosive agents. Road salt, one of the most common means of dealing with icy roads, is notorious for causing rust and corrosion. When salt combines with moisture from melting snow or rain, it creates an electrolyte that speeds up the corrosion process. This corrosive concoction often finds its way to the undercarriage of vehicles, including the exhaust system. Over time, this can lead to weakened exhaust pipes and silencers, creating holes and leaks that compromise a car's performance and safety.

Increased Moisture:

Winter is synonymous with rain, sleet and snow, which can lead to increased moisture in the exhaust system. Moisture can find its way into the exhaust pipes through condensation or other means, and when temperatures drop, this moisture can freeze. This frozen moisture, known as exhaust icing, can restrict the flow of exhaust gases, leading to excessive backpressure and reduced engine efficiency. In severe cases, it can even cause damage to the catalytic converter.

Heat, Cold & Stress:

The exhaust system is subjected to extreme temperature fluctuations during winter. The rapid transition from a cold start to running temperature can place significant stress on the components. This stress, along with the expansion and contraction of metals due to temperature changes, can weaken the exhaust system's structural integrity, potentially leading to cracks and leaks.

Reduced Fuel Efficiency:

Winter weather can also negatively impact a car's fuel efficiency, which indirectly affects the exhaust system. Cold temperatures cause engine oil to thicken, leading to increased friction within the engine. To compensate for this, vehicles often run richer fuel mixtures in cold weather, resulting in incomplete combustion and increased emissions. As a result, the exhaust system has to work harder to filter and expel these pollutants, which can put additional strain on its components.

EuroFlo Quality Product

One sure-fire way to give your exhaust system the best chance of surviving a harsh winter is to fit EuroFlo exhausts.

EuroFlo exhausts are manufactured in our ISO 9001/ TUV accredited factory and only EuroFlo offers an industry leading 3 year warranty on all exhaust components.

- Fully Aluminised – Internally and externally
- Double Skinned
- 3 Year Warranty
- OE style bracketry, high quality olives
- Heavily engineered interiors
- Interiors pressed together, not welded, to prevent interior corrosion
- Specific baffle tube hole patterns developed for each vehicle
- Unique Sound Control Chamber Technology
- Ongoing Homologation programme



Delivery and Availability:

As a distributor of EuroFlo products, our branches have instant same-day access and availability from their regional warehouses. This means that the chances of even the most exotic or unusual vehicle clogging up your ramp while waiting for a EuroFlo emissions component are extremely low. After all - Time is money!

For more information on EuroFlo's full range
Please visit www.euroflo.co.uk or contact your local branch

MAHLE

MAHLE HIGHLIGHTS QUALITY AND EXPERTISE ON ENGINE, GASKETS AND THERMAL MANAGEMENT RANGES

- OE-matching quality • German engineering and know-how • New technical training and support available

Every second car worldwide is fitted with a MAHLE component, and the brand focuses on building long-term relationships with its customers to offer market leading, reliable and highly efficient products to meet the future needs of the industry.

ENGINES AND GASKETS

MAHLE's engine components provide the highest possible levels of efficiency and operating safety combined with the lowest emissions and competitive cost. The company's collection includes over 7,000 references

across pistons, cylinders, assemblies, engine bearings, valve train components and NRMM turbochargers.

Each engine component is designed with German engineering know-how, can withstand operating temperatures up to 2,600 degrees and are made to meet OE specifications to offer peace of mind that the product being fitted meets the standards set by OEMs.

MAHLE's gaskets product range provides unrivaled standard of innovation and quality, covering just over one million applications in the vehicle parc. The range includes medium- and heavy-duty truck, commercial marine and industrial applications, head and intake manifold gasket materials, valve / timing cover, oil pan and other gasket materials.

The gasket references from MAHLE are for use with drastic temperature extremes, high internal pressures, coolants and lubricants of every type. Plus, they are made with the latest



technology, German engineering and most advanced materials to meet the OE-quality standards.

MAHLE's focus on research and development, and rigorous testing processes ensure each and every component is made with the same values, quality standards and processes.

The company is committed to being close to its customers, which is why MAHLE manufactures not only in the UK and Germany, but at 160 additional locations in 35 countries. Regardless of the country of manufacture, technicians and workshops can rest assured they are getting quality guaranteed by MAHLE. MAHLE employs more than 70,000 staff members across its locations around the world, highlighting the scale of the



MAHLE has an exclusive distribution agreement of the Victor Reinz brand in the UK, which includes the OE gasket product range, produced by DANA group.

You can find out more about MAHLE's products by

MAHLE brand. From factory workers to research and development, to engineering, each MAHLE employee has the same passion for the brand's products.

THERMAL MANAGEMENT

The seasonal conditions and how a vehicle has been maintained will affect its thermal management product requirement. Hot summers with incorrect or no coolant will overheat engines causing failure and have an impact on the engine cooling components. Likewise, very cold winters will cause systems to freeze, having the same effect. This can be due to not having the correct levels of antifreeze or incorrect antifreeze in the system. In tight economic times car servicing becomes low on the agenda. This tends to be across all makes of vehicle but more on the second family vehicles that tend to be the 'run-about' vehicle and less likely to be serviced on a regular basis.

Air conditioning compressors should be used all year round and not just in the

warmer months. Using the aircon system regularly not only helps reduce the amount of moisture in the car and reduce the misting effect, but it also has a benefit of keeping the system moving and lubricated to reduce the potential of early failures on critical parts of the system.

Common issues occur when coolant is mixed with tap water that has minerals in it that can distort deposits inside the radiator and the cooling system passages of the engine. The use of distilled water or de-ionised water should be encouraged to prevent damage.

As a tier-one supplier to the vehicle manufacturer (VM) the requirement to comply, and in most cases exceed, ISO standards and product conformity means MAHLE is regularly audited by the VM and outside agencies at its manufacturing sites. This means the aftermarket can be assured the MAHLE product range is of exceptional quality.

MAHLE offers nearly 2000 SKUs across 32 different product types in the MAHLE / BEHR range, and all are fitted at an OE level. Regular R&D means the range is consistently

updated to introduce more thermal products for hybrid and full electric vehicles to supply the future of the aftermarket.

TRAINING AND SUPPORT

MAHLE is in a unique position in the aftermarket as the only tier-one supplier offering a full and comprehensive thermal management programme. Its product can be sold and fitted with confidence with a technical helpline option on the customer services phone and technical email for a fast response to issues.

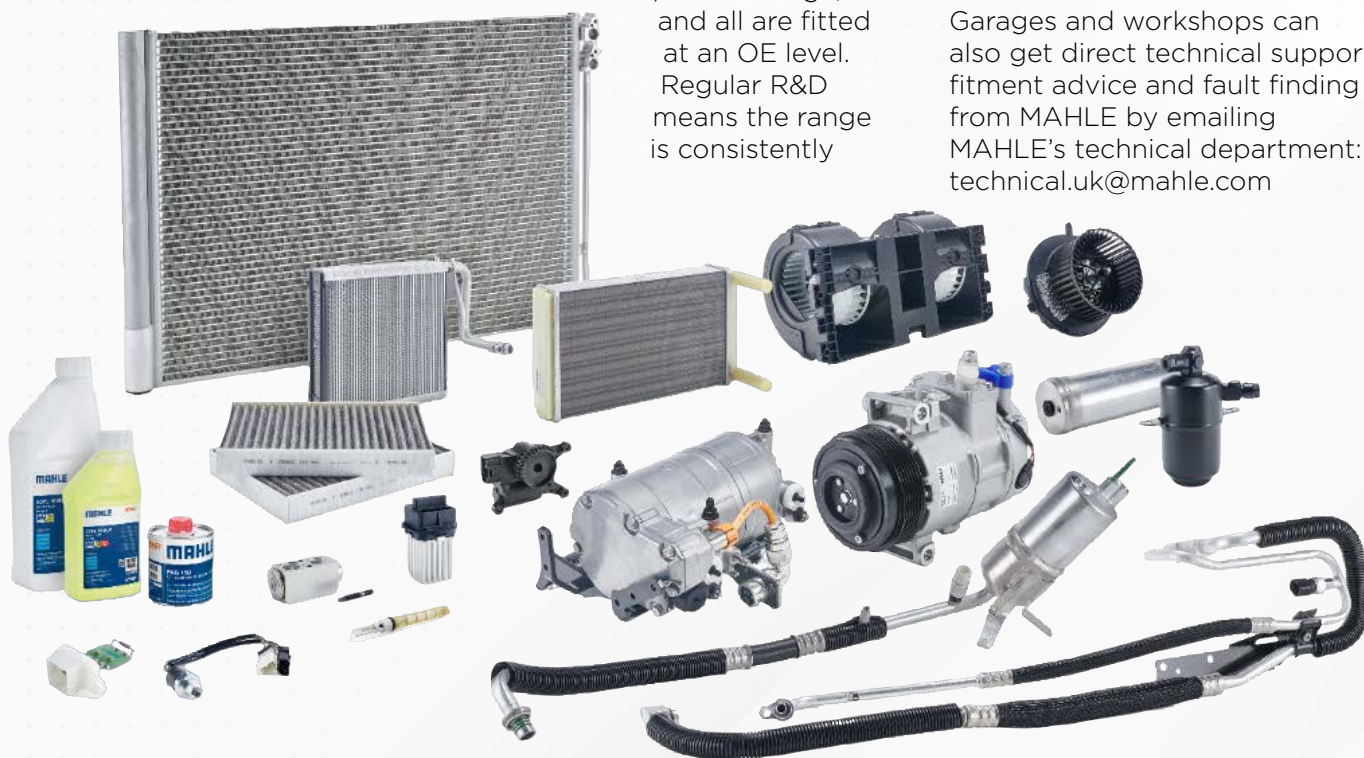
Support is also available at all levels of the business for information and training, including branch level support on request, warranty, and technical guidance.

MAHLE's training portal offers both theory and practical classroom training sessions, online training courses and



interactive e-learning courses. To register for access visit <https://training.mahle.com> or scan the QR code.

Garages and workshops can also get direct technical support, fitment advice and fault finding from MAHLE by emailing MAHLE's technical department: technical.uk@mahle.com



EXPLORING ADVANCED SOLUTIONS: A COMPREHENSIVE GUIDE TO GRANVILLE'S DIVERSE ANTIFREEZE RANGE

With over four decades of experience in manufacturing lubricant additives for the automotive aftermarket, Granville Oil has firmly established itself as a distinguished industry supplier. It comes as no surprise that when the time came to select a supplier for high-quality antifreeze, our choice was Granville.

However, the world of antifreeze can be complex, with numerous types available. We embarked on a journey to gain a comprehensive understanding of the different types of antifreeze we now have on our shelves.

Here at our branch, we take pride in offering the complete range of Granville antifreeze products and ensuring we provide you with precise guidance. Antifreeze, in its fundamental role, has remained consistent since its inception – it keeps cars cool in the summer and prevents freezing in the winter. Combined with today's modern additives, it also prevents corrosion and the formation of scale deposits. What has evolved in more recent times are the chemicals used in the manufacturing process. Some of these changes enhance stability and performance, resulting in an impressive 250,000 kilometre lifespan, all while reducing their environmental impact.

In our ever-evolving industry, it's safe to say that vehicle manufacturers (VMs) often demand different specification oils, and antifreeze is no exception. Ensuring that you use the right antifreeze in your customer's vehicle is of paramount importance to us as a business, and you can rely on our expert advice when you ring our branch.

In the meantime, join us as we explore the diverse range of Granville antifreeze offerings to help you maintain your customers' cars in optimal coolant condition.

GRANVILLE ZEROCOL 48 GREEN ANTIFREEZE:

Granville's traditional green antifreeze has been a reliable choice for years. This classic formulation provides excellent temperature regulation and corrosion protection. It's ideal for a wide range of vehicles and remains a trusted option for many automotive enthusiasts.

GRANVILLE RAPID COOL RED ANTIFREEZE:

An ethylene glycol-based engine coolant concentrate that utilizes Organic Acid Inhibitor Technology (OAT). This high-quality antifreeze is free from nitrates, amines, phosphates, borates, and silicates. It boasts a remarkable 5-year or 250,000 kilometre lifespan, whichever comes first. Zerocol Red Antifreeze is engineered to provide superior protection and heat transfer for the vehicle's engine.

GRANVILLE RAPID COOL BLUE ANTIFREEZE:

A Monoethylene Glycol-based antifreeze that does not contain nitrates, amines, or phosphates. Rapid Cool Blue Antifreeze contains corrosion inhibitors suitable for aluminum engines and is suitable for use in both petrol and diesel engines.

GRANVILLE SUB-ZERO UNIVERSAL ANTIFREEZE:

A versatile year-round antifreeze and coolant with a distinctive formulation that allows it to be mixed with any ethylene glycol-based antifreeze. This adaptability makes it a convenient choice for various automotive applications. Sub-Zero Universal employs Organic Acid Technology (OAT) additive technology, setting it apart as a modern and environmentally conscious option.

GRANVILLE ZEROCOL 40 ANTIFREEZE:

A Si-OAT ethylene glycol-based long-life antifreeze and coolant that provides year-round protection against frost and corrosion. Zerocol 40 contains a rust inhibitor package based on salts of Organic Acids and Silicate. It is Nitrite, Amine, Phosphate (NAP), and Borate-free. Zerocol 40 exhibits exceptional thermal stability, eliminating the risks of deposit buildup in the engine cooling system. Discover the right Granville antifreeze for your vehicle today and ensure top-notch coolant performance. Contact us for expert guidance and to keep your customers' cars running smoothly.



**WHATEVER THE WEATHER,
WE'VE GOT YOU COVERED.**

Our full range of Antifreeze & Coolant products are available in multiple sizes and formulated to suit your vehicle's specific requirements.



For more information visit granvilleoil.com

EFFICIENCY MEETS AFFORDABILITY: A Cost-Effective Timing Chain Kit for the PSA DV6 1.5l Blue HDi Engine from **GT Automotive**

After being introduced in 2017 on the Peugeot 308 MkII, the 1.5l BlueHDi has already suffered a plethora of faults with injection system jams and AdBlue tank seizure amongst the more common issues.

However much more seriously, an issue affecting early engine heads of this series can cause a mechanical fault, potentially resulting in catastrophic, "you need a new one", engine failure.

Several models have been affected, across both passenger and light commercial applications alike, including those listed below:

CITROEN: C3 III, C3 Aircross, C4 III, C4 Cactus, C4 SpaceTourer, C5 Aircross, Berlingo III, Berlingo III Van, Traveler, Jumpy

DS: DS3 Crossback, DS4 II, DS7 Crossback

OPEL / VAUXHALL: Corsa, Mokka, Crossland, Grandland, Combo, Combo Cargo, Zafira, Vivaro

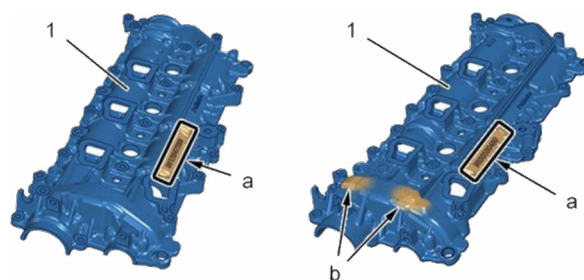
PEUGEOT: 208 II, 2008 II, 308 II and III, 508 II, 3008 II, 5008 II, Rifter, Partner, Expert

TOYOTA: Proace, Proace City, Proace City Verso, Proace Verso

without the need to break seals and examine internally;

✓ Cam housing with (a) engraved reference 9812647280 and flat housing design should contain the old **7mm chain**

X Cam housing with (a) engraved reference 9830580480 and (b) bumped housing design should have the newer **8mm chain**



SOLUTION FROM GT AUTOMOTIVE

After recognising the issues, PSA of course have revised parts design and the resulting OE "modernisation" upgrade parts are available direct from dealership at a considerable expense to the customer.

With the release of an aftermarket timing chain kit (Part No. GTCK201) & camshaft set, manufactured on the same production lines as OEM factory parts, we can now provide a cost-effective, OE quality solution for these ailing engines without the need for expensive, upgraded, dealership parts.

GT Automotive have also released the 8mm timing chain kit (Part No. GTCK202) for the newer engines fitted with PSAs OE upgrade or the earlier versions that have had the modernisation, giving a variety of solutions for this problematic range.

With all parts stocked at our UK distribution centre for immediate same day dispatch, and backed up with a no quibble manufacturer's warranty, we give you peace of mind to fit and forget with this tricky engine issue.



SIGNS & SYMPTOMS

Outside of the usual signs that an engine is beginning to fail, two predominant symptoms relating specifically to the chain are; excessive chatter caused by chain slack and / or wear and excessive or complete failure to turn over. In both cases, the focus immediately becomes the timing chain connecting the camshafts, with its resilience over time brought into question.

According to several technical notes from the PSA Group, modifications were later made to the engine specification, amongst which the inclusion of a beefier 8mm chain to replace the failing 7mm chain which, in turn, resulted in changes to both the camshafts and rocker cover amongst a list of further optional parts and / or checks to be made, at the discretion of a dealership.

Claiming to both help the engine run smoother and faster, the changes were not just seen as a fix to the engine's issues, but a "modernisation" of the engine and a direct answer to some of its quirks.

Whilst there is not an easily specific date split to blanket all makes and models and separates the earlier engines from the late, spotting affected blocks can be as simple as examining the rocker cover of the engine,





Technology with Vision

HELLA STARTERS AND ALTERNATORS

Advanced Start-Stop Systems – A look at the Volvo V60 Eco Start-Stop DRIVE

Automatic systems, such as automatic start-stop, are installed to reduce fuel consumption and emissions. However, there are different versions and requirements depending on the vehicle manufacturer, therefore highly efficient alternators with overrunning alternator pulley, and starters with a reinforced structure for frequent starting processes are installed. Naturally, the automatic start/stop function can only be guaranteed if all components of the start and charging system are operating correctly.

Charging system component overview

AGM battery with battery sensor – The abbreviation AGM stands for absorbent glass mat and means that the electrolyte in these batteries is bound in a glass fibre fleece. AGM batteries ensure higher start and supply reliability, are leak-proof and have been specially developed for vehicles with start-stop systems. An intelligent battery sensor is additionally mounted on the battery's negative terminal and monitors the battery condition, the measured values are transmitted to a higher-level control unit via the serial LIN communication interface.

Auxiliary battery – A second, so-called auxiliary battery is also installed in this vehicle, this supports the electrical system when the engine has been switched off. The additional supply is managed by a battery control unit, and it simultaneously prevents the batteries from discharging each other.

Alternator with overrunning alternator pulley – The alternator supplies power consumers with power while the engine is running and maintains the battery charge. The alternator output depends on the engine speed, with the maximum alternator output only generated above 2000 rpm. A charge regulator is installed in the alternator, which is also referred to as the alternator control unit. The charge controller is connected to the engine control unit via a LIN interface. By mounting an overrunning alternator pulley, only the driving force of one direction of rotation is transmitted to the alternator, thus reducing friction and wear.

Engine control unit – In this system, the charging system is intelligently controlled via the engine control unit (ECU) and the central electronics module (CEM) sends a request about the desired charging voltage for the main battery to the engine control unit which is then forwarded to the alternator regulator. The charge signal lamp in the instrument cluster is controlled via the CAN network. At the same time, the engine control unit switches on the auxiliary battery via a relay for the charging process, the charging time for which is calculated by the central electronics module and forwarded to the engine control unit.

Starter – The starter is briefly connected to the engine during the starting process via a ring gear that brings it to the desired starting speed. Depending on the design, the current consumption of the starter can be well over one hundred amperes. By reinforcing individual components, the starter has been designed for an increased number of start cycles over its entire service life.

Fitting Hella premium starters and alternators to your customer's vehicles ensures a like-for-like, OEM quality replacement, manufactured and tested to stringent OE specifications through Hella's Centre of Excellence. As modern vehicle starting and charging systems continue to advance and become more complex, why risk fitting an inferior quality unit?

- Premium range at competitive prices.
- Brand new units, not remanufactured.
- Comprehensive range with over 1,300 part numbers covering cars, vans and commercial vehicles, including Off-Highway.
- Manufactured to OEM standards





QUALITY IN THE BOX

THE TECHNICIANS CHOICE



AT WIX FILTERS, we are dedicated to providing professional technicians with the highest quality filtration solutions. WIX is a worldwide global manufacturer owned by the MANN+HUMMEL group, producing over 210 million filters annually. Our commitment to quality is evident in every filter we produce.

UNLIKE MANY OTHER aftermarket filtration brands, WIX in-house manufacturing ensures

consistent quality and performance. Our filters are rigorously tested and verified to meet the most demanding standards, giving you the confidence to take on any job.

WITH ACCESS TO comprehensive training and marketing support programs, as well as the expertise of the WIX Institute of Filtration Technology, WIX Filters are the ultimate choice for professional technicians and mechanics around the world.

**SO, WHEN YOU NEED A FILTER, DON'T SETTLE FOR ANYTHING LESS.
ASK FOR WIX FILTERS!**

**START YOUR ONLINE
TRAINING JOURNEY
TODAY BY VISITING
INSTITUTE.WIXEUROPE.COM**



VISIT WWW.WIXFILTERS.COM TO LEARN MORE ABOUT OUR FULL RANGE OF FILTRATION SOLUTIONS, TRAINING PROGRAMS, AND MARKETING SUPPORT.



TRUST & QUALITY

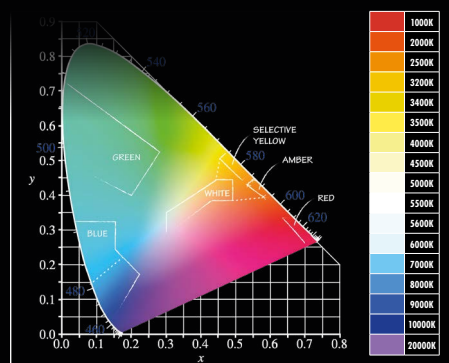
FOR OVER
140 YEARS

Long before the Ford Model T, even before the first Mercedes 'horseless carriage', there was Lucas. The business was established in 1872, the same year that the petrol engine was first patented. The story of the business that Joseph Lucas founded in Birmingham, still the global HQ of Lucas today, is the story of one of the most successful automotive brands in history. Lucas has had a particularly profound impact throughout the history of vehicle lighting and it remains one of the largest automotive bulb suppliers in the UK aftermarket. This success is built upon trust and Lucas go to great lengths to ensure every bulb bearing its name delivers the quality, value and reliability expected of the heritage brand.

In order to meet and exceed UNECE regulations, Lucas bulbs are engineered to exacting standards and meticulously tested throughout the manufacturing and distribution process. Key areas to meet ECE Regulation 37 and beyond include:

Kelvin Temperature

The colour temperature of bulbs must fall within specified tolerances for the bulb type.



Dimensional Tolerances

Dimensions of the bulb and filament are specified within exacting tolerances to ensure correct operation and effective beam pattern.



Beam Pattern & Light Distribution

Halogen headlight bulbs must be manufactured to ensure correct beam pattern output from vehicle headlamps. The beam pattern ensures oncoming drivers are not dazzled but pedestrians on paths are illuminated. ECE regulations specify light output measured at set points when projected onto a wall at 25m.

Maximum Wattage

To ensure compatibility and avoid damage to vehicle wiring and electrics, bulbs must adhere to a maximum wattage. For example a H7 bulb at 12 Volts must not exceed 58 Watts.

Luminous Flux

The brightness of bulbs (luminous flux) is also specified. For example a H7 at 12v must produce 1500 Lumens \pm 10%

Base and Cap Dimensional Requirements

All Lucas bulbs also conform to IEC 60061 (Lamp caps and holders together with gauges for the control of interchangeability and safety). This contains the recommendations of the IEC in regard to lamp caps and holders in general use, together with relevant gauges, with the object of securing international interchangeability.

Life Cycle Testing

Whilst bulb life is not specified in R37 it is referred to as part of IEC60810. The true test of quality is reflected in the lifespan of the bulb. Lucas bulbs are life tested to ensure long-life and reliability.



Production Line and Batch Testing

Stringent quality inspection processes and test procedures are in place throughout the manufacturing and the distribution process to ensure Lucas trusted quality in every box.

SPOTLIGHT ON: COIL SPRINGS



Our Precision, Your Advantage

Analysis of the DVLA's MOT database in 2021 shows that of the 38.2 million MOTs carried out on Class 4 vehicles, the second most common reason for initial MOT failure was coil springs, with almost 1.1 million failures registered.*

Given their vital function and positioning, it's hardly a surprise that coil springs are so prone to breakage. Several factors can cause coil springs to break, especially prevalent during the winter months, severely impacting both passenger and driver safety. KYB takes a look at some of the common reasons why:

Increased vehicle weight

Supporting a vehicle's weight, a coil spring is constantly put under considerable stress as it compresses to absorb road conditions. In recent years, cars have become heavier as they gain new technologies and features as standard. In order to compensate for the extra weight these additional features have created, weight needs to be reduced elsewhere, hence coil springs have become lighter and sometimes have different shapes too - but they are working harder than ever to support vehicle weight.

Potholes

Within the first 4 months of 2023, the AA reported that they saw pothole related breakdowns increase by almost a quarter (23%) when compared to last year. They argue that if this level continues throughout the rest of the year, 2023 is set to become the second worst year for road condition related breakdowns behind 2018. As a vehicle drives over a pothole, the spring takes the brunt of the force - this sudden jolt can cause an otherwise healthy spring to bend out of shape or an already weakened spring to break completely.



Extreme temperatures

There's a reason why we see far less coil spring replacements needed in Southern European countries - such as Italy, Spain and Portugal. Put simply, they don't have the harsh winter conditions that many Northern European countries have, therefore they don't use salt on their roads. Here in the UK, we're susceptible to these colder winters, and this is when we see more issues with coil springs arise.

The positioning of a coil spring means that they are naturally susceptible to damage. As the wheel rotates, road debris repeatedly strikes the spring. Eventually, this debris is likely to chip the coating on the spring, exposing the metal. Once this happens, tiny cracks in the surface of the spring are fully exposed to the elements. In the winter, water can seep into these cracks, freeze and expand, potentially causing any cracks that are already present to worsen. This is often accelerated by the increased use of grit salt through the winter months - acting as a corrosive, the salt erodes the spring, weakening it.



KYB recommends that every vehicle that comes into the workshop during the winter months is checked for broken coil springs.

How can I ensure that the springs I fit are best protected against harsh winter conditions?

Many premium manufacturers like KYB ensure that there are steps incorporated into their manufacturing processes that help to ensure the best possible protection. For example, every KYB coil spring is shot peened. Shot peening is the most important manufacturing process for the lifetime of a coil spring. It involves the spring being bombarded with small spherical shots, which prepare and clean the surface of the metal before painting. This process increases the spring's lifetime up to 10 times. KYB springs are also protected from corrosion by a zinc phosphate coating to ensure the best possible protection.

**SCAN HERE TO FIND OUT MORE
ABOUT KYB COIL SPRINGS**



* Information obtained from One Sure Insurance.



PLANET

HIGH PERFORMANCE LUBRICANTS

Planet High Performance Lubricants

Provides a servicing solution that meets latest industry standards

7 grades, available in 199 litre barrels:

Synthetic 5w/30 ACEA C2 C3

Synthetic 5w/30 ACEA C3

5w/30 Longlife VW 504/507

Semi Synthetic 5w/30 ACEA A1 B1

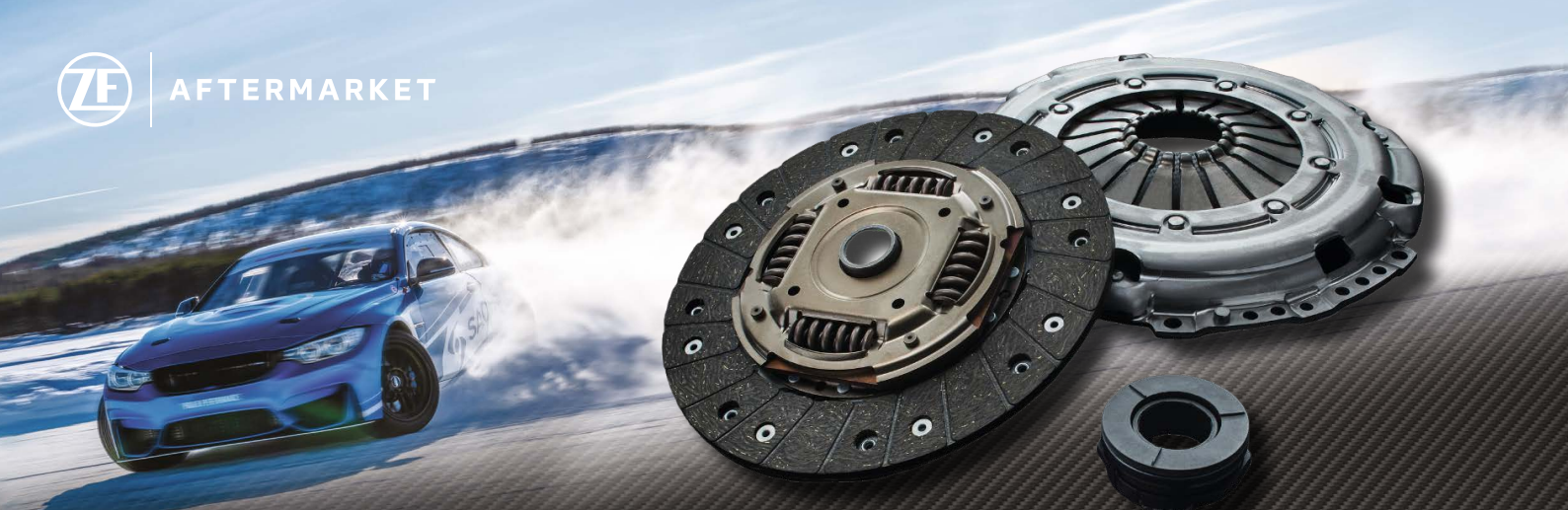
Semi Synthetic 10w/40 ACEA A3 B4

Synthetic 5w/30 FMC

Synthetic 0w/30 ACEA C2

www.planetoil.co.uk





“FAST INSTALLATION IS KEY”: ZF AFTERMARKET PROVIDES BEST-PRACTICE CLUTCH ADVICE

ZF Aftermarket is continuing to support customers, supplying a wide range of OE quality clutches, clutch kits and clutch components under the SACHS brand name to ensure fast installation of the highest quality parts.

SACHS clutch technology ticks every box: Safety, quality, innovation, performance and range. As well as individual products, ZF Aftermarket offers a number of practical SACHS installation kits that simplify assembly and offer a safer drive by including everything that's necessary in one box.

ZF Aftermarket recognises the importance of having access to parts that make the technician's job easier. Its practical installation kits provide a number of benefits, including easy assembly with several components supplied together; greater availability; complete traceability as all parts come from a single source to complement each other perfectly; and, optimal durability thanks to the quality and expertise that comes with the SACHS name.

Optimum Transmission

ZF Aftermarket recommends replacing all relevant clutch components to ensure that all parts work together seamlessly. With this in mind, the SACHS clutch kit with dual-mass flywheel (DMF) and XTend ensures optimum transmission reliability of the engine torque to the transmission, as well as the longest possible service life of every single clutch component.

With the SACHS DMF, motorists and passengers experience a reduction of noise inside the vehicle, as well as a smoother ride with a higher shift comfort, as they offer excellent vibration damping throughout the entire speed range. They are designed in a way that engine vibrations are largely reduced in all speed ranges.

In summary, engineers develop SACHS clutch components according to the specifications of the vehicle manufacturers, ensuring quieter start-up behaviour, high durability, engine vibrations are isolated, noise is reduced, transmission damage is prevented, and shifting comfort is improved.

The SACHS XTend clutch pressure plate provides automatic wear compensation. It achieves this by separating the wear of the facing from the movement of the diaphragm spring.

The compensation mechanism constantly registers reduction in the lining and compensates for the created gap by reliably turning an adjustment ring. This keeps the clutch from becoming vulnerable to extreme temperatures, soiling and aging.

Furthermore, the pedal-force conditions remain constant over the entire service life. At the same time, the service life is extended, since the facing can be worn down further.

Another advantage of XTend is in its design: The installation space required axially in the clutch system with operational wear is reduced through the use of XTend.

Clutch kit combinations

The clutch kit with DMF and Xtend is also available as a clutch kit with differential-before-clutch (DBC) assembly and further clutch kit combinations are also available from SACHS, p.e. with a concentric slave cylinder CSC.

The SACHS DBC range provides outstanding vibration damping over the entire speed range and effectively reduces noise. Moreover, it is largely unaffected by extreme temperatures, soiling or wear and features high durability.

The installation of a DBC is easy using the included special tool and ZF Aftermarket provides the relevant installation instructions.

Choose excellence in every part.

Find out more at aftermarket.zf.com/sachs/pc-clutches

**PROVEN PERFORMANCE
DESIGNED TO LAST**


SACHS



TRUPART'S REPLACEMENT VEHICLE LIGHTING AND WING MIRRORS

At Trupart, our commitment to excellence is in every product we sell. As vehicle lighting and mirror specialists, we understand that it's essential that when you replace a part on a customer's vehicle, it's effectively 'fit for purpose'. Our range of replacement E-marked vehicle lighting and mirrors are engineered to meet the most stringent standards.

Our comprehensive range caters to all makes and models, ensuring you can find the exact specification for your customers' vehicle.

LIGHTING PROGRAMME

HEADLAMPS, REAR LAMPS & FOG LIGHTS

- Direct aftermarket replacement.
- Fully e-marked and designed to OE specification.
- Over 2,800 lighting references available.
- Latest technologies – including daylight running lights, LED and directional light designs.

LIGHTING ACCESSORIES

- Number plate lamps, fog lamp surrounds, headlamp motors, bulb holders.

MIRROR PROGRAMME

WING MIRROR UNITS

- Fully e-marked.
- Complete units, including glass and covers.
- Large range, including multiple specifications from manual to power folding with aerial.

MIRROR GLASS

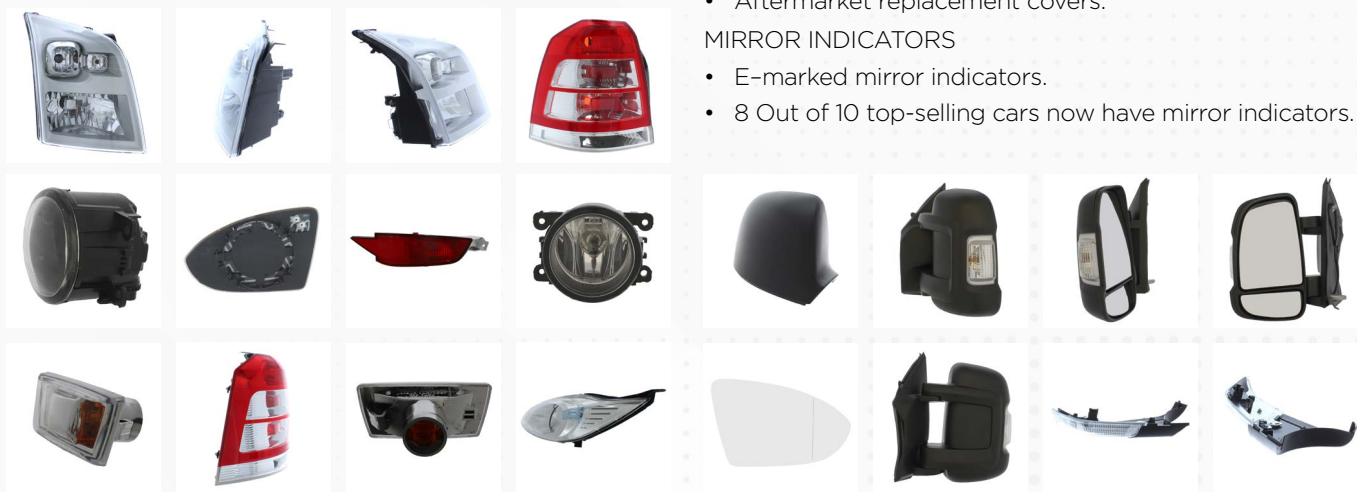
- Direct OEM-quality replacement with backing plate.
- Aspherical, convex, blind spot warning where applicable.

MIRROR COVERS

- Black, textured or primed.
- Aftermarket replacement covers.

MIRROR INDICATORS

- E-marked mirror indicators.
- 8 Out of 10 top-selling cars now have mirror indicators.



WHY TRUPART?

The Trupart Lighting and Mirror programme offers an unparalleled vehicle lighting and mirror solution to the aftermarket. The Trupart range represents exceptional value and the most comprehensive and up to date product offers currently available.

When you choose Trupart for your vehicle lighting and wing mirror needs, you're choosing:

- **Quality:** Products engineered to meet stringent quality standards. All our lighting and mirrors are fully E-Marked and made to OE specifications.
- **Durability:** Built to withstand the most challenging road conditions.
- **Reliability:** Products that deliver consistent performance over time.
- **Simplicity:** Easy to find the correct reference, simple and hassle free to fit.

IN PARTNERSHIP WITH OUR KEY SUPPLIERS



Das Original



Our Precision, Your Advantage



The Smart Choice for Today's Technician!

**SMART
CHOICE**
MAGAZINE

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APD Glastonbury	Butt Close, Glastonbury, Avon, BA6 9HY	01458 832 915
APD High Wycombe	Unit 1, Network 4, Lincoln Road, Cressex Business Park, High Wycombe, Bucks, HP12 3RF	01494 321 636
APD Maidenhead	7 Kings Grove Industrial Estate, Kings Grove, Maidenhead, SL6 4DP	01628 561 368
APD Norwich	3 Spar Road, St Faith's Industrial Est, Norwich, Norfolk, NR6 6BZ	01603 486 020
APD Reading	Suttons Business Park, Reading, RG6 1AZ	01189 110 949
APD Swindon Westmead	Unit 1, Glenmore Business Park, Bridgemoor Cl, Swindon, Wiltshire SN5 7AU	01793 821 715
APD Export	APD Retford Warehouse, Unit 2, Hallcroft Industrial Est, Aurillic Way, Retford, DN22 7PX	01777 700 075

THE SMART CHOICE FOR TODAY'S TECHNICIAN!

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Parts Distribution Ltd