apd AUTOPARTS & DIAGNOSTICS

SMART CHOICE

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THE SMART CHOICE FOR TODAY'S TECHNICIAN!



IFA PARTNER OF ad INTERNATIONAL

T&Cs: Promotion runs for 12 working days, Tuesday 1st to Wednesday 16th December 2026 inclusive, excluding weekends. Spend £50 or more ex VAT on any qualifying day and each qualifying invoice will automatically be entered into that day's prize draw. One winner per day. 12 prizes in total: 3 × LG 55" Smart 4K UHD TVs, 3 × Beats Solo Buds, 3 × Apple iPad 11" Wi-Fi 128GB and 3 × Ninja Foodi MAX Dual Zone 9.5L Air Fryers. Prizes are non-transferable with no cash alternative. If unavailable, APD may substitute a prize of equal or greater value. Models, colours and specifications may vary from those shown. Winners will be notified directly, and prizes will be delivered before Christmas. APD reserves the right to amend, suspend or withdraw the promotion. Images are for illustration purposes only.

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apd AUTOPARTS & DIAGNOSTICS

VDA German Association of the Automotive Industry

VDA approved AdBlue® from AD

Premium quality from a trusted source



10 LITRES 20 LITRES

HOW IT WORKS

Works with the SCR (Selective Catalytic Reduction) system on modern diesel vehicles. Injected into the exhaust stream, AdBlue® converts nitrogen oxides (NOx) into harmless nitrogen and water vapour reducing the impact on air quality and helping vehicles meet emissions standards.

Certified to ISO 22241
Meets ISO 22241-1, -2 and -3. Non-conforming urea solutions can lead to costly vehicle repairs.

Lower emissions
Reduces NOx and particulate emissions.

For all SCR vehicles
Suitable for all vehicles fitted with an SCR system.

Spill-free design
Pack design prevents spillage, reducing paintwork corrosion and contamination.

Robust PET packaging
Suitable for external shaded storage.

Quick, easy refilling
Flexible pouring spout included, stored behind the sleeve/label.

AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V. (VDA).
AD AdBlue® is produced under VDA licence by Yara International to ISO 22241-1.

Available in 10L & 20L packs

Ask your local AD distributor

Granville®

READY FOR THE COLD?



6 QUESTIONS ANSWERED BEFORE WINTER HITS

WHAT'S THE DIFFERENCE BETWEEN ANTIFREEZE AND COOLANT?

Antifreeze is the concentrated product; coolant is the ready to use mixture of antifreeze and water. Getting the mix right is key, and distilled or deionised water should be used to avoid the scale and deposits that tap water can leave behind.

WHAT'S THE DIFFERENCE BETWEEN OAT, SI-OAT, P-OAT AND SP-OAT?

They use different combinations of corrosion inhibitors to protect the cooling system. OAT uses organic inhibitors, while Si-OAT, P-OAT and SP-OAT combine these with silicates and/or phosphates to meet different vehicle requirements. Always check the specification.

CAN DIFFERENT TYPES OF ANTIFREEZE BE MIXED?

No. Different formulations contain different additive packages, and mixing incompatible types can upset the balance of protection. Rather than working better together, they can reduce performance and increase the risk of deposits or corrosion.

DOES ANTIFREEZE COLOUR TELL YOU WHAT TYPE IT IS?

No. Colour alone doesn't tell you what's inside. Manufacturers can use different colours for the same technology, or the same colour for completely different formulations. So, the colour might look right while the chemistry isn't.

IS MORE ANTIFREEZE ALWAYS BETTER?

Not necessarily. More antifreeze might sound like more protection, but too much can reduce performance. Pure antifreeze freezes at a higher temperature and transfers heat less effectively, so always use the required mixing ratio for the best protection.

WHAT MAKES A SCREENWASH SUITABLE FOR WINTER?

It needs to clean as well as protect against freezing. Granville's methanol-free formulation uses powerful cleaning agents to tackle road salt, dirt and oily grime, whilst protecting against freezing temperatures.



Granville®

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granvilleoil.com

Find the right product
by scanning the QR code or visiting granvilleoil.com

Lucas

EVERY BULB. EVERY FIT. ALL LUCAS.

LUCAS 150 ANNIVERSARY EST.1875

Your trusted source for Lucas lighting, now with the full range in stock. Whatever the vehicle, whatever the customer, there's a Lucas bulb built to shine.

From trade packs to retail-ready boxes, every bulb carries 150 years of quality, innovation, and reliability. Our complete Lucas range delivers trusted performance and quality your customers know by name.

Trade packs

Ideal for garages and workshops, 10-pack boxes offer great value and less waste. Available in 12V & 24V.

Single boxes

Pioneered by Lucas, our best-selling single boxes let motor factors sell bulbs individually while protecting the product. Available in 6V, 12V and 24V.

Retail packs

Durable, eye-catching and now plastic free — designed for standout retail performance.

Upgrades

Brighter, whiter and built to last. Lucas Upgrade Bulbs deliver enhanced visibility and style without compromising reliability. Easy to fit and fully road legal, they're the perfect choice for drivers who want more from their lights.



STOCK THE BEST. SELL WITH CONFIDENCE.

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Lucas Automotive Aftermarket. Lucas and the Diagonal Device are registered trademarks. LUC-10321

NEW

POLYGARD®

New Polygard Arctic Screenwash Extreme -18°C

The next generation of screenwash. Featuring a new non-flammable formula with enhanced cleaning performance, this concentrated screenwash provides freeze protection down to -18°C. It effectively removes dirt, insects and traffic film, helping to maintain a clear, streak-free view of the road ahead.

Key Benefits:

- NEW Non-Flammable Blend
- Freeze Protection to -18°C
- Fast De-Icing Action
- Professional Cleaning Performance
- Flexible Year-Round Use



NOW AVAILABLE

Order today from your local branch



ALWAYS CHECK THE BATTERY

A battery can appear to be working normally right up until the moment it lets a driver down. For workshops, one quick test can turn that uncertainty into useful advice, stronger customer service and additional revenue.

Many battery replacements begin at the roadside. By that point, the driver has already suffered the inconvenience of a non-start, and the opportunity for their usual workshop to identify the problem has been lost. Yet battery condition can be checked during an ordinary workshop visit in less than a minute.

That is the thinking behind Yuasa's Always Check the Battery campaign, which encourages workshops to make battery testing a routine part of every service, MOT and repair. The principle is straightforward: you cannot judge a battery's condition by looking at it, and a vehicle that starts today may still be carrying a battery that needs attention.

Evidence from a major UK workshop trial shows the scale of that hidden need. More than one in three batteries tested required attention: 11% needed replacing and 27% required charging. With more than 400,000 vehicle batteries replaced by UK breakdown organisations each year, workshops have a clear opportunity to find problems sooner, before a breakdown provider does.

The check itself need not slow the job down. A professional battery tester, such as the GS Yuasa GYT250 or GS Yuasa GYT050, can provide an accurate assessment in under 60 seconds. The workshop can then confirm the condition of the battery, explain the result clearly to the customer and recommend the appropriate next step: recharge, replace or reassure.

That last step matters. A good result is still valuable because it gives the customer confidence that the battery has been checked rather than simply assumed to be healthy. Where attention is needed, the test provides an evidence-based reason for the recommendation, making the conversation clearer and helping the customer make an informed decision.

Battery testing is especially important following the exceptionally hot summer experienced across the UK. Provisional Met Office figures show that summer 2026 was the UK's warmest on record, with a mean temperature of 16.5°C.

While battery failure is often associated with winter, much of the damage can occur during warmer weather. High temperatures accelerate battery degradation, increase electrolyte evaporation and contribute to the breakdown of internal plate material. A 10°C rise in battery temperature can also double its rate of self-discharge.

The effects of this heat may not become obvious until temperatures begin to fall. Colder weather reduces the starting power available from the battery, while headlights, heaters, blowers and heated screens place greater demands on it. A battery weakened during the summer can therefore continue to start the vehicle normally before failing as conditions become colder.

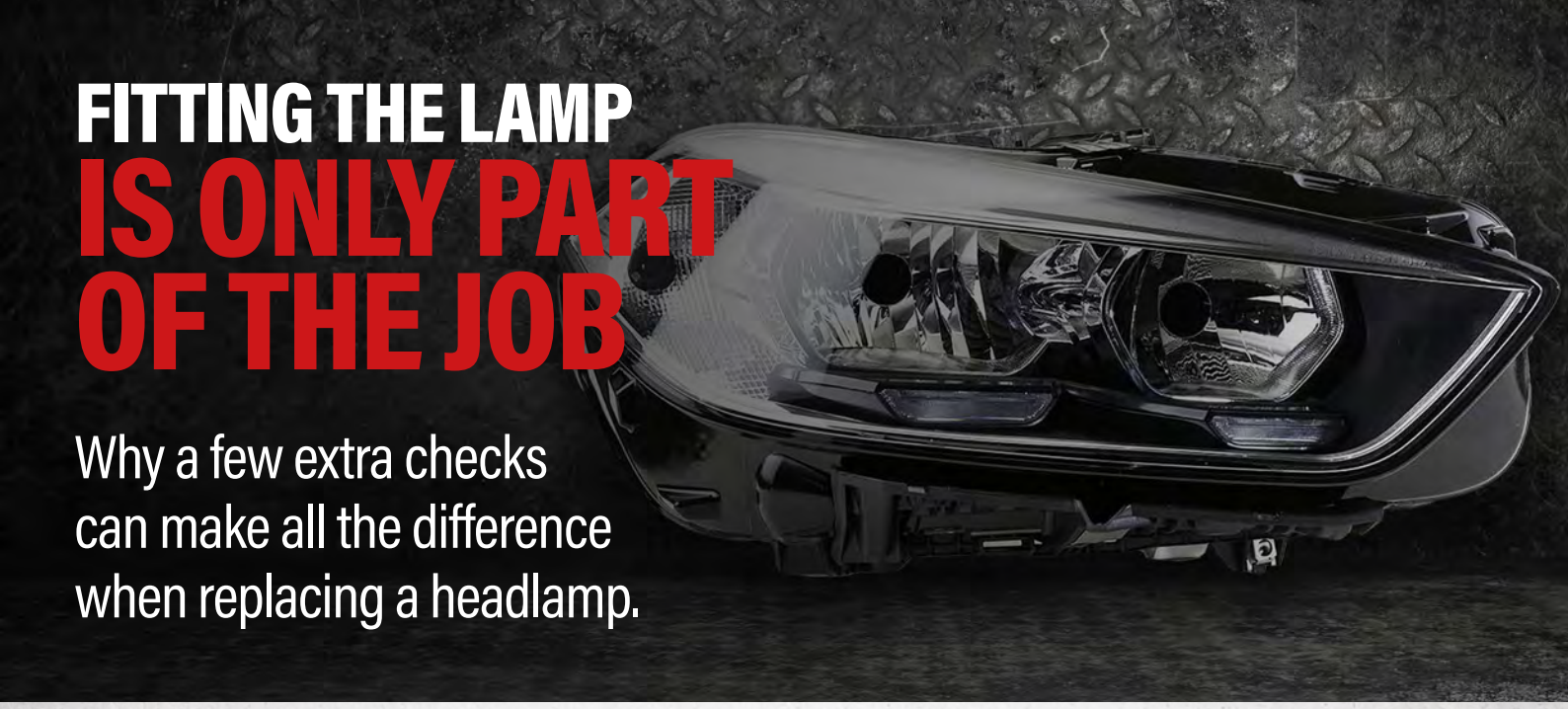
For the workshop, this creates a valuable opportunity to identify heat-affected or discharged batteries before winter exposes the problem. Routine testing turns a commonly overlooked component into a consistent part of preventative maintenance. It can help avoid disruption for the driver, strengthen trust through proactive advice and uncover legitimate charging or replacement work that might otherwise be missed when the vehicle leaves.

Always check the battery, because you don't know its condition until you test it.

YUASA

by GS YUASA

Consumer website **www.yuasa.com**
Trade battery lookup **fit.yuasa.com**
Social **@GSYuasaUK**



FITTING THE LAMP IS ONLY PART OF THE JOB

Why a few extra checks can make all the difference when replacing a headlamp.

A failed or damaged headlamp might look like one of the more straightforward jobs coming through your workshop. Identify the problem, remove the old unit, fit the replacement, check the beam and hand the vehicle back.

But fitting the lamp is only part of the job.

From persistent condensation and damaged mountings to repeated bulb failures and incorrect beam alignment, what looks like a straightforward lighting problem can sometimes signal something else. Unless you identify the underlying cause, simply fitting a replacement may not be the end of the story.

MISTING OR WATER INGRESS?

Finding moisture inside a headlamp does not automatically mean the unit needs replacing. Headlamp assemblies are designed to handle significant changes in temperature and atmospheric conditions, so some temporary condensation can occur. In many cases, light misting will disappear naturally as conditions change and the lamp operates.

Persistent heavy condensation or visible water collecting inside the unit is different and deserves further investigation. Check for cracks or previous impact damage, inspect covers and seals and make sure ventilation points have not become blocked or damaged.

If water is getting in, finding out why could prevent the same problem from happening again.

ANOTHER BULB GONE?

A failed bulb is usually a simple repair. A bulb that keeps failing is not.

Vibration, poor electrical connections, voltage irregularities, incorrect fitment and contamination during installation can all shorten bulb life.

Before fitting another replacement, take a few extra minutes to inspect the lamp, connector and surrounding components. Look for signs of overheating, corrosion or a poor connection and make sure the bulb is correctly located and secured.

Repeated failure is the symptom. Finding the cause is what stops the comeback.

LOOK BEYOND THE LENS

Not all headlamp damage is immediately obvious.

A relatively minor impact can damage mounting points or distort surrounding brackets without leaving any obvious signs at the front of the lamp.

That matters when you install the replacement. Installing a new headlamp onto damaged or incorrectly positioned mounting points can affect how the unit sits and ultimately how it aligns.

Before the old unit goes in the bin, check why it failed, how it was damaged, and what is happening around it.

A new headlamp can only do its job properly if everything around it is right too.

FITTED DOESN'T MEAN FINISHED

The new lamp is installed. Everything illuminates. Job done?

Not quite.

Correct headlamp alignment remains an important part of the replacement process. The objective is not simply to produce light, but to put that light where the driver needs it without creating unnecessary glare for other road users.

Once the replacement is fitted, check its operation, beam pattern and alignment, and make any necessary adjustments in accordance with the appropriate vehicle procedures.

Fitting the lamp completes the installation. Checking it completes the job.

WHEN REPLACEMENT IS THE ANSWER

Once you've completed the checks and established that replacement is required, quality and correct application matter.

Trupart supplies replacement vehicle lighting designed to give workshops a dependable solution, including headlamps, rear lamps, fog lamps and associated lighting components.

The Trupart programme also includes replacement wing mirror units, mirror glass, covers and indicators, helping workshops tackle another area of the vehicle where seemingly straightforward damage can involve more than at first meets the eye.

LOOK. CHECK. REPLACE.

Replacement vehicle lighting and mirrors from Trupart.





Trupart® automotive

QUALITY THAT KEEPS YOU MOVING

NISSENS AND AVA: TWO STRONG BRANDS, ONE COMPLETE CABIN HEATER AND BLOWER SOLUTION

Irrespective of whether it's the height of summer and the air conditioning is protecting the vehicle's occupants from extreme heat, or the depth of winter when the heater is at its maximum to keep out the cold, year round, the cabin blower is in almost constant use.

Although fundamentally reliable, having to satisfy such high ongoing demands, allied to the fact that many owners are reluctant to replace the vehicle's cabin air filter, cabin blowers can begin to feel the strain, and will eventually fail.

When it comes to the colder months, the warmth provided by the cabin heater, which is a small heat exchanger that generally uses the hot engine coolant to provide the much needed heat, is vital.

So, although heaters and blowers may appear to be relatively simple components, they are among the most critical within a vehicle's climate control system, as they work together to ensure cabin comfort, visibility and safety in all weather conditions. Therefore, the failure of one or the other will result in poor cabin comfort, reduced demisting performance and so add to the stress of the daily commute or on longer journeys.

Furthermore, as vehicle fleets across Europe continue to age, demand for reliable replacement HVAC (heating, ventilation and air conditioning) parts remains strong. Helpfully, with two brands within the Nissens Group portfolio – Nissens and AVA – workshops across the country have access to a comprehensive range of premium quality cabin heaters and blowers, which provide a reliable, high performance solution to meet the diverse requirements of their customers.

In many vehicle applications, access to these components requires partial dashboard removal, making repairs costly due to the labour intensive nature of the process, which further elevates the requirement for a high-quality replacement product, making it a decisive factor to ensure long term reliability and customer satisfaction.

Nissens and AVA approach the market with complementary strengths. Nissens focuses on premium quality thermal management solutions designed to match original equipment (OE) performance standards and deliver dependable long term operation. Its heater and blower products are developed according to Genuine Nissens Quality standards, providing workshops with confidence in fitment, efficiency and durability.

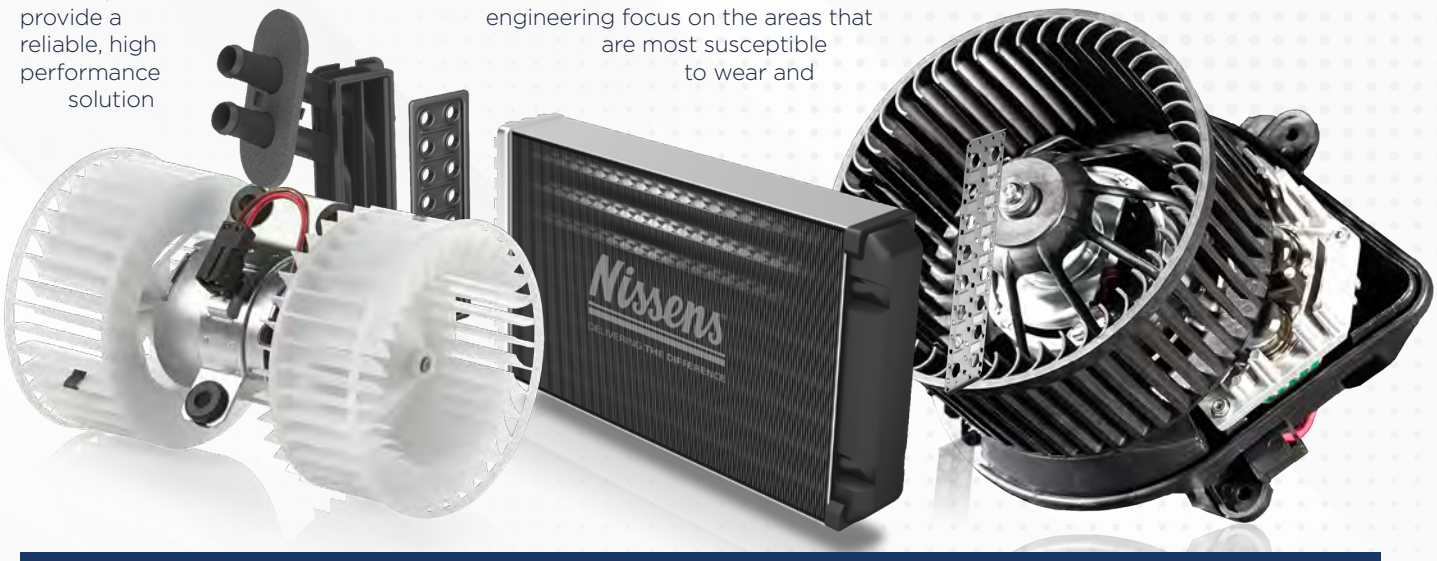
At the same time, AVA offers a smart, value orientated alternative, tailored to the needs of the independent aftermarket. Designed specifically for aftermarket applications, AVA products combine dependable performance with strong value, making them an attractive choice for those more cost conscious repairs, but without compromising the essential quality requirements.

Both brands share the same engineering focus on the areas that are most susceptible to wear and failure. The heaters feature high performance core tubes with turbulators, louvred fins for improved heat exchange and EPDM gaskets that resist thermal stress. The blowers incorporate robust electric motor armatures, durable carbon brushes with surge protection, and reliable control units and resistors to ensure long service life and stable performance.

From an installation perspective, the products are designed with workshop efficiency in mind. Products are engineered for straightforward fitment, and where required, installation hardware such as clips, bolts and fasteners are supplied in the box to help reduce fitting time and complexity.

The combined Nissens and AVA offering provides the flexibility to address a broad spectrum of market needs, enabling workshops to supply the right heater or blower solution for virtually every requirement, helping to ensure reliable cabin comfort, effective demisting performance and long-term customer satisfaction.

For more information concerning these dependable cabin heaters and blowers, or any other product in the combined Nissens and AVA offering, visit **nissens.com, ava-cooling.com**, or speak to your local branch.



BMW & MINI THERMAL MANAGEMENT - IN DEMAND

CONTROL THE HEAT. PROTECT THE ENGINE.

The BMW/MINI thermal management module plays a critical role in controlling coolant flow and engine temperature across 1.5L and 2.0L petrol applications. As mileage and heat cycles build, internal valve or actuator faults and housing leaks can disrupt coolant control, causing coolant loss, temperature warnings and overheating which, if left unresolved, can lead to serious engine damage and potentially complete engine failure.

More mileage, more thermal stress - making heat management module replacement a growing cooling system repair opportunity.



THE BGA SOLUTION.

BGA's CT0932 Thermo Management Module provides a complete replacement solution for BMW and MINI 1.5L and 2.0L petrol applications, helping restore accurate coolant flow, correct engine warm-up and stable operating temperature.

Covering key BMW and MINI applications, CT0932 delivers broad vehicle coverage across both everyday and higher-output petrol models.

Designed as a direct OE-reference replacement, it gives workshops a reliable solution for restoring cooling system control across a wide range of BMW and MINI applications.



BMW & MINI
COOPER / 1 SERIES / COUNTRYMAN

CT0932

GUARANTEED ORIGINAL QUALITY

5 YEAR WARRANTY

PREPARING FOR THE WINTER

STRAIN ON VEHICLE ELECTRICS



With the colder months approaching, independent workshops can expect an increase in starting and charging faults as temperatures place additional demands on vehicle electrical systems.

Failed batteries may be the most visible casualty of colder weather, but the root cause can often lie deeper within the vehicle's rotating electrics. As temperatures fall, both starter motors and alternators face significantly greater demands.

Cold weather creates a double challenge at start-up. As temperatures drop towards zero, engine oil becomes thicker, increasing the mechanical resistance that the starter motor must overcome to crank the engine. At the same time, the chemical reaction within a standard 12V battery slows, reducing the available cranking power.

The result is greater strain on the starter motor, which can be required to draw higher currents over longer cranking periods.

Once the engine is running, the electrical demand shifts to the alternator. Heated windscreens, heated seats, auxiliary cabin heaters and constant lighting all add to the load, with modern vehicle electrical systems operating close to peak capacity throughout the winter months.

"The autumn and winter months magnify any minor flaw in a vehicle's charging or starting circuit," explains Ian Mattacola, Product and Brand Manager at HELLA. "When an alternator has to constantly supply heavy loads to keep up with auxiliary electronics while recharging a depleted battery, low-grade components suffer from thermal fatigue and burnt diode packs. In severe conditions, relying on budget replacement parts quickly leads to premature failures and frustrating workshop comebacks."

For technicians carrying out seasonal servicing, taking a complete system approach can help identify potential problems before they result in a breakdown.

One area to check is dynamic voltage drop. Corroded earth straps or frayed main battery cables can introduce high resistance into the circuit, starving the starter motor of voltage while also forcing the alternator to work harder.

HELLA recommends measuring voltage drop under real electrical load rather than relying solely on static measurements across the battery terminals. This can help identify resistance that may otherwise remain undetected during a routine inspection.

Smart charging communication should also be verified when diagnosing or replacing an alternator. Modern units communicate directly with the engine ECU using LIN-bus or BSS serial protocols, allowing charging output to be regulated according to factors including electrical load and temperature.

When a failing alternator is replaced, ensuring protocol compatibility with OE standards is therefore essential to maintain the vehicle's correct charge control strategy.

Component quality is another important consideration, particularly when workshops are operating at capacity during the winter period.

"HELLA's rotating electrics programme covers more than 1,300 references across passenger cars, light commercial vehicles and heavy-duty vehicles," said Ian. "Every unit is validated to strict OE standards at HELLA's Competence Centre, with starter motor test benches handling up to 9kW and alternator testing up to 600A."

For technicians, this testing is designed to provide reliable performance under the maximum electrical demands encountered during the winter months.

For garages, taking a proactive approach to voltage drop, charging communication and component quality can help deliver reliable repairs while reducing the risk of premature failures and costly comebacks.



Scan the QR code
For further details about HELLA's rotating electrics programme.

DRIVEN BY EXPERTISE.

ONE THING IN COMMON



COMPETENCE IN ALL 4 KEY ENGINE SYSTEMS – WHERE RELIABILITY MATTERS.

Whether for passenger cars, light and heavy commercial vehicles or even tractors – the range of vehicles fitted with INA parts is nearly unlimited. What do they all have in common? With INA, they profit from highest precision, maximum durability, and outstanding Schaeffler quality.
Schaeffler Vehicle Lifetime Solutions offers a comprehensive portfolio of aftermarket repair solutions under the INA brand.

From timing and auxiliary drives to valve trains and cooling systems, Schaeffler is a key development partner of leading car manufacturers and an OE supplier of current and future technologies such as the 48-volt hybrid systems that will play an increasingly important role in future repairs and maintenance at independent workshops.

INA – YOUR EXPERT ENGINE PARTNER

Good reasons to choose the aftermarket's No. 1

Strong OE heritage
Leveraging extensive OE know-how, INA is the leading OE partner for key engine systems, collaborating with all relevant OEMs in the PassCar and LCV sectors.

No. 1 full-range provider
As the aftermarket's No. 1 full-range provider, INA equips workshops with innovative complete repair solutions that contain everything they need to carry out a professional system replacement in just one box.

Future-proof portfolio
Continuous range extension and life-cycle-oriented portfolio management ensure a future-proof product offering, covering traditional combustion, hybrid and electric vehicles.

Best-in-Class coverage
With the strongest coverage and an ever-growing range of products, INA offers a relevant, up-to-date portfolio of components for virtually every car on the road.



INA Timing Belt Kits



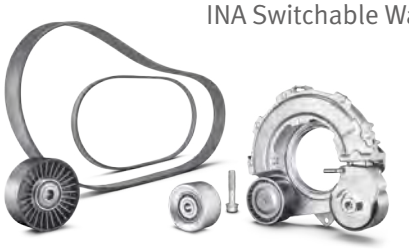
INA Timing Chain Kits



INA Control Valves



INA Switchable Water Pumps



INA FEAD Kits

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SCHAEFFLER

HOW TO ENSURE
TOP MARKS
ACROSS THE BOARD



NGK Ignition Parts are often the OEM fitment of choice but even a 10 out of 10 part depends on correct installation. Do you know the top five impacts of under or over-torquing?

1. Thermal Overload & Pre-Ignition
Insufficient torque results in poor thread engagement between components and the engine, disrupting thermal conduction and the resulting temperature spikes can affect pre-ignition and electrodes.

2. Combustion Blow-By & Compression Loss
If under torqued, high pressure combustion gases can escape past the threads, resulting in compression loss, carbon packing in the thread well, vibration damage and compromise ignition component integrity (i.e. plugs, coil boots).

3. Cylinder Head Thread Stripping
Over torquing stresses thread engagement beyond the yield strength of aluminium heads, stripping threads or galling metal.

4. Shell Distortion & Insulator Fracture
Excessive torque can distort the thin steel plug shell. This stress can fracture the internal ceramic insulator, leading to dielectric breakdown, misfires, and secondary flashover under load, or worst case, go unnoticed with the internal disruption of the heat transfer path, leading to severe engine damage.

5. Shear Failure & Plug Ejection
In a worst-case scenario, over-tightening glow plugs can lead to excessive seating pressure, leading to shearing off at the hex during future removal. Conversely, loose plugs endure severe fatigue from cylinder pressure, eventually stripping remaining threads and possibly ejecting from the head under engine load.

Key Takeaway: Always adhere to manufacturer torque specs to ensure NGK Spark Plugs and Glow Plugs (installed dry without additional lubricant) provide exceptional ignition performance in even the harshest engine environments.

NGK part selection has never been easier via the Niterra Part Finder at www.ngkpartfinder.co.uk

NGK
IGNITION PARTS

+LINE.

OE-LEVEL QUALITY WITH TECHNICAL SUPPORT TO MATCH



As temperatures begin to fall, vehicle electrical systems come under greater pressure, making winter one of the busiest periods for starter motor and alternator-related faults.

Cold conditions can make engine oil thicker, requiring more effort to turn the engine during starting. At the same time, lower temperatures reduce battery capacity, placing additional demand on the starter motor. Once the vehicle is running, increased use of heaters, blowers, heated seats and lighting can also add significantly to the workload placed on the alternator.

For workshops, however, successfully resolving winter electrical problems requires more than simply identifying and replacing a component. Understanding how modern charging systems operate is becoming increasingly important.

A common issue WAI encounters following the installation of a modern alternator is the assumption that an unusual voltage reading indicates a fault. If the voltage appears higher or lower than technicians might expect from a conventional alternator, the unit can incorrectly be diagnosed as overcharging or defective.

Modern alternators can be described in several ways, including Smart, computer-controlled, ECU/PCM-controlled, COM, DFM, ISTARS and ISG (48V). While terminology varies, the key principle remains the same: operation is controlled by the vehicle's onboard computer.

Technicians therefore need to understand not only the alternator itself, but also how it communicates with the vehicle. Unlike a conventional system, alternator voltage can fluctuate according to the vehicle's requirements. Charging behaviour can be influenced by several factors, including battery type, state of charge and temperature.



Correct battery specification is equally important. A smart alternator needs to recognise the appropriate battery for the vehicle, which is why WAI recommends always following the vehicle manufacturer's guidance when selecting and fitting a replacement.

Quality across the +Line range

WAI's +Line portfolio provides workshops with high-quality rotating electrical solutions developed with reliability, performance and consistent quality at their core. The range covers passenger cars, LCVs, HGVs, industrial, marine and off-road applications, combining extensive product coverage with strong availability and competitive pricing.

Backed by more than 30 years of expertise, +Line products are engineered to meet or exceed OE standards and manufactured under stringent quality controls. Products are also supported by acomprehensive warranty, providing workshops with confidence in the OE-equivalent replacements they fit.

Choosing dependable components can deliver benefits beyond the initial repair. By helping to minimise downtime and reduce customer returns, workshops can protect their reputation for quality workmanship while supporting profitability.

But the +Line proposition extends beyond the product itself. WAI aims to give technicians access to both high-quality rotating electrics and the technical knowledge required to diagnose problems accurately and efficiently.

Taking a structured approach to diagnosis can save valuable workshop time, increase customer confidence and help keep vehicles on the road, whatever the conditions.

For technicians requiring additional assistance, WAI's expert technical support team is also available to provide advice, guidance and training.

https://psh.eu/en/

Over 30 Years of Experience

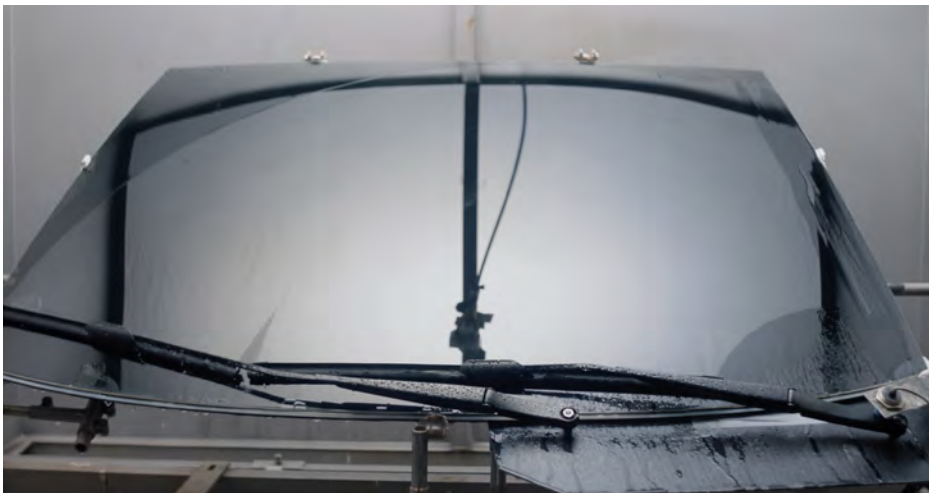
plus line

+LINE is available from your local branch

Invented for life

Bosch wipers under test

At Bosch, the test engineers push the limits of what is possible in the pursuit of visibility and safety. In various durability tests, Bosch wipers must prove their performance. To ensure this, Bosch has many strict quality tests in addition to the prescribed standard tests required for acceptance into the program. These tests are divided into four categories: wiping performance, environmental influences, load tests, and durability.



Strict performance and load tests for optimal function

Wiping performance on the test bench

To ensure optimal wiping performance, the wipers undergo four testing scenarios: wiping quality, acoustics, high-speed contact, and durability. During development, wipers are tested on a windshield in the laboratory, focusing on streaks, smears, water residues, and marks. Only when test requirements are met and the wiping pattern is flawless are the wiper rubber or blades approved for production. An acoustic laboratory tests the wiper system to reduce squeaks and noise, enhancing customer comfort. Wind tunnel and test track evaluations ensure wipers maintain contact at high speeds, verifying their effectiveness during fast driving.

Resistance to environmental influences

The wipers must withstand extreme weather, including prolonged UV exposure and high temperatures, without cracking or deforming. Salt spray tests evaluate corrosion resistance, while temperature cycling tests assess resilience from low to high temperatures. Successful tests show no cracks, deformations, or significant wiping quality loss.

Load test at the limit

In wintry conditions, wipers face intense stress. Bosch conducts load tests, including freezing at -20°C and snow load assessments, to ensure winter suitability. Endurance tests simulate 500,000 wiping cycles to verify durability, while the mechanical robustness of components is evaluated in specialised tests.

Increased resistance

The fourth and final testing category focuses on the wipers' resistance. They are exposed to various aggressive chemicals, and afterwards, the test results are analysed under a microscope to determine if any traces of the substances remain. Bosch experts evaluate all test results according to strict quality standards and continuously improve Bosch wipers. This ensures the high-quality standards of Bosch are met.

5 things

you can rely on with Bosch wipers:

- **#1** outstanding wiping performance
- **#2** quiet wiping
- **#3** increased service life
- **#4** easy installation
- **#5** safety in all weather conditions

For even more Bosch wiper know-how: Simply scan the QR-Code.

MotoRad®



MOTORAD MAP THERMOSTAT

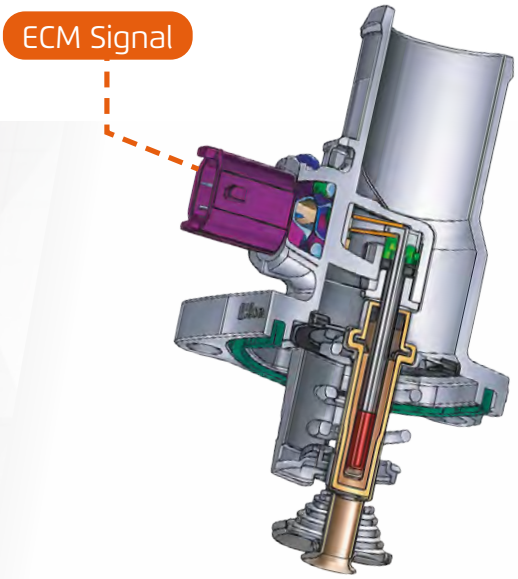
BEYOND TEMPERATURE CONTROL.
The ECM-driven thermostat, engineered by MotoRad.

elring parts ltd



While a standard thermostat responds only to coolant temperature, a MAP thermostat is commanded by the ECM – delivering better fuel economy, lower emissions, and immediate response to engine load.

#1 in European COVERAGE



HOW IT WORKS

- **Smarter Control.** The ECM signals the thermostat to open or stay closed based on engine load – not just temperature.
- **Better Fuel Economy.** At highway speeds, the ECM raises the engine's operating temperature – improving thermodynamic efficiency and reducing fuel consumption.
- **Instant Performance Response.** Under heavy loads, the MAP thermostat opens immediately – reducing coolant temperature and increasing engine performance.

ECM + TEMPERATURE
= dual control

IMPROVED
fuel economy

LOWER
emissions

FAST RESPONSE
to engine load changes

WHY MOTORAD

WE DON'T REVERSE-ENGINEER MAP THERMOSTATS.
WE WERE PART OF BUILDING THEM.

MotoRad supplies MAP thermostat assemblies directly to OEMs

68+ YEARS of thermal management expertise

MULTI-PATENTED THERMOSTAT TECHNOLOGY

OEM SUPPLIER


Standard


Fail Safe


UltraStat


MAP Thermostat


Thermostat Assembly


Thermostatic Coolant Valve (COVA)/ EV

SERVICE NOTE

If the thermostat or its electric actuator fails, the complete assembly must be replaced – it cannot be serviced separately. Failure symptoms: Engine Management Light, reduced fuel economy, increased emissions.

DRIVEN BY BETTER.

FIND THE RIGHT PART

www.motorad.com

1.5 DV5 HEAD GASKET - IN DEMAND

FOUR BRANDS. ONE CRITICAL GASKET.

The PSA 1.5 BlueHDi DV5 engine family operates under high combustion temperatures and repeated thermal cycles, with DPF regeneration and heavy use placing additional stress on the cylinder head gasket. Over time, this can lead to coolant loss, white smoke, compression loss and oil/coolant contamination, with the risk of serious engine damage if left unresolved.

With more than 400,000 compatible UK vehicles, head gasket replacement represents a significant repair opportunity across both passenger cars and LCVs.



THE BGA SOLUTION.

BGA's **CH6700A** Cylinder Head Gasket provides a single replacement solution across key PSA, Ford, Vauxhall/Opel and Toyota 1.5 diesel applications. Featuring Multi-Layer Steel construction and OE-specification sealing geometry, it is engineered for the high pressures and thermal loads of the DV5 engine family, covering more than 400,000 UK vehicles.

ONE GASKET. MULTI-BRAND COVERAGE. COMPLETE CONFIDENCE.

DV5 CAM CARRIER UPGRADE

BGA also offer a fully built 8mm Cam Carrier upgrade for the DV5 engine with **CS2340FK**, providing a complete engine repair and timing system upgrade - all from one trusted brand.



GUARANTEED ORIGINAL QUALITY

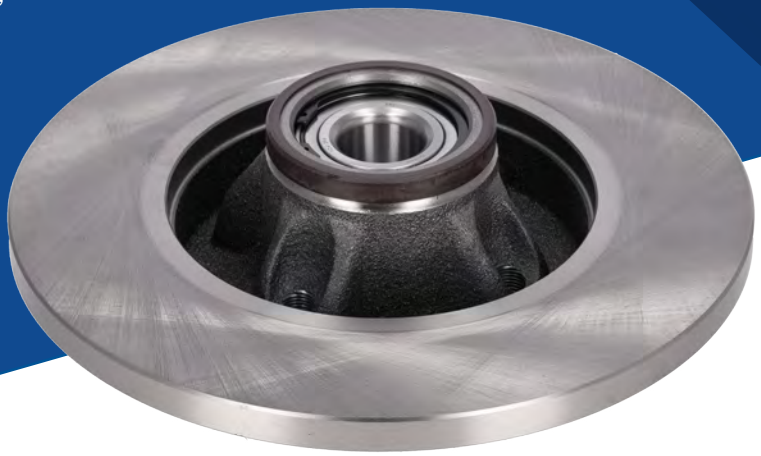
5 YEAR WARRANTY

PROTIPS

Blue Print

ADP154305, ADP154351

To Fit: Various Peugeot, Citroën and DS models



Rear Brake Discs with Integrated Wheel Bearings



Fig. 1 Damaged reluctor due to contact with the sensor

Many Peugeot, Citroën and DS models are equipped with rear brake discs featuring an integrated wheel bearing. In this assembly, the brake disc also acts as the wheel hub, helping to reduce weight. The pre-assembled design also makes replacement quicker and easier for the technician, while eliminating the risk of fitting the bearing with incorrect clearance or seal positioning.

However, care must be taken when fitting this type of brake disc to the stub axle as this disc/bearing assembly is also fitted with a multipole reluctor for the wheel speed sensor.

Once the old brake disc has been removed, inspect the wheel speed sensor and its mounting area for excessive corrosion. Corrosion beneath or around the sensor mounting point can alter the sensor position and impair its operation. In some cases, this may cause the sensor to contact the reluctor and damage the new brake disc assembly (Fig. 1).



Fig. 2 Brake disc and sensor correctly installed

Alternatively, corrosion may increase the air gap between the sensor and the reluctor. This can trigger an anti-lock braking system fault, which may be recorded in the brake control unit as an implausible wheel speed sensor signal.

Before completing the installation:

1. Check that the wheel speed sensor is not contacting the multipole reluctor.
2. Check that the air gap between the sensor and reluctor is correct.
3. If the position or air gap is incorrect, remove the brake disc and sensor.
4. Clean all corrosion from the sensor seating area.
5. Inspect the sensor and replace it if damaged.
6. Refit the sensor and reinstall the brake disc.
7. Confirm that a clear air gap of **1–2 mm** is visible between the reluctor and sensor (Fig. 2).

For more technical information, visit **partsfinder.bilsteingroup.com.**

Right First Time®

www.blue-print.com

STEERING & SUSPENSION: MORE THAN JUST THE FAILED COMPONENT

Steering and suspension components operate under continuous loads from braking, acceleration, cornering and uneven road surfaces. As components wear, however, the effects can extend far beyond the part that has developed the original fault.

Suspension defects remain one of the most common issues identified during MOT testing. ***8.73% of tests record a suspension-related defect, with a further 1.97% recording a steering-related issue.*** For technicians, this makes accurate diagnosis and correct fitment particularly important, but replacing the visibly failed component may only be part of the repair.



Excessive play in a ball joint, control arm bush or steering joint can allow unwanted wheel movement, potentially altering the vehicle's intended geometry under braking, acceleration and cornering.

The effects may appear elsewhere. Uneven inner or outer shoulder tyre wear, for example, can be the result of worn steering or suspension components allowing the wheel position to change. Simply replacing the tyre without identifying the underlying cause risks the same wear pattern returning.

Where a component capable of influencing wheel geometry has been replaced, ***wheel alignment should be checked and adjusted where required.***

The condition of the corresponding component on the opposite side should also form part of the repair assessment. Components on the same axle have ***typically covered the same mileage and experienced similar operating conditions***, meaning that when one has reached the end of its service life, the corresponding component may also have experienced significant deterioration.

This is particularly important with ***springs and dampers***, where replacing only one side can leave different spring, ride-height or damping characteristics across the axle. This imbalance can influence ***body control, steering response, braking stability and handling.***

For other geometry-related suspension components, technicians should assess the age and condition of the corresponding part. Where it is similarly worn or historic, replacement can help restore more consistent characteristics across the axle rather than combining a new component with one already significantly into its service life.

Correct installation is equally important. Steering and suspension components operate under significant loads, making manufacturer-specified ***torque settings, tightening sequences, component orientation and replacement fasteners*** essential considerations.

Rubber-bushed components require particular attention. Where specified by the vehicle manufacturer, final tightening should be completed with the suspension at the correct ride height or operating position. Tightening with the suspension hanging can preload the bush once the vehicle is lowered, potentially restricting its intended movement and accelerating deterioration.

Modern vehicles can add another consideration. ***ABS, ESC, traction control and steering-angle-related systems*** rely on predictable vehicle and wheel behaviour. Following repairs that affect steering position or suspension geometry, technicians should therefore consider whether alignment, diagnostic resets or calibration procedures are required.

At FAI, we believe a quality steering and suspension repair should go beyond replacing the component that has failed. Technicians should consider ***why it failed, the condition of related and corresponding components, tyre wear, wheel geometry and the correct installation procedure.***

Check the component. Consider the axle. Protect the geometry. Complete the repair.

EXPLORE THE FULL FAI STEERING & SUSPENSION RANGE ON THE FAI ECAT

EuroFlo
ULTRA PREMIUM EMISSION SYSTEMS

Premium materials, OE level engineering and continuous factory investment are driving EuroFlo's ultra-premium emissions programme.

PREMIUM MATERIALS FOR EXCEPTIONAL DURABILITY

Even with rising raw material costs, EuroFlo remains committed to using premium-grade, fully aluminised materials across its exhaust range, including:

- **Double layer 0.6mm steel silencer bodies**
- **1.5mm steel baffles**
- **1.5mm or 2.0mm steel pipes**

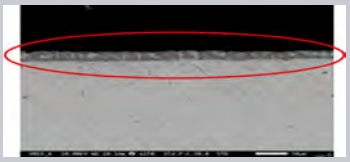
All raw materials are benchmarked against strict specifications to ensure consistency and performance.

EuroFlo uses Al-Si coated steel for proven stability under high-temperature, real-world conditions. Some other manufacturers use Al-Zn coatings which are not designed for sustained heat exposure.

A recent microscopic comparison with a competitors product showed that EuroFlo's aluminised coating is approximately twice as thick, delivering significantly greater protection, durability and long-term reliability.



EuroFlo Test Sample



Competitor Test Sample

Sample	Coating thickness measurement (µm)						
	1	2	3	4	5	Average Value	Standard Deviation
EuroFlo	44.62	47.56	46.88	46.09	40.14	45.06	2.65
Competitor	26.26	23.79	22.56	21.33	22.97	23.38	1.65

O.E. LEVEL ENGINEERING & PERFORMANCE

Every EuroFlo exhaust component is meticulously reverse-engineered from O.E. to ensure exact back-pressure, accurate noise levels and a performance that meets or exceeds OE standards.

Our silencers use unique sound-absorption chambers with mechanically assembled interiors to ensure consistent, long-lasting acoustic performance and true O.E. level reliability, enhanced by EuroFlo's signature engineering excellence.

FACTORY INVESTMENT: DRIVING PERFORMANCE & SUSTAINABILITY

EuroFlo continues to invest heavily in its manufacturing operations to maximise productivity, quality and environmental responsibility. Recent upgrades include a new **laser cutting machine** for greater precision, **upgraded and fully standardised welding equipment and systems** for consistent, high-quality welds, and **photovoltaic panels** that generate renewable on-site energy and reduce reliance on conventional power sources.

CONTINUOUS IMPROVEMENT OF QUALITY PROCESSES

EuroFlo continually strengthens its quality management through enhanced specification methods, reinforced control processes and added checkpoints for consistency.

Heavy-duty 'bullet proof' jigs maintain precise geometry for perfect fitment, while robot welders deliver uniform, porosity-free welds.

Multi-stage leak testing ensures optimal performance, maximum power, reduced fuel use, and lower emissions across every exhaust component produced.

This commitment ensures that every stage of production meets the highest standards.

WHY CHOOSE EUROFLO?

- **ULTRA PREMIUM QUALITY**
- **Industry leading 3 year, no quibble warranty**
- **Unbeatable competitiveness**
- **Rapid development: 15+ new references every month**
- **Extensive range and outstanding availability**
- **Accurate, industry leading cataloguing**
- **Fast, frequent same day logistics for most stockists**

EuroFlo's precision engineering allows us to set exceptionally high standards — standards that enable us to confidently offer our industry leading 3 year, no quibble warranty across the entire exhaust range.



DELIVERY & AVAILABILITY

As a distributor of EuroFlo emissions products, our branches have 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!

Premium Emission Systems • Premium Emission Systems
3 Year Warranty
EuroFlo

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

HITACHI ASTEMO IS NOW ASTEMO

Astemo
Mobility Beyond

Same product. Same part number. Same quality commitment.

With OE know-how and decades of experience in the European aftermarket, Astemo brings together automotive components for today's vehicle technician - from ignition and fuel delivery to engine management, emissions and sensors.



elring parts ltd

OE KNOW-HOW. AFTERMARKET EXPERIENCE.

IGNITION

Astemo's ignition offering includes ignition coils, ignition cable sets and ignition modules, supported by workshop services including extraction tools and spark plug grease.

AIR & ENGINE MANAGEMENT

The range includes air flow sensors, throttle bodies, intake manifold pressure sensors and camshaft and crankshaft sensors, drawing on Astemo's established OE manufacturing experience.

FUEL DELIVERY

Across the fuel system, Astemo offers fuel pumps and modules, fuel pump control units, high pressure pumps and injectors. Astemo is an OE manufacturer of fuel pumps and throttle bodies.

GLOW PLUG CONTROL

For diesel applications, the range includes glow plug controllers, with Astemo also offering controller and glow plug kits together with glow plug grease.

THE ASTEMO RANGE



Ignition Coil



Air Flow Sensor



Glow Plug Controller



Fuel Pump & Module



Throttle Body



Fuel Pump Control Unit



High Pressure Pump



Exhaust Pressure Sensor



Lambda Sensor



Exhaust Gas Temperature Sensor



EGR Valve & Cooler



Interior Blower Regulator & Resistor



Intake Manifold Pressure Sensor



Camshaft and Crankshaft Sensor



Wheel Speed Sensor



Injector



Ignition Cable Set



Alternator Regulator



Ignition Module

HITACHI ASTEMO IS NOW ASTEMO

OE know-how and decades of experience in the European aftermarket. Technical support & training available.

Astemo

DON'T TAKE THE RISK



A damaged or deteriorating sump doesn't have to mean a trip to the main dealer. And when an older vehicle comes in for a service, taking a few seconds to check both the sump and sump plug could prevent a routine oil change from becoming an unnecessary headache.

Every garage knows the value of ramp time. A routine service should be exactly that, routine. But problems around the sump and its plug can quickly turn a straightforward oil change into something more complicated.

Corrosion, impact damage or damaged threads can mean the sump itself has reached the end of its useful life. The good news is that replacement sumps are readily available through the aftermarket, with Trupart offering extensive coverage across the UK car parc. But often it starts with something much smaller. The common sump plug.

As vehicles get older, particularly once they move beyond five years, the sump plug may already have been removed and refitted numerous times. Add heat cycles, road salt, corrosion and the occasional less-than-careful previous repair, and it is worth asking a simple question. Does it really look good enough to put back?

PLASTIC OR METAL, CHECK IT FIRST

Modern vehicle design means technicians are now likely to encounter a mixture of traditional metal sumps and newer composite designs.

Plastic or composite sumps and plugs can be found across a growing number of applications, including vehicles from Volkswagen, Audi, SEAT, Škoda, Ford and BMW. Depending on the application, the plug may incorporate its own sealing arrangement and can show signs of deterioration or damage after repeated servicing.

Traditional metal sumps remain equally familiar on vehicles from manufacturers including Vauxhall, Nissan, Toyota and Renault. Here the signs may be different. Corrosion, damaged threads, worn sealing surfaces or a rounded plug head can all indicate that refitting the old plug simply isn't worth the risk.

> **"A comprehensive range of replacement sumps and sump plugs covering popular applications across the UK car parc"**

There is no suggestion that every sump plug should automatically be replaced because a vehicle has reached a particular age. But on a five-, six- or ten-year-old vehicle, taking a few seconds to inspect both the sump and plug before refitting makes good workshop sense.

A SMALL PART CAN CAUSE A BIG DELAY

The oil is out. The new filter is fitted. Then you notice the sump plug isn't quite right, or worse, the threads in the sump itself are damaged.

Suddenly a routine service can leave a vehicle occupying valuable ramp space while you wait for another parts delivery. Worse still, refit a questionable plug and discover a leak after filling the engine with fresh oil, and a straightforward oil change has become considerably less routine.

The answer is simple. Check before you refit. If the plug shows signs of wear, damage or corrosion, don't take the risk. Change it. And if the problem is with the sump itself, remember that an aftermarket replacement may already be readily available.

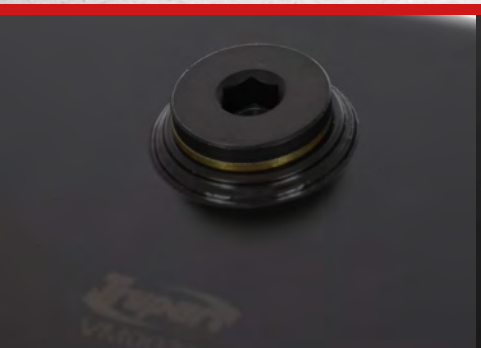
TRUPART, QUALITY YOU CAN SEE

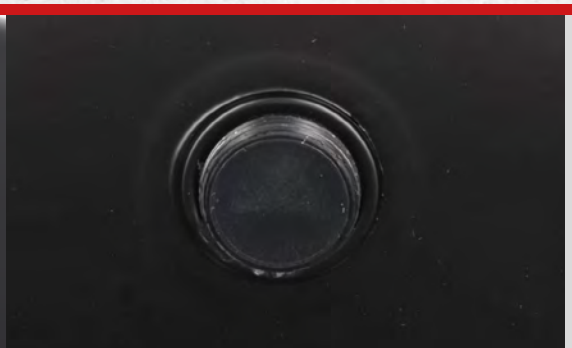
Trupart offers a comprehensive range of replacement sumps and sump plugs covering popular applications across the UK car parc.

Whether the job calls for a replacement plug or a complete sump due to corrosion, impact damage, damaged threads or general deterioration, technicians can source the parts they need through the aftermarket without automatically turning to the main dealer.

Quality is central to the Trupart range. Trupart is so confident in the quality of its sumps that the Trupart name is laser-etched directly onto the product, providing clear identification and leaving no doubt about who prepared the part.

Trupart's Matching Quality programme reinforces that commitment across the range. So next time an older vehicle comes onto the ramp for a service, take a few seconds before automatically putting the old sump plug back. Check the plug. Check the sump. And if either needs replacing, don't take the risk.





Trupart® automotive

QUALITY THAT KEEPS YOU MOVING

FIRST LINE
THE ALL MAKES SPECIALIST

PREMIUM QUALITY STEERING & SUSPENSION

OE MATCHING QUALITY

The demand for high-quality Steering & Suspension components continues to rise as vehicles become more advanced and road conditions more demanding. These critical parts ensure safe handling, ride comfort, and vehicle stability – which is why worn or failing components must be replaced promptly with trusted, OE-matching quality parts.

First Line Ltd offers an extensive range covering thousands of passenger car and light commercial vehicle applications – all available through your local branch in First Line brands.

More than 8,700 Steering & Suspension parts available (inc. Engine Mounts).

FIRST LINE COVERS EV'S & HYBRIDS

Not only does First Line offer a complete solution for Internal Combustion Engine (I.C.E.) vehicles, it is proud to offer a rapidly growing range for electric vehicles (E.V) and hybrid applications including parts for Chinese vehicle manufacturers such as BYD and MG to reflect the changing demands of the UK aftermarket.

To date, First Line has introduced more than 2,000 parts across 360 EV applications, with an additional 4,000 parts covering 450 hybrid applications. This substantial investment demonstrates a clear commitment to equipping the aftermarket with the breadth and depth of coverage required to meet future servicing demands, helping motor factors remain competitive in a rapidly evolving market.



Example Coverage

JAGUAR F-PACE HYBRID (2015>)

95+ Part Numbers

Example Coverage

TESLA MODEL 3 EV (2017>)

45+ Part Numbers



SAMPLE POPULAR REFERENCES AVAILABLE NOW

Here are a selection of the most requested applications entering the workshops today.

Suspension Arm:

Nissan Qashqai 2018>2020 (FCA7439 & FCA7440)

Ball Joint:

VAG A3, Golf 2011> (FBJ5463 & FBJ5464)

Stabiliser Link:

Audi A3 2003> (FDL6732)

Tie Rod End:

Ford Fiesta VI 2008>2017 (FTR5520 & FTR5521)

Engine Mounting:

Mercedes E-Class 2010>2016 (FEM4475)

Rack End:

Ford Kuga 2019> (FTR6282)

SAMPLE EV & HYBRID REFERENCES AVAILABLE NOW

First Line offers a comprehensive range of EV & Hybrid part numbers with examples including:

Stabiliser Link:

Tesla Model S 2015> (FDL7695)

Suspension Arm:

BYD Dolphin 2021> (FCA8239)

Top Strut Mounting:

Cupra Born 2021> (FSM5609)

Ball Joint:

MG HS 2018> (FBJ5808)

CHECK OUT OUR WEBCAT

Scan the WebCat QR code to view the extensive First Line parts catalogue

MAKE FIRST LINE YOUR FIRST CHOICE FOR STEERING & SUSPENSION

www.firstlineltd.com

TROUBLE SHOOTING: SHOCK ABSORBERS

KYB offers important diagnostic advice about what you should look for when inspecting shock absorbers.

Our Precision, Your Advantage

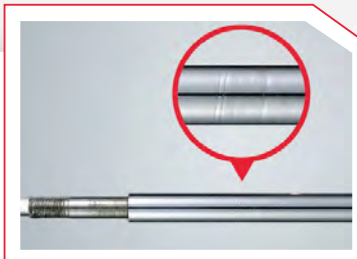




PISTON ROD SURFACE PEELING

CAUSE: A worn, damaged or absent protection kit, meaning the piston rod has been impacted by road debris and salt, causing damage.

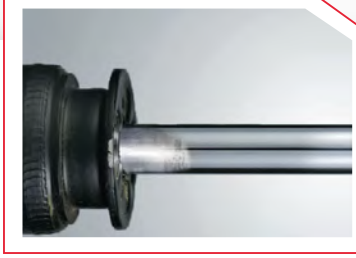
RESULT:
- Increased chance of oil leak or loss.
- Reduced effectiveness of shock absorber.



MECHANIC PISTON DAMAGE

CAUSE: The use of improper tools on the piston rod, often caused by an adjustable wrench or hydraulic pliers.

RESULT:
- Compromised chrome surface.
- Increased chance of oil leak or loss.



TEARING

CAUSE: Pressure placed on piston rod caused by poorly aligned suspension. May occur after a collision or incorrect aligning of a mounting kit or spring.

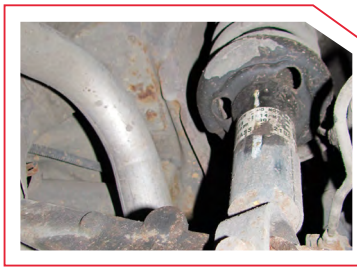
RESULT:
- Compromised chrome surface.
- Increased chance of oil leak or loss.



BROKEN PISTON ROD

CAUSE:
- Incorrect installation due to use of improper tools such as an impact wrench.
- Exceeding the recommended torque.

RESULT:
- Complete failure of shock absorber.



OIL LEAK

CAUSE:
- Damage to piston rod and/or oil seal.
- Excessive operation period (50,000 miles).

RESULT:
- Reduction in damping force
- Impacted safety and comfort.
- Accelerated wear of other components.



DAMAGED OUTER CYLINDER

CAUSE:
- External impact.

RESULT:
- Compromised structural integrity.
- Increased chance of oil leak.
- Potential collapse and failure of unit.



RUSTED CYLINDER

CAUSE:
- Corrosion from water, accelerated by corrosive road salts.
- Excessive operation period (50,000 miles).

RESULT:
- Compromised chrome surface.
- Increased chance of oil leak or loss.



BROKEN BOTTOM FIXATION

CAUSE:
- Excessive axle load.
- Incorrect torque when tightening threaded joints.
- Repair works performed with suspension not loaded with vehicle weight.

RESULT:
- Vibrations and noise.
- Accelerated wear of other components.

FOR MORE ADVICE AND A RANGE OF SUPPORT TOOLS, PLEASE SCAN HERE:

KYB SUSPENSION SOLUTIONS

COMMA®

made for mechanics



Winter is coming

Cold weather significantly changes the way engine oil behaves. Cold starts mean the engine spends more time operating below its ideal temperature.

As temperatures drop, oil becomes thicker and takes longer to circulate. The first few seconds after starting a vehicle are tough on an engine, with key components relying on the oil reaching them quickly enough to provide protection. That's why choosing the right oil is about far more than matching the viscosity.

Every Specification Matters

Modern engines are designed around increasingly specific lubricant requirements. The manufacturer specification defines how the oil should perform, including low temperature flow, fuel economy and compatibility. Match the grade but miss the specification and you could be putting in an oil that was never designed for that engine, at the time of year when its performance matters most.

The Right Oil for Every Vehicle

With a Comma oil available for nearly every make and model in the UK car parc, Comma builds its motor oil range around vehicle manufacturer requirements and OEM approvals, so you can protect customer vehicles whatever the season.

Comma's online Vehicle Lookup gives workshops a vehicle-specific lubricant recommendation, backed by Comma's 100% Compatibility Guarantee.

Look After Your Customers This Winter

With an unknown forecast ahead, it's good to be prepared.

Check oil stock, always check specification accuracy and be ready for your customers' vehicles this winter.

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

commaoil.com



WATER, WEAR AND TWO MICRONS: WHY DIESEL FUEL FILTRATION KEEPS GETTING HARDER

Ask a technician what a fuel filter does and the answer is usually “keeps the dirt out.” That is half the job. On a modern common-rail engine the filter is also the last line of defence against water, and the fuel flowing through UK forecourts and depots is making that harder, not easier. WIX has been building filtration since 1939; few requirements have tightened faster than this one.

Clearances Measured in Microns

Common-rail injection runs at up to roughly 2,500 bar and sliding clearances inside an injector are typically 1–3 µm. A human hair is around 70 µm. Particles in the 2–10 µm band are therefore large enough to abrade needle guides and control-valve seats. Free water adds three further failure modes: lost lubricity, corrosion, whose rust particles become abrasives in their own right, and flash-boiling at the nozzle tip, which erodes spray-hole geometry.

Where the Water Comes From

UK pump diesel is B7 to BS EN 590, containing up to 7% fatty acid methyl ester (FAME), with water limited to 200 mg/kg tested to EN ISO 12937. FAME is hygroscopic, so blended fuel carries more dissolved water than mineral diesel. As tank temperature falls overnight, some of it drops out as free droplets, exactly the condition that feeds microbial growth, or “diesel bug.”

Two Routes to Separation Inside the Filter

To prevent these issues, coalescing filter media (paper) force fine droplets to merge until they are heavy enough to fall into a collection bowl. Alternatively, hydrophobic media strip water at the media face itself. WIX filters also apply multi-layer filter media for finer particle capture. The weak point in every design is chemistry: detergents and lubricity improvers lower fuel–water interfacial tension, stabilising droplets and cutting separation efficiency; hence, the better-quality media, the better the filtration process is retained.

Five Points for the Workshop

- Drain water-drain bowls (if applicable) at every service; treat a water-in-fuel lamp as urgent.
- Change at the OEM interval, pressure drop, not visible dirt, is the limit.
- Never pre-fill an element with unfiltered fuel; prime per OEM procedure.
- Fit the seals supplied in the box; a weeping joint draws in air and moisture.
- After a suspected bad-fuel event, sample and change the filter before condemning injectors.

Ultimately, a quality fuel filter is now a pre-requisite for a successful service and no come-backs. Cutting corners on a cheaper, seemingly equivalent part often neglects the technology required to meet all fuel filtering requirements.

For fuel filters, don’t just think dirt….think water as well.

WIX Filters. They get the job done.



WWW.WIXEUROPE.COM



DMF FULLPACK™

THE ONE-BOX REVOLUTION FOR UK GARAGES

As modern vehicle drivetrains become increasingly complex to meet strict efficiency standards, transmission repairs have become some of the most technical and labour-intensive jobs for independent UK workshops. With the aftermarket demand for Dual Mass Flywheel (DMF) replacements accelerating rapidly, fitting a reliable replacement brand is critical. Valeo, a leading global Original Equipment (OE) manufacturer with over 90 years of transmission heritage, answers this challenge with the DMF FULLPACK™ - the ultimate all-in-one solution.

THE COMPLETE "ONE-BOX" SOLUTION

Nothing stalls workshop productivity faster than realizing mid-job that parts are incompatible or missing. The DMF FULLPACK™ eliminates this uncertainty by delivering a fully matched repair solution in a single box. Every kit includes:

- **Dual Mass Flywheel (DMF):** Precision-calibrated to match exact torque dampening specifications.
- **Complete Clutch Kit:** A premium friction disc and cover perfectly matched to the flywheel.
- **Actuation Component:** A Concentric Slave Cylinder (CSC) or a conventional release bearing.
- **Hardware:** All required high-tensile mounting bolts and specialized fittings.

STREAMLINING REPAIRS

Reusing a worn DMF or mixing brands can result in mismatched performance, heavy vibration, and premature component failure. By replacing all wear parts simultaneously with compatible, OE-quality components, garages guarantee matched-set longevity. This streamlined approach means just one part reference to look up and one order to place, effectively protecting your workshop against costly warranty comebacks.

BEST-IN-MARKET COVERAGE & INNOVATION

Valeo offers the best aftermarket coverage available, having introduced nearly 100 new DMF FullPACK references in just the last 18 months. Supporting standard manual, automatic, and dual-clutch platforms, Valeo continues to push boundaries. The PACE Award-winning Pendulum Dual Mass Flywheel Gen.2 drastically reduces Noise, Vibration, and Harshness (NVH) for enhanced driving comfort. This cutting-edge damping technology is scheduled to launch within the DWC FullPACK range in Q4 2026.

© 2026 - Valeo Service - Société par Actions Simplifiée - Capital 12.900.000 euros - 306 486 408 R.C.S. Bobigny - 70, rue Pleyel 93200 Saint-Denis - France

SPECIALIST CLUB

Are you a mechanic? One DMF FULLPACK™ scan unlocks a £10 voucher in our loyalty program.

TECH ASSIST

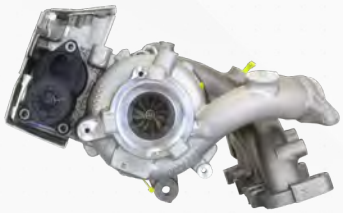
Check our free FullPack DMF fitting guide in Valeo Tech Assist.

THE **RIGHT TURBO** FOR **EVERY JOB**
ONE TURBO. FOUR CHOICES.

As the aftermarket continues to evolve, and so too customer demands, choosing between quality and cost is no longer an option. Cue Carwood's multi-tiered product strategy for turbos.

By providing a range of solutions; OE from leading brands like Mitsubishi, BorgWarner, Garrett and BMTS, OE-quality and aftermarket-quality, coupled with our own remanufactured units, Carwood can now offer aftermarket businesses more choice for an even wider range of vehicles. From budget-conscious, value-driven repairs all the way through to premium OE pricing. Critically all four options offer proven OE power output, torque, fuel economy and emissions, so you can still install with confidence.

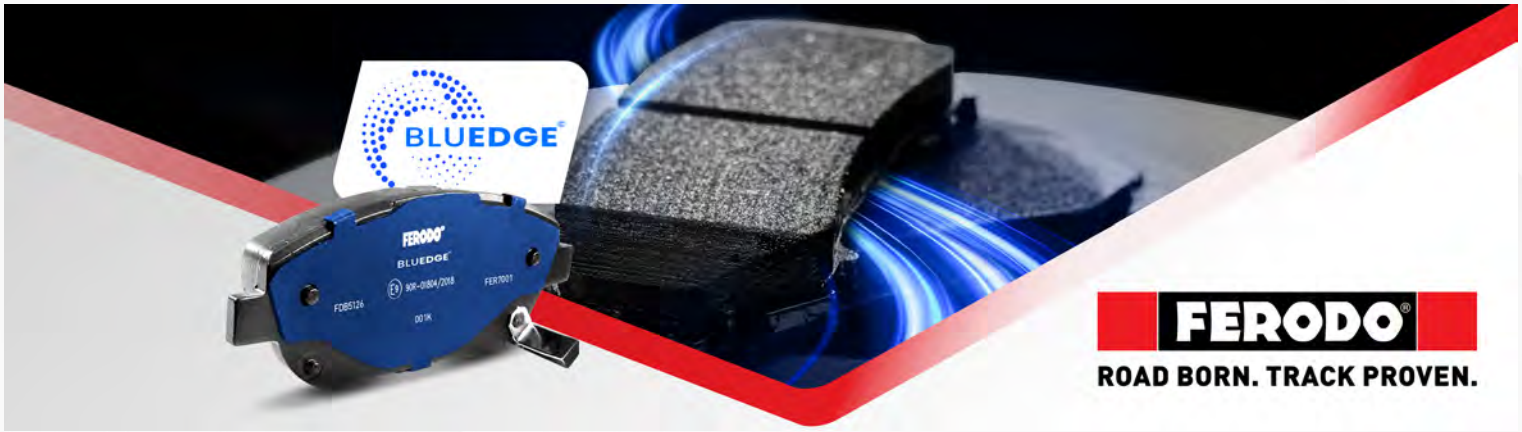
Will Johnson, Head of Business – Turbochargers, at Carwood explains why. "We recognise that the owner of a vehicle may have different service and repair needs based on their individual circumstances and the type, age and value of the vehicle. Take a late-model, high-value hybrid vehicle, just out of warranty versus a 13-year-old about-town car where the cost of repair is disproportionately high compared to that of the vehicle. The likelihood is they will require different solutions – our new tiered strategy aims to provide just that. Allowing you to meet a wider range of customer requirements, whilst continuing to benefit from Carwood's technical expertise and support."

OE NEW	OE-QUALITY NEW	CARWOOD REMAN	AFTERMARKET-QUALITY NEW
			
BorgWarner + BMTS + Mitsubishi + Garrett + IHI + Continental	BMTS	Carwood	Carwood
Same as part fitted on the assembly line	Engineered to the same exacting standards as BMTS OE	Restored to manufacturer's original spec - sometimes better	Affordable, fit-for-purpose turbo range
100% coverage from start of vehicle production	Broad all makes coverage	Extensive vehicle lifetime coverage	All makes with a focus on older/high mileage
1.5k+ SKUs	400+ SKUs	7.5k+ SKUs	150+ SKUs
Premium OEM pricing	Mid-tier pricing	Typically 25% less than new OE	Value-led pricing
2-year warranty	2-year warranty	3-year warranty	2-year warranty
Fitting kit varies by OEM	Full fitting kit	Full fitting kit	Lite fitting kit
New manufacturing footprint	New manufacturing footprint	Saves material, energy and waste-to-landfill	New manufacturing footprint
Why choose? For customers who want the assurance of an original part and/or late-model vehicle repairs under warranty	**Why choose?** For genuine OEM-level performance across a wider range	**Why choose?** For a no-compromise, cost-effective and sustainable alternative to new	**Why choose?** For older or high-mileage vehicles where the cost of repair is disproportionately high versus the vehicle

carwood.com

Ferodo Announces New Brake Technology To Address Evolving Environmental Requirements

New Ferodo BluEdge Brake Pads and Brake Discs to support a Balance of Low Emissions, Braking Performance, and reduced NVH.



Ferodo has launched BluEdge, a new range of brake pads and discs developed to meet the changing demands of the automotive aftermarket.

The new range is designed to help businesses prepare for evolving environmental regulations, including requirements associated with Euro 7 emissions standards, while maintaining the braking performance and durability expected from Ferodo.

BluEdge also focuses on reducing NVH (Noise, Vibration and Harshness), helping to deliver quieter, smoother braking.

The new Ferodo BluEdge brake pads and brake discs will be introduced in a selected range in time for workshops and service professionals to perform the first brake replacements for vehicles covered by the evolving environmental requirements.

"We are entering an era of evolving emission requirements covering light and commercial vehicles," said Silvano Veglia, Product Management Director, DRiV. "With upcoming regulations extending for the first time to brake emissions, Ferodo product engineers set out to develop a brake pad technology designed to support aftermarket professionals in balancing low braking emissions along with true original equipment quality performance, including pedal feel, braking response, consistency, and reduced noise performance. I am pleased to report that the new Ferodo BluEdge brake pads deliver on these objectives."

New Ferodo BluEdge brake pads, a new pad technology developed to help address evolving environmental regulations, are easily identifiable by their unique blue shim.

The brake pads feature highly advanced non-asbestos organic (NAO) friction materials which replace ferrous metals with carefully selected and tested organic fibers. This new solution contributes to the reduction of particulate emissions by up to 80% compared with conventional metallic pad materials and helps reduce pad and disc wear while supporting braking properties.

Ferodo BluEdge brake pads can be installed together with Ferodo BluEdge brake discs, featuring a next-generation laser cladding technology which fuses a high-performance coating to the disc, resulting in a robust and wear-resistant braking surface. This technology contributes to the reduction of brake particulate emissions by up to 90% compared to conventional uncoated discs and promotes balanced wear and consistent braking performance.

Underscoring the benefits of this advanced technology, Ferodo will offer a three-year* warranty on Ferodo BluEdge brake pads and discs when they are installed together as a system.

As with all Ferodo braking solutions, Ferodo BluEdge brake pads and discs are validated through extensive laboratory testing as well as in real-world operating environments. "'Road born and track proven' braking solutions represent the central difference between Ferodo and other braking brands," Veglia said. "Professionals choose Ferodo because our products add confidence in brake repairs – confidence that comes with OE expertise, innovation, and track-proven performance."

**Limitations apply*

To learn more about Ferodo products, contact your Ferodo brakes supplier and visit www.ferodo.com. For information regarding the brand's continued leadership in auto and motorcycle racing, karting and other forms of competition, visit www.ferodoracing.com.



MAHLE HIGHLIGHTS CORRECT FITTING OF PTFE OIL SEALS



Getting the smallest details right can make the biggest difference to a successful repair. This is particularly true when fitting PTFE oil seals, where techniques traditionally used for conventional seals can result in premature failure.

As the dedicated distributor for VICTOR REINZ products, MAHLE is helping workshops avoid common installation errors by highlighting the correct procedure, including using the appropriate special fitting tool where required.

VICTOR REINZ technical guidance identifies damage to the PTFE sealing lip during assembly as the most frequent cause of failure, making it essential that technicians understand how these seals differ from conventional designs.

What exactly is PTFE – and why is it needed?

PTFE stands for polytetrafluoroethylene, a synthetic material well suited to the demanding environment inside modern engines.

Higher engine speeds and oil temperatures, longer oil change intervals and modern lubricant additives place greater demands on sealing materials. PTFE offers low friction, high wear and chemical resistance, and strong thermal performance. VICTOR REINZ technical information states that PTFE oil seals can operate from -130°C to +200°C and cope with dry operation or insufficient lubrication.



Another important characteristic is what VICTOR REINZ describes as its plastic memory effect. During manufacture, the PTFE sealing lip is formed as a flat ring. When installed onto the shaft, it expands and folds to match the shaft diameter. Once warm, PTFE naturally attempts to return towards its original form.

This allows the sealing lip to maintain contact with the shaft without the conventional pretensioning spring found in many traditional oil seals and explains why it must be treated carefully during installation.

Keep it dry

Perhaps the most important difference is that PTFE oil seals must be installed completely dry.

While lubricating a conventional sealing lip before installation may be familiar workshop practice, doing the same with a PTFE seal can compromise its performance. VICTOR REINZ guidance states that both the PTFE sealing lip and shaft surface must be completely dry, with no grease or oil used.

Where available, PTFE oil seals can replace conventional oil seals, so technicians should identify the replacement seal type rather than assuming the fitting procedure will be the same as the component being removed.

The right tool for the job

Before beginning the repair, technicians should check whether a specific fitting tool is required and ensure it is available.

VICTOR REINZ PTFE oil seals should only be removed from their protective packaging immediately before installation to minimise contamination.

The PTFE sealing lip is protected by a plastic sleeve, which can normally also be used as an assembly aid and should remain in position until installation. If fitting without the supplied sleeve, the appropriate special tool specified by the manufacturer should be used.

Forcing the seal into position without the correct sleeve or tool risks shifting, damaging or turning the PTFE sealing lip inside out, making reliable sealing virtually impossible.



Check the shaft

The shaft must be carefully inspected before installation and any existing damage professionally repaired. Technicians should also check for sharp-edged chamfers that could damage the PTFE lip.

When replacing an existing PTFE seal, the new sealing lip should not run in exactly the same position as the old one, as an existing wear point could compromise the repair.

Fit it once, fit it right

Once the shaft has been inspected and the correct installation equipment is ready, the assembly sleeve and oil seal can be positioned.

Correct alignment is essential. The sleeve should allow a smooth transition onto the shaft, with the sealing ring pushed into position using an even, controlled movement. The sleeve should only be removed once the seal is correctly fitted.



One final instruction must be factored into the repair: do not start the engine immediately.

VICTOR REINZ recommends waiting at least four hours after installation before starting the engine, giving the PTFE sealing lip time to adapt correctly to the shaft. Workshops should account for this when planning the job.

Victoria's Practical Tips

The VICTOR REINZ website also features Victoria's Practical Tips, providing technical guidance covering sealing repairs and installation procedures.

Supporting workshops beyond the component

As the dedicated distributor for VICTOR REINZ products, MAHLE provides the independent aftermarket with access to the brand's sealing expertise and product range, alongside technical information supporting correct installation.

For workshops, following the specified fitting procedure is just as important as selecting the correct replacement part. With PTFE oil seals, small differences in installation technique can determine the success and longevity of the repair.

For further technical information and installation guidance, including Victoria's Practical Tips

Visit: victorreinz.com/EN/Products/Oil-Seals.aspx



VXPRO

WINDOW LIFT REGULATORS

YOUR WINDOW LIFT REGULATOR QUESTIONS ANSWERED

According to Factor Sales data, VXPRO is now the UK's number one selling aftermarket window lift regulator brand. That means our technical team answers hundreds of regulator enquiries every year. Most of them come down to the same few questions.

1. Is the Window Motor Faulty?

Not necessarily.

If the motor can still be heard operating but the glass doesn't move, drops into the door or moves unevenly, the window lift regulator mechanism has usually failed—not the motor.

Before removing the door trim, check the obvious items first:

- Fuse
- Window switch
- Listen for motor operation

If the motor is completely silent, further electrical diagnosis will be required once access has been gained.

2. Do I Need to Replace the Motor?

Often not.

Many VXPRO window lift regulators are supplied without a motor, allowing the original motor to be transferred if it is still operating correctly. Replace the motor only if it has failed electrically, has suffered water damage or is excessively noisy.

3. Does the Vehicle Have Comfort Function?

This is probably the most important question when ordering.

If the vehicle has one-touch opening/closing (comfort function):

Re-using the original motor?
No problem.

Replacing the motor as well?
The replacement motor must support the same comfort function.

4. How Can I Tell?

The easiest guide is the motor connector.

Basic systems
Usually 2-wire motors
Manual operation
No comfort function

Comfort systems
Usually multi-pin connectors
One-touch opening/closing
Anti-pinch protection
Communication with the vehicle electronics

Always compare the original connector before ordering.

5. Why Are There Several Window Regulators Listed?

This catches technicians out regularly.

The same vehicle may have several regulator options depending on specification:

- Regulator mechanism only
- Regulator with motor
- Motor with comfort function
- Motor without comfort function
- Complete regulator with carrier panel/backplate

Even the same OE number may cross-reference to multiple versions.

If in doubt, compare the original part or contact our technical team before ordering.

6. Why Doesn't My New Regulator Look Exactly Like the Original?

Most VXPRO window lift regulators are designed to closely match the original OE construction. However, some aftermarket designs may look slightly different, often to improve efficiency or performance. As long as the mounting points, glass fixings and motor interface match the original, the regulator will fit and function correctly.

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OEM+
OE Matching Quality + Added Value

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No Quibble Returns

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