



# SMARTCHOICE

ISSUE 73 • MAY - JUL 2024

THE SMART CHOICE FOR TODAY'S TECHNICIAN!

# TAKING THE HEAT OFF!



**KEEPING THINGS COOL THIS SUMMER!**  
AC SPARES, CONSUMABLES AND GAS, IN STOCK NOW READY FOR THE NEW SEASON

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**FERODO OE VS AFTERMARKET: SPOT THE DIFFERENCE!**



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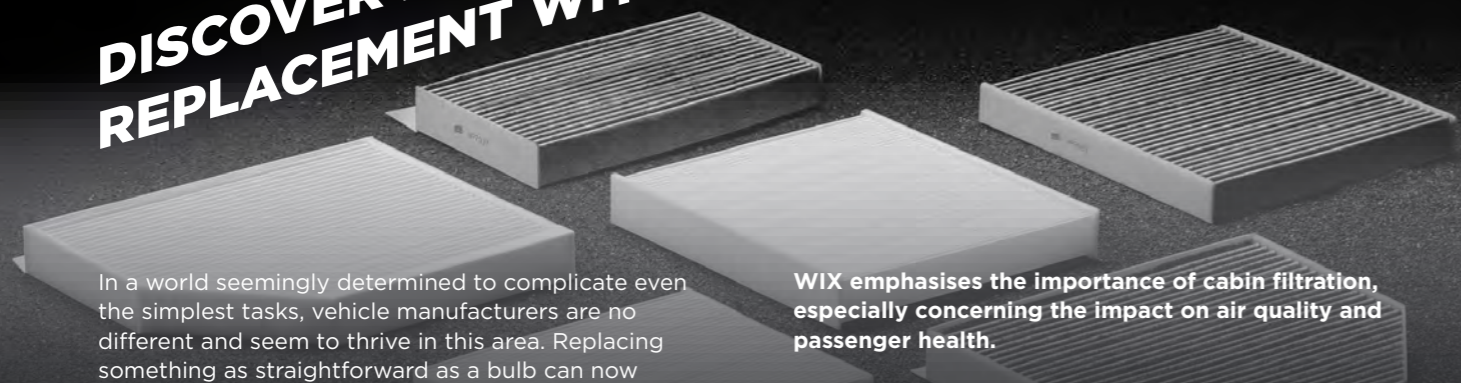
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# DISCOVER EXPERT TIPS FOR CABIN FILTER REPLACEMENT WITH WIX TRAINING TUTORIALS

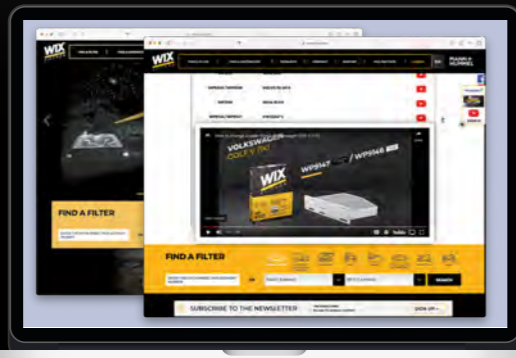


In a world seemingly determined to complicate even the simplest tasks, vehicle manufacturers are no different and seem to thrive in this area. Replacing something as straightforward as a bulb can now present a myriad of challenges. When drivers are keen to minimise costs, justifying the labour time for a replacement or repair can be more arduous than the task itself.

**WIX emphasises the importance of cabin filtration, especially concerning the impact on air quality and passenger health.**

A clogged cabin air filter restricts airflow, leading to unpleasant odours, increased humidity, and a buildup of pollutants within the vehicle. Neglecting the cabin filter places additional strain on the heating, ventilation, and air conditioning system, potentially leading to reduced efficiency and increased maintenance costs. WIX advocates for proactive maintenance to ensure optimal HVAC system performance and longevity.

Consider the unassuming cabin filter, often neglected during routine servicing, despite manufacturers' recommendations for regular replacement. Typically, these filters should be changed every 15,000 to 30,000 miles to maintain optimal airflow and prevent pollutants and unpleasant odours entering the vehicle. Yet, locating the filter can sometimes feel like a game of hide-and-seek, with varying levels of difficulty in replacing it.



With pollen levels peaking in the summer and air quality often deteriorating, it's crucial to address cabin filtration promptly. For drivers with allergies, such as hay fever, more frequent filter changes are recommended to maintain a healthy driving environment.

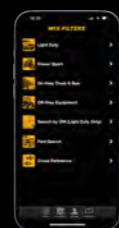
WIX has streamlined the process of changing cabin filters by providing comprehensive fitting instructions in each box. Moreover, they offer a series of instructional videos categorised by vehicle type, facilitating easy location and replacement. Although the videos feature left-hand drive vehicles, the fitting principles remain consistent.

WIX cabin filters are engineered to meet factory specifications, employing advanced technologies to effectively filter out particles and pollutants. Whether utilising electrostatic filtration or non-woven synthetic fibre, WIX filters prioritise performance and reliability for every application.

Exploring WIX's website reveals a wealth of valuable information, particularly for busy workshops. They offer a filter training course, complete with a certificate upon completion, which serves as a useful resource for apprentices and seasoned professionals alike.

In conclusion, prioritising cabin filtration not only enhances the driving experience, but also contributes to passenger health and well-being. By choosing WIX, drivers are provided with fresh, clean air inside their vehicles. In a world where complexity reigns, WIX filters offer simplicity and reliability.

Replacing your customer's cabin filter with a WIX unit ensures a like-for-like, OEM quality replacement, accompanied by all associated guarantees.



[WWW.WIXEUROPE.COM](http://WWW.WIXEUROPE.COM)



## SPOTLIGHT ON FERODO

We take a look at Ferodo® brake pads and ask them that all-important question: Is there a difference between OE and aftermarket brake pads?

**For most brake pad manufacturers, the short answer is yes. Many friction product producers lack OE production knowledge and focus exclusively on aftermarket specifications. Ferodo®, however, stands out as an exception, boasting a strong OE pedigree. In fact, one in four vehicles leaving the factory today, totalling 25 million a year, are fitted with Ferodo® brake pads. This is a staggering statistic, to say the least!**

**Our Top Tip:** How to ensure you're fitting an official Ferodo® brake pad. Read the unique Ferodo® formula on any aftermarket or OEM brake pad to check its validity.

Use the official Ferodo® Friction Formula Trace Chart below to learn how to validate Ferodo® brake pads instantly.

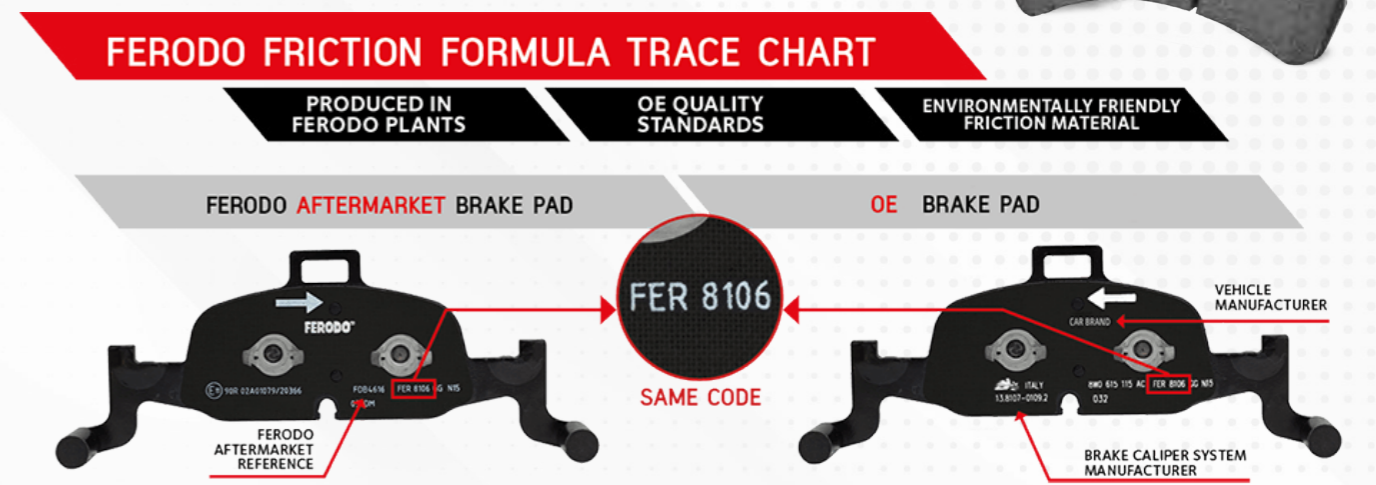
Ferodo® supplies OE brake pads for a wide range of vehicle manufacturers including Alfa-Romeo, Audi, Bentley, BMW, Chrysler, Citroën, Dacia, Fiat, Ford, GM, Hyundai, Isuzu, Jaguar, Lamborghini, Lancia, Land-Rover, LDV, Maserati, Mazda, Mercedes-Benz, Mini, Mitsubishi, Nissan, Opel, Peugeot, Renault, Seat, Skoda, Smart, Tesla, Toyota, Volkswagen, and Volvo.

With Ferodo®, you get a top-level friction product that guarantees longer pad life, reduced noise, and brake dust, among other benefits, which cannot always be guaranteed when opting for aftermarket braking parts.

**We asked the team at Ferodo® if the brake pad we buy from our local motor factor branch is the same as the OE.**

The answer is yes. Whether certified Original Equipment or aftermarket brake pads, every Ferodo® friction product passes through the same high-end production lines and is manufactured to the same rigorous engineering standards. This quality assurance provides peace of mind for any garage that is replacing brake pads on a customer's vehicle.

All Ferodo® brake pads come with the OE Original Quality label, and with their 14 production facilities worldwide, producing over 40 million brake pad pieces globally each year, it's safe to say that by having Ferodo® as a braking supply partner, you're covered!







# MULTITUBE

## THE REVOLUTION IN ENGINE AIR FILTRATION

# COMING SOON

UFI Filters' revolutionary engine air filtration technology, UFI MULTITUBE, available soon in the **Aftermarket catalogue for FIAT 500 Hybrid**.

UFI MULTITUBE presents a **double tubular structure** which replaces the traditional air panel, the revolutionary UFI air filter has a cartridge that is up to **50% lighter** which features a rigid, non-woven filter media made with synthetic hydrophobic fibers produced according to the exclusive **FormulaUFI.Extreme**.

This offers improved **flexibility, better fluid dynamics, and reduced weight**, while maintaining increased **filtering performance** of more than **99.5%**. The special cartridge coupling system also attaches the cartridge firmly to the filter box, simplifying service operations and preventing the entry of dirty air into the engine, thereby guaranteeing an additional level of protection.



Discover all UFI Multitube features

Up to 50% lighter than traditional filters

Filtering media in **FORMULA UFI-EXTREME**

Filtration efficiency over 99.5%



### CARTRIDGE CODE

27.TUB.01

### MAIN APPLICATIONS

Fiat 500  
500 Cabrio 1.0 hybrid

### PLUS

- + Up to 50% cartridge weight reduction
- + Lower emissions and fuel consumption
- + Cartridge in **FORMULA UFI-EXTREME**
- + Simple service operations

## UFI FILTERS CONFIRMS LEADERSHIP IN FILTRATION SYSTEMS FOR FORMULA 1, SUPPLYING 9 OUT OF 10 TEAMS

UFI Filters has cemented its position as a top producer of filtration systems by supplying **nine of the ten teams competing in the 2024 Formula 1 season**.

The announcement is a prestigious recognition of the technologies developed by the High-Tech Division of UFI Filters, founded in 1999. In Formula 1, UFI Filters does not limit itself to providing teams with oil, air and petrol filters. The complexity of today's racing cars also demands up to fifteen filter elements in a car. In total, UFI produces around **8,000 such F1 filters annually**.

For Formula 1, **each filter is tailor-made** for the needs of the different teams, with **customised solutions provided in terms of size and materials** used. Their design requirements are the result of a co-design process between technicians in UFI Filters' High-Tech Division and the individual racing teams.



Find out all the UFI filters supplied for F1 Teams



Allied Nippon **WORLD CLASS BRAKING ENGINEERED FOR EVS**

Take a look at the quality construction of an EV+ Brake Pad.

SCAN HERE



## EV+ BY ALLIED NIPPON: TAKE CHARGE OF YOUR SALES

As the electric vehicle (EV) market continues to surge, workshops must be primed to take advantage of new revenue streams, one of which, according to Allied Nippon, is its new EV+ brake pad range.



**With over one million EVs now registered in the UK and counting, it is clear that adapting to the specialised needs of these vehicles is paramount for aftermarket businesses.**

Allied Nippon's EV+ range is a meticulously crafted solution, tailored for the demands of EV braking systems. EVs are distinguished by their rapid acceleration and substantial weight due to large battery packs, putting significant demands on the braking system, including the pad.

### The EV+ advantage

- Enhanced stopping power:** EV+ brake pads feature a new friction material, specially selected for superior stopping power. This, coupled with scorching for improved friction stability and the red BRAKEBOOST instant friction layer, ensures reliable EV stopping power.
- Ultra-low noise:** With EVs being inherently quieter than their internal combustion engine cousins, noise reduction when braking is crucial for their EV driving experience. EV+ brake pads have been rigorously tested and achieved an AA-rating with a peak output of just 88dB.
- Comprehensive features:** The EV+ range comes fully equipped with features designed to optimise performance and ensure simple installation for technicians. From the specially selected friction material to the OE matching chamfers and multi-material backing shims, every aspect of EV+ is geared towards delivering premium performance.

### Driving revenue growth

The upselling potential of EV+ lies not only in meeting the evolving needs of EVs, but also in providing these advantages at a competitive price point:



Matt Ellis and Dr Keith Ellis lead the way with EV+ by Allied Nippon

Allied Nippon EV+ is designed to deliver premium levels of performance without a premium price.

EV+ Project Lead and Allied Nippon Development Manager, Matt Ellis, outlines the opportunity: "As EVs continue to infiltrate the UK vehicle parc, EV+ brake pads offer workshops a strategic opportunity to enhance their service offerings whilst driving revenue growth.

By offering an EV-specific product like EV+, garages can also demonstrate that they are embracing the future of the

automotive industry, building trust and reputation with their customer base."

### What's in the EV+ range?

The EV+ portfolio of 37 part numbers is available immediately and includes the Nissan Leaf, Renault Zoe, Tesla Model 3, and Jaguar I-PACE. Additionally, where the model is an exclusive EV application with no ICE variant, EV+ will be the only Allied Nippon reference available moving forward.

**For more information visit [www.allied-nippon-eu](http://www.allied-nippon-eu)**



# Wiring Harness Repair Kit

## Fiat 500 & Ford KA



### Problem

The rear licence plate's lamps are not working, the rear windscreen wiper and/or demister is not working, the tailgate is not showing as 'closed' on the instrument panel and there is false alarm triggering.

### Cause

This is a common fault on the models listed above and is usually due to the wiring harness between the body and tailgate becoming 'brittle' with age. This, combined with the frequent opening and closing of the tailgate, contributes to stressing and straining the wiring. Eventually, the insulation cracks - leaving the wiring exposed, which results in short or open circuits.

### Solution

Remove any necessary interior trim panels. Carry out any relevant actuation and electrical tests to the control unit units to eliminate any other faults before repairing the wiring harness. Disconnect the vehicle's battery; each wire of the original harness should be cut to size. Strip the insulation, then the joining connector, and 'crimp' into position whilst attaching the original harness to the new wire.

febi wiring harness repair kits are supplied with an OE-matching rubber gaiter, connectors, and enough new silicon-insulated wire to cover vehicles fitted with all available 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 preventing corrosion for a reliable repair.

Note: At 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.

Cut the water pipe for the rear-screen wash and insert the flexible pipe supplied to extend and match the extra wiring harness.

Wrap the repaired wiring harness with fabric insulation tape (107140) to protect the connectors and wiring harness. Fit the new rubber gaiter and grommets into the vehicle's body and tailgate. Reconnect the battery. Check for flexibility of the new wiring harness when opening and closing the tailgate. Clear any fault codes and test the operation of all affected electrical systems.



[EN] Fiat 500 tailgate wiring harness repair  
febi bilstein  
17.6K subscribers  
71 views

Want to watch a video of the full repair? Check out the febi YouTube channel [youtube.com/@ferdinandbilstein](https://www.youtube.com/@ferdinandbilstein).

To see the full range of febi Electrical components visit: [partsfinder.bilsteingroup.com](https://www.partsfinder.bilsteingroup.com)



[www.febi.com](https://www.febi.com)

**bilsteingroup**

# Ford Mondeo

## Rear Suspension



(Fig 1)

The Ford Mondeo model produced from 2007 to 2014 was the fourth incarnation of this family favourite. It was renowned for having good load-carrying capabilities, which also made it popular with many company car drivers and the emergency services. This model shares many of its platform similarities with the Galaxy and S-Max, and also some Volvo models - including the design of the vehicles' suspension system and the components used.

This Mondeo was equipped with an independent multilink rear suspension system which was available in standard, sports and heavy duty versions - with or without self-levelling dampers or electronic control. However, all other suspension parts were fundamentally the same. This was all subject to each model specification. (Fig 1) The many suspension bushes, bearings and joints that make up this vehicle's suspension work together in unison to provide safe handling characteristics and comfort for the driver, passengers and any load the vehicle is carrying.

Through time these can become worn or damaged; eventually losing their effectiveness, which can then be felt, seen and heard. Frequent 'knocking' or creaking noises can be heard and the steering can become vague, causing uneven tyre wear and giving poor contact with the surface of the road, which can affect the vehicle's braking ability.

The rear trailing arm bushes are a common component of this system and can deteriorate over time. The rubber becomes torn and the outer casing corrodes, giving the vehicle a 'slumped' look; causing the suspension to become out of alignment and operate incorrectly. (Fig 2)



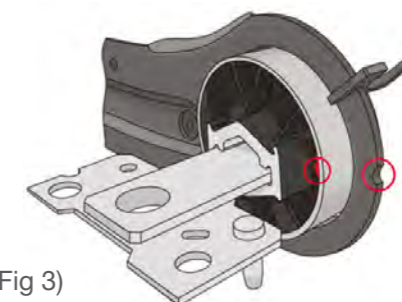
(Fig 2)

These bushes can be replaced separately, which saves replacing the whole trailing arm. This can be executed by using a special tool to push the old bush from the arm and pull the new one in; not forgetting firstly to align the bush - with the alignment points on the bush - with the arm. (Fig 3) This is imperative for the correct operation of the bushes.

The new febi bushes' outer metal casing has a leading edge for ease of fitment. Being made from vulcanised

natural rubber gives it excellent mechanical properties and hardness - ensuring a long service life.

One of the challenges when repairing a vehicle's suspension system is being able to remove any of the bolts or fixings (which are 'securing' the worn parts) that are being replaced.



(Fig 3)

The original bolts become corroded and weakened over time, having endured constant attrition from the elements. Many different methods may be required to do this - including the use of penetrating fluid, heat or the fixings being cut to remove them. This renders the original bolts unfit for purpose, and is often overlooked during this type of repair. febi offers a solution to this issue by providing a repair kit with the new bolts included. As an example, axle beam mounting kit 43403 comes complete with bushes for both sides of the vehicle as well as bolts. For a more complete repair febi ProKit, 46000 cross strut kit comes complete with bushes, bolts and suspension links.

The bolts provided have high tensile strength for securing safety-critical components, with excellent clamping force and an anti-corrosion coating for longer service life. These bolts also have leading threads for easy fitment and a thread-lock treatment to resist loosening during operation.

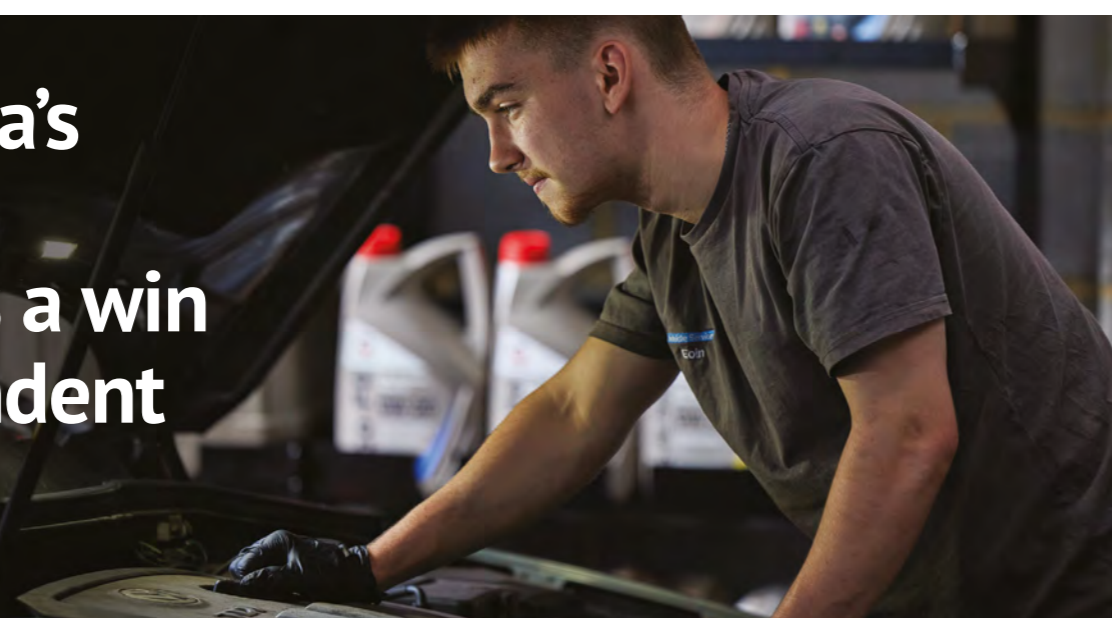


[www.febi.com](https://www.febi.com)

**bilsteingroup**



# Why Comma's "combined" approach is a win for independent workshops



Comma stands at the forefront of making engine maintenance easier, navigating the complexities of the modern independent workshop by focusing on straightforward oil selection and support for mechanics.

Beyond responding to the evolving needs of the automotive sector, the brand is using its +50-years' worth of experience to create a comprehensive suite of solutions, carefully tailored for any mechanic's toolkit.

Comma recognises that each vehicle presents unique challenges, which is reflected in its extensive product range. For example, modern engines, influenced by the diverse construction techniques and materials used by manufacturers, demand nothing less than high-performance, OEM-approved engine oils.

That's why Comma's mission has never been clearer: to ensure every mechanic has access to quality products and free tools that give them confidence when replacing oils and lubricants.

### Made for mechanics

To stay on top of the latest original equipment manufacturer (OEM) specifications, Comma's products go through a rigorous process of research, development, and testing. This means that their products, such as engine oils, antifreeze, and coolants, not only meet, but often surpass industry standards, giving peace of mind to workshop professionals.

Comma also provides a suite of tools on its website, including an easy-to-use VRM tool, to assist workshops in selecting the correct oil grade and products for most European vehicles. This is complemented by a 100% Compatibility Guarantee for products used as recommended.

The user-friendly Product Finder, accessible at [commaoil.com](http://commaoil.com), simplifies the search process by allowing customers to enter the vehicle's registration and receive tailored recommendations based on the latest OEM information.

### Comma combines

Workshops also benefit from using Comma's stock profiling tool, which allows professionals to streamline operations and discover the optimum range of products and pack sizes for their workshops. All they need to do is fill in a form via the Comma website and Comma will arrange for a personalised stock pack recommendation to be emailed through.

Comma's highly skilled experts are also on-hand to offer guidance and provide mechanics with the right solutions. They offer free online training and real-time technical guidance and MOT status updates, supporting workshops to make better-informed decisions in an ever-evolving industry.

For Comma, it's not about an individual product, tool or piece of training, it's about combining all these elements together to create the tools mechanics need and value.



For more information on Comma, scan the QR code or visit our website.



[commaoil.com](http://commaoil.com)

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### Did you know

Over 90% of turbo failures are caused by either lack of oil or oil contamination!

As technology changes and turbos become more and more complex, oil supply becomes more critical than ever. Turbos can spin at speeds of over 300,000 revs per minute and reach temperatures close to 1000°C, so a clean and uninterrupted supply of the correct grade oil is essential for the life of any turbocharger.

SCM stock over 250 oil feed pipes for popular applications, where we recommend you fit new pipes when replacing the turbo, to minimise the risk of the replacement turbo failing.



You can find our Turbo Instructions available to download on our website, which list any troublesome applications and the best way to avoid any future problems

[www.scmturbo.com/tech-desk](http://www.scmturbo.com/tech-desk)

- ✔ All Of Our Products Are designed and manufactured to OE specification
- ✔ Always made from the highest quality materials, offering maximum resistance to heat, wear and corrosion.
- ✔ FREE gasket and stud kits with all our popular turbos, so they can be fitted straight from the box, saving valuable down time!





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5 YEAR WARRANTY

## MAINTAINING PRECISE ENGINE AIRFLOW

To manage engine airflow a vehicle's ECU relies on three key sensors: the Mass Airflow Sensor (MAFS), Throttle Position Sensor (TPS), and the Manifold Absolute Pressure (MAP) sensor. These sensors play a crucial role in determining the required volume and flow of air which can then be controlled with the Throttle Body and Idle Air Control Valve (IACV). Precise air intake to fuel ratio is required for optimum combustion.



MAFS



THROTTLE BODY



IACV



TPS



MAP SENSOR

### THE MASS AIRFLOW SENSOR (MAFS)

The Mass Airflow Sensor is positioned between the air filter and the Throttle Body. Its purpose is to measure the amount of air passing through the Throttle Body. It contains a thin piece of film or hot wire that stretches across the sensor's inlet.

The ECU heats the hot wire to a designated temperature and attempts to maintain that reading. As airflow/volume rises, more current is

required to maintain the temperature, and as airflow decreases, less current is required. The ECU then reads these voltage differences as a way of measuring air volume.

### THE THROTTLE BODY AND IDLE AIR CONTROL VALVE (IACV)

Air from the Mass Airflow Sensor is let into the engine for combustion by the Throttle Body, a simple butterfly valve that can be opened and closed as required. To maintain smooth engine revs while idling,

many vehicles employ an Idle Air Control Valve (IACV) to bypass controlled airflow to the engine when the Throttle Body is closed.

### THE THROTTLE POSITION SENSOR (TPS)

Tracking the throttle position and communicating data to the ECU is the Throttle Position Sensor (TPS). In older cable systems, the TPS is mounted on the Throttle Body. In modern vehicles with electronic Throttle Bodies, the TPS is located within the accelerator pedal.

As the pedal is pressed, the sensor sends a voltage to an electric motor that controls the opening of the throttle body valve.

The Throttle Position Sensor is a variable resistor, or potentiometer (often referred to as a Throttle Pot). When the engine is idle, the throttle is closed, and the sensor will read a voltage of around 0.5 volts. During acceleration, the throttle valve opens, and the voltage will rise to around 5 volts. The TPS communicates this data to the ECU so that the airflow

and open-to-closed transition can be monitored.

### THE MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR

The next key sensor is the Manifold Absolute Pressure (MAP) Sensor. This monitors pressure in the intake manifold, often located after the throttle body, and communicates data to the ECU. Which is then able to define air density and flow rate in order to calibrate the necessary fuel for optimum combustion.

## VALEO, YOUR APPROVED SUPPLIER FOR ALL YOUR ENGINE MANAGEMENT SYSTEM NEEDS!

Valeo have been at the forefront of engine management for over 40 Years. Over this time the evolution of engine management systems is a testament to automotive innovation, particularly in achieving Euro 6 compatibility in newer vehicles allowing them to be compliant in the ULEZ Zones across the UK. This article details the important milestones in the journey of these systems and their crucial role in meeting stringent emission standards.

crucial role in monitoring the oxygen levels in the exhaust gasses, facilitating precise adjustments to the air-fuel mixture. Temperature sensors ensured optimal engine operating conditions, preventing overheating and contributing to overall efficiency. Engine speed sensors provided essential input for synchronizing fuel injection and ignition timing, enabling a more responsive and efficient engine performance. The marriage of these sensors marked a paradigm shift, enabling a more precise and adaptive control over the combustion process, ultimately enhancing both performance and fuel efficiency.

fuel-air mixtures, resulting in cleaner combustion and improved overall performance.

The latest frontier involves integrating machine learning and artificial intelligence - an area Valeo is heavily involved with. These technologies enable adaptive learning, allowing the system to continuously optimize performance based on driving conditions and user behavior.

The evolution of EMS, from basic electronic control units to sophisticated AI integration, has been instrumental in achieving Euro 6 compatibility.

Valeo offers a complete range of engine management systems technologies. This includes components for fuel injection and supply, air management, ignition and exhaust-gas treatment as well as engine control units.

As technology advances and Valeo keeps striving for a greener future, these systems continue to play a vital role in shaping the future of environmentally-friendly and high-performance vehicles.



### Sensor Integration into the EMS

A pivotal shift occurred with the integration of advanced sensors, fundamentally altering the landscape of EMS. These sensors, including oxygen sensors, temperature sensors, and engine speed sensors (all available from Valeo), monitored critical parameters, ushering in an era of real-time data feedback. This capability allowed for the optimisation of fuel delivery and ignition timing.

Oxygen sensors played a

### Meeting Euro 6 Standards with Advanced Technologies

In response to environmental concerns, Euro 6 emission standards were introduced. EMS played a pivotal role in meeting these stringent requirements through advanced control algorithms and precise sensor data.

Modern systems adopted technologies like direct injection and turbocharging to further enhance efficiency and reduce emissions. These advancements optimise



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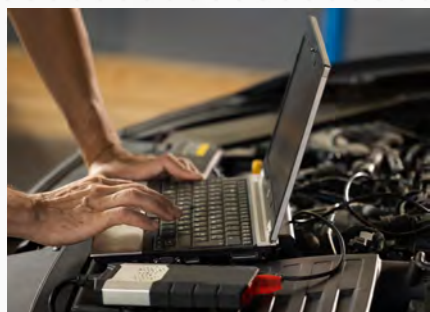




## DIAGNOSING AN ENGINE MISFIRE WITH CARWOOD

Leading remanufacturer and fuel systems specialist, Carwood, troubleshoots a common fault on a 2014 VW Caddy, equipped with a CAYD engine - the vehicle presented with the EML on and reports of long engine cranking, rough idling and exhaust smoke.

**Interrogate the vehicle's fault code history** with an EOBD diagnostic tool. This returned a P019100 fault code - fuel high pressure sensor.



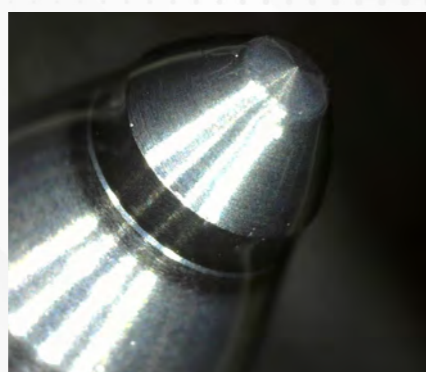
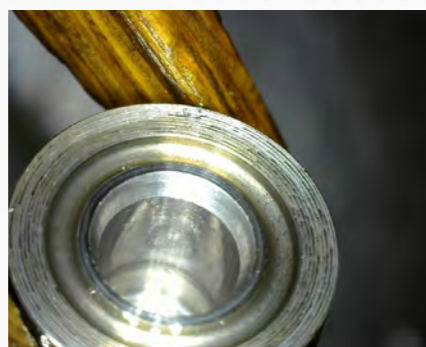
**Test the injector's back leak** on vehicle to pinpoint possible faults. Unfortunately, there's no simple pass/fail criteria, however, look for an imbalance between the injectors; a high backleak flow on one injector though doesn't necessarily mean this is at fault.

**Check the high-pressure pump with an EOBD tool:** If this test shows no rail pressure feedback during cranking, then a sealed rail kit must be used to isolate the high-pressure hydraulic system. In this case, the pump generated the correct rail pressure during cranking and idling, but was slow to do so. Based on the ECU fault codes and the injector backleak check, two of the injectors were thought to be faulty.

**Have a specialist test the injectors:** Although the simplest option would be to replace the pump and all four injectors, it's important to determine why they failed, and address this, before doing so. If not, the replacement units could fail. So the injectors are put through a series of rigorous tests at Carwood's fuel systems facility.

Two of the injectors failed the basic hydraulic test with no injection,

and the other two failed the bench test due to low fuel delivery. To establish the exact failure mode, the parts are then disassembled and the individual components inspected under microscope. This concluded that the injectors are contaminated with metal.



**Remove the pump:** With evidence of contamination, the high-pressure pump is also checked. This too is contaminated with fine metal debris, caused by the high-pressure pump starting to fail.



**Replace the pump and injectors** with either new OE or a cost and eco-friendly unit that's just as-good-as, from an OE-approved remanufacturer like Carwood.

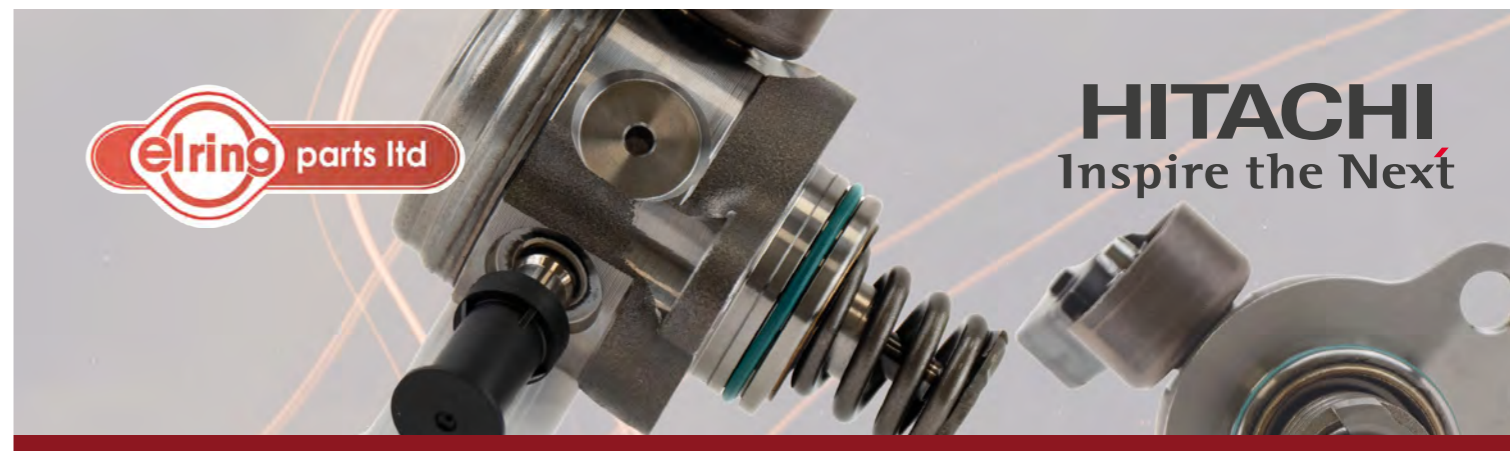
**Remove all traces of contamination** by cleaning the fuel tank and low-pressure hydraulic pipework using traditional flushing methods. Replace all high-pressure pipes, the rail assembly and fuel filters with new.

**Fit the high-pressure pump,** ensuring pump and rail fittings are clean. Remember to pressurise the fuel system by turning the ignition key on, and check for leaks.

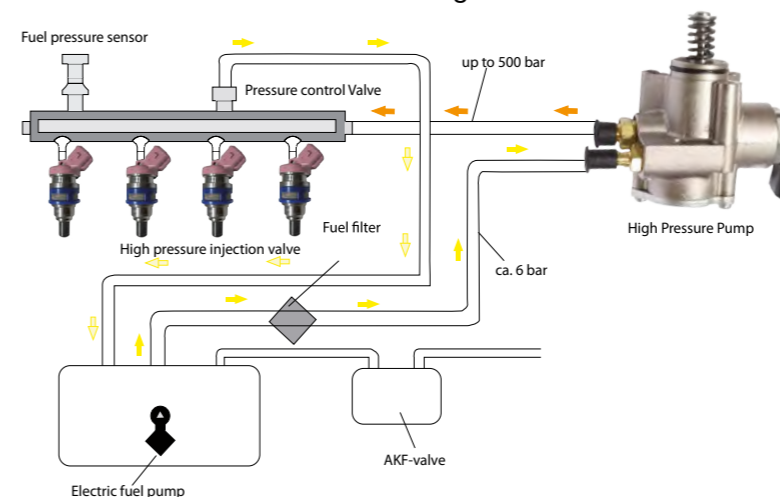
**Recode the injectors into the vehicle ECU** before installing them, to ensure the timing and quantity of fuel delivered is calibrated for optimum performance.

**Perform a relearn:** All Continental/VDO injectors have an ECU self-adaptation process that teaches the ECU the ideal pilot injection for the engine, in order to prevent engine knock.

**Reconnect the scan tool,** clear all fault codes and take the vehicle for a short road test to confirm that the fault has been eliminated. Job done!




High Pressure Pumps are used in modern petrol engines with direct injection. Petrol direct injection has the benefits that a higher torque is achieved with the same cubic capacity. This therefore leads to a higher performance. The engine reacts better to changes of the gas-pedal position. In the partial-load operation, the aim is a measurable amount of fuel saving.



The High Pressure Pump is supplied with fuel from the in-tank pump at a pressure of approx. 6 bar and then boosts the fuel with a pressure up to 500 bar into the common rail.


The pump is positioned directly within the cylinder head, because the drive mechanism is mechanical and not electrical.


**Hitachi currently supplies 35 high pressure pump SKU's, which match more than 1000 vehicle applications. Models from 2002 to still under production vehicles are covered, which represent more than 1.8 million vehicles in the UK.**


HÜCO No. 133090 / HITACHI No. 2503090	VIO UK
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VW GROUP 04E127026BK	
VW GROUP 04E127026L	
HITACHI HFS03451	

HÜCO No. 133082 / HITACHI No. 2503082	VIO UK
 VW GROUP 06J127025C	344.103
VW GROUP 06J127025E	
VW GROUP 06J127025L	
HITACHI HFS034131	
HITACHI HFS034135	

HÜCO No. 133081 / HITACHI No. 2503081	VIO UK
 VW GROUP 06L127025H	130.723
VW GROUP 06L127025T	
PORSCHE 95812702500	
PORSCHE PAC127025	
HITACHI HFS034141D	

HÜCO No. 133071 / HITACHI No. 2503071	VIO UK
 VW GROUP 03C127026C	214.603
VW GROUP 03C127026M	
VW GROUP 03C127026S	
HITACHI HFS03431A	
HITACHI HFS03431M	

HITACHI No. 2503096	VIO UK
 VW GROUP 05E127027A	>180.304
VW GROUP 05E127027G	
HITACHI HFS55402	
HITACHI HFS55461	

HITACHI No. 2503097	VIO UK
 VW GROUP 05E127027L	>148.133
HITACHI HFS55465	





# SKF Timing Belt Kits.

## Uncompromising Quality for Over 30 Years

Taking a cautious approach to timing maintenance might seem prudent, but if neglected, it can be an incredibly costly wake-up call for many drivers. When valves and pistons collide due to a timing belt system failure, the resulting repair bill can be staggering. I'm sure we've all witnessed this scenario at some point. What shocks drivers the most is realising that even a seemingly simple, low-maintenance car can quickly approach the brink of being effectively written off.

That's why, when replacing, it's wise to opt for quality products that have proven their reliability over time. With over three decades of experience in the automotive aftermarket, SKF has been at the forefront of timing belt kit innovation. Their commitment to delivering top-notch replacement products to workshops globally, frankly, speaks volumes.

It's no wonder we consistently recommend SKF to all our workshop customers. Whether it's a timing belt or timing chain system, SKF offers comprehensive kit solutions that include all necessary components for a professional and thorough replacement. With a wide range of kit solutions, from single component options to complete water pump timing belt kits and comprehensive timing chain kits for complete overhauls, SKF provides unparalleled flexibility.

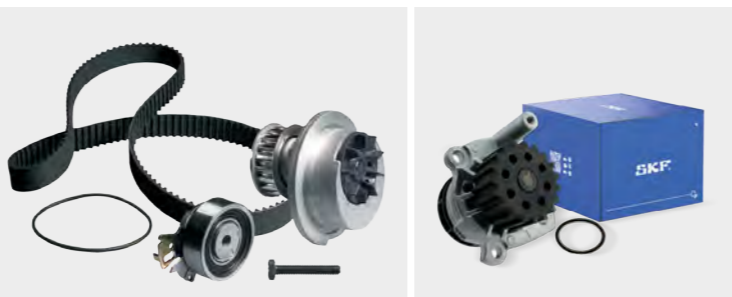
Their kit content is variable based on specific requirements, ensuring optimal solutions for every application. The renowned SKF Aquamax water pumps set industry benchmarks, featuring the finest mechanical seal materials and the highest quality bearings. Each pump's performance is meticulously controlled to match OE performance.

To us, it's not what it says on the box, but what's in the box. SKF timing belts adhere to the highest production standards and quality criteria, utilising HNBR rubber material, Glass cord, and Aramid reinforcement. Importantly, for peace of mind, SKF aftermarket timing belts meet and often exceed OE standards, offering exceptional heat, wear, and contamination resistance.

### Some things to remember:

- **Inspect the Vehicle:** Before beginning any work, thoroughly inspect the vehicle for oil or coolant leaks around the belt running area, check timing covers for damage and correct fitment, and check mountings and accessory drive belt components.
- **Consider Mileage and Time:** Keep in mind both mileage and time intervals, as the timing belt can deteriorate over time due to oxidation caused by oxygen and ozone exposure.
- **Count The Teeth:** Use the VIN or engine code to order the correct replacement belt, ensuring it matches OEM specifications precisely.
- **Use Technical Information:** Fitting instructions, supplied by Autodata or Haynes, for example, provide important information such as correct tensioning, torque settings, auxiliary belt routing and vehicle specific procedures, often found on later vehicles. Vehicle manufacturers often change specifications after production has started, so what was correct at launch, may change mid-production.
- **Replace the Water Pump:** If the timing belt drives the water pump, it's advisable to replace it simultaneously to prevent potential contamination and alignment issues.

With SKF Engine Timing Belt Kits, precision meets reliability for a smoother ride ahead.



For technical support and insights, visit: [vehicleaftermarket.skf.com](http://vehicleaftermarket.skf.com) or scan the QR code to know more about the SKF products.



- ▶ SKFAftermarket
- ▶ SKFAutomotive
- ▶ skfautomotive

Contact SKF Technical Support to help resolve your automotive problems and answer your questions: [helpline@skf.com](mailto:helpline@skf.com)

### What is inside matters

Beyond dimensional fit parts there is a technology in materials, design and performance that follows each component that has been tested and secured per car application. SKF systems knowledge expertise is inside our kits.

# MAHLE

## MAHLE AFTERMARKET OFFERS ADVANCEMENTS IN AUTOMOTIVE AIR CONDITIONING COMPRESSORS

### AIR CONDITIONING

Regular use of air conditioning compressors throughout the year is vital, not only for reducing moisture and preventing misting, but also for maintaining system lubrication and reducing the risk of premature failures, such as the compressor. Signs of compressor failure include coolant leaks, inadequate cooling, noise, and error messages, often caused by incorrect installation, insufficient lubrication, leaks, or solid matter contamination.

MAHLE Aftermarket emphasizes the importance of year-round air-conditioning maintenance to ensure optimal climate comfort and safety, and prevent avoidable, costly repairs. Offering a wide range of OE and aftermarket-quality A/C compressors, MAHLE understands the significance of reliability and confidence when fitting compressors.

MAHLE's Compact Variable Compressors (CVCs) represent the next generation of variable displacement piston compressor technology, offering enhanced performance and adaptability across diverse vehicle applications. These compressors are engineered based on a swash plate, simple harmonic motion mechanism, offering enhanced performance and adaptability.

### AN ALL-IN-ONE SOLUTION (ACP 1571 000P)

Providing easy fitment and reliable operation, MAHLE has engineered the OE-quality ACP 1571 000P, replacing five A/C

compressors with one SKU for two refrigerants (R134a and R1234yf), covering a range of major VAG models.

It is suitable for around 24.8 million vehicles in the EMEA region, including AUDI A1/3, Q2/3 and TT; CUPRA Ateca; SEAT Altea, Ibiza, Leon and more; ŠKODA: Fabia, Octavia and Yeti, and also VW Caddy, Golf, Passat, Polo and Tiguan, plus other models.

### ENGINE COOLING

Another area to consider is engine cooling. Seasonal conditions significantly impact vehicle thermal management requirements. Incorrect coolant type and quantity can lead to engine overheating and failure in the summer months, as well as freezing and internal corrosion during winter, with the varying elements potentially causing damage to cooling system components.

Further issues often arise when coolant is mixed with regular tap water, which contains minerals that cause deposits to form in radiators and engine cooling passages, leading to reduced flow and inefficient cooling. To prevent damage, the use of distilled or de-ionised water is recommended.

### QUALITY ASSURANCE AND COMPLIANCE

As a trusted tier-one supplier to vehicle manufacturers, MAHLE adheres to stringent ISO standards and product conformity requirements. Regular audits by both manufacturers and external agencies guarantee that MAHLE's aftermarket products meet exceptional quality standards, providing customers with confidence and peace of mind.

By prioritizing reliability, adaptability, and performance, MAHLE continues to lead in automotive climate control systems. For more information on MAHLE's A/C compressor offerings, scan the QR code [www.mahle-aftermarket.com/na/en/products-and-services/a-c-compressors/](http://www.mahle-aftermarket.com/na/en/products-and-services/a-c-compressors/)



You can find out more about MAHLE's products by visiting <https://www.mahle-aftermarket.com/eu/en/>





Many vehicle owners do not consider their climate control system to be a service-related item. The majority treat it just like their domestic fridge, simply expecting it to work every time they turn the key. That is, of course, until it comes to a sweltering hot day and the air inside becomes hotter than the air outside.

Of course, a domestic fridge usually spends its entire life in the kitchen on a solid floor, never moving, apart from being pulled out for the annual Spring clean. However, mobile air conditioning systems or MACS, endure several stress factors daily, including road vibration, flex, speed humps, extremes of temperature, water ingress and frost. Therefore, unlike the fridge, the MAC system will lose a percentage of its refrigerant each year.

This summer, we are likely to see an unprecedented volume of cars on the road, with drivers pushed to their limits. Heading for the coast or countryside and sitting in traffic for hours on end will be a likely occurrence, so a fully functioning climate control system is going to be a must-have.

When booking vehicles in for routine servicing, a quick reminder that a service and re-gas is due and is indeed part of the manufacturer's recommended service schedule will ensure your customer's AC system is fully functional as we head into summer and, importantly, bring in extra revenue. After all, you can bet that the big national repair chains will be pushing this all day long!

It is worth remembering, too, that in some vehicles, if the compressor stops working, the engine becomes immobile, leading to a breakdown. Obviously, when servicing the AC system, you add refrigerant and replenish the compressor oil. From a breakdown perspective, it's highly unlikely the recovery agent will carry any AC spares, so a roadside repair is not possible.












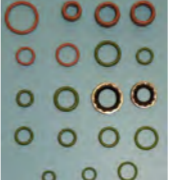
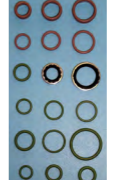





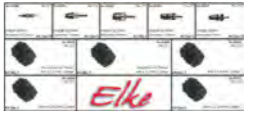

Auto Air Gloucester is the biggest independent supplier of air conditioning parts, tools and consumables and provides a complete AC solution. You are fully covered with a 3-year warranty on all hard parts, including OEM and aftermarket compressors, as well as a dedicated technical helpline.

The team at Auto Air provide a 'download' section on their website with a full parts and consumables catalogue, and information on tools and equipment, all of which can be purchased from us.

**For technical information, including fitting tips, we highly recommend you visit [www.autoairglos.net](http://www.autoairglos.net)**



## TOP 20 SELLING CONSUMABLES

<b>PART NO: 41-0002A</b>	<b>PART NO: 41-1020A</b>	<b>PART NO: 41-1020</b>	<b>PART NO: 42-0018</b>	<b>PART NO: 41-0002B</b>
				
<b>DESCRIPTION:</b> LEAK STOP ELKE R134A	<b>DESCRIPTION:</b> 1LTR PAG OIL ISO 46 SPIO R134A	<b>DESCRIPTION:</b> 250ML PAG OIL ISO 46 SPIO R134A	<b>DESCRIPTION:</b> 250MLUV DYE R134A/ R1234YF/HYBRID	<b>DESCRIPTION:</b> LEAK STOP ELKE 1234YF
<b>PART NO: 41-1020B</b>	<b>PART NO: 42-0022</b>	<b>PART NO: 43-AAG0357</b>	<b>PART NO: 41-1132</b>	<b>PART NO: 41-1130</b>
				
<b>DESCRIPTION:</b> PAG 46 C/W DYE 1 LTR R134A	<b>DESCRIPTION:</b> UNIVL 1L PAG OIL 68 R134A & 1234YF	<b>DESCRIPTION:</b> O RING KIT UNIVERSAL	<b>DESCRIPTION:</b> 1/4 X 16MM HI SIDE Adapter	<b>DESCRIPTION:</b> 1/4 X 13MM LO SIDE Adapter
<b>PART NO: 41-1025</b>	<b>PART NO: 16-COND</b>	<b>PART NO: 14-COMP</b>	<b>PART NO: 41-1029</b>	<b>PART NO: 41-50015A</b>
				
<b>DESCRIPTION:</b> PAG46 ND12 COMP 250ML 1234YF	<b>DESCRIPTION:</b> COND O RING KIT	<b>DESCRIPTION:</b> COMP O RING KIT	<b>DESCRIPTION:</b> POE 85 UNI OIL 250ML 1234YF, HYBRID, R134A	<b>DESCRIPTION:</b> FLUSHING FLUID FLAMMABLE
<b>PART NO: 41-1009A</b>	<b>PART NO: 43-0358</b>	<b>PART NO: 41-5374</b>	<b>PART NO: 41-4168</b>	<b>PART NO: 41-1117</b>
				
<b>DESCRIPTION:</b> VALVE CORE KIT 76PCS	<b>DESCRIPTION:</b> DOUBLE O RING KIT	<b>DESCRIPTION:</b> CAP KIT R134A	<b>DESCRIPTION:</b> VALVE CAP & SHRADER VALVE 1234YF	<b>DESCRIPTION:</b> BUBBLE LEAK

## TOP 10 SELLING COMPRESSORS

PART	DESCRIPTION
14-9698P	GOLF SANDEN COPY
14-1309P	SD7C16 1309 COPY
14-7479P	ASTRA COMP COPY
14-9731P	RENAULT COMP
14-0128P	FORD RANGER 3.2D COM
14-1274P	DENSO AUDI COMP
14-9721P	AUDI A6 COMP PATTERN
14-9698	VW GOLF SANDEN/DENSO
14-1126P	VW COMP COPY
14-9774P	HYUNDAI I10 COMP 1.2



## TOP 10 SELLING CONDENSORS

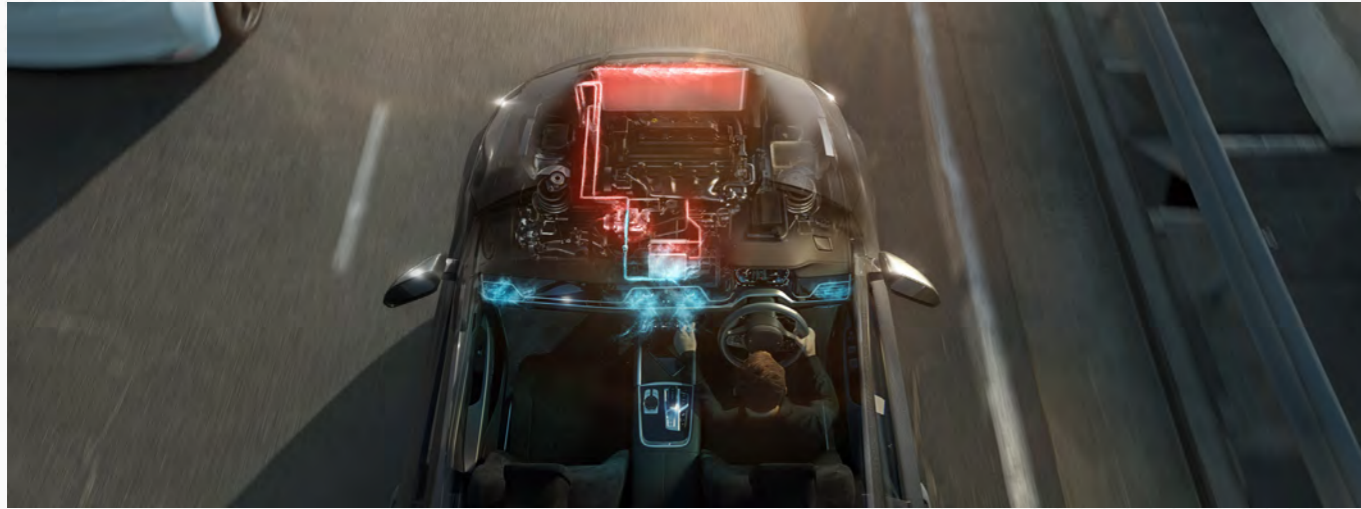
PART	DESCRIPTION
16-9817	NISSAN QUASHQAI 2013
16-1058	VW GOLF COND/AUDI A3
16-9127	FORD FOCUS/C MAX 14-
16-1054	AUDI/GOLF COND 04> C
16-9007	SEAT IBIZA COND
16-8917	BMW MINI COOPER COND
16-9948	BMW 3 COND
16-9972	FORD FOCUS COND
16-9928	CIT C4 PICCASO COND
16-1985	NISSAN JUKE 1.6 DIG





## THERMAL MANAGEMENT, THE NEW AIR CONDITIONING!

With automotive technology advancing as swiftly as the Tesla S, the conventional air conditioning (AC) system has seamlessly evolved into a comprehensive thermal management system (TM).



This evolution is particularly pronounced in vehicles powered by permanent or plug-in electric drives. No longer confined to merely providing cabin heating and cooling, the AC system now plays a crucial role in optimising the performance of electric power drives, control electronics, and maintaining ideal battery conditions.

When it comes to replacement parts, we advocate fitting quality components. That's why, with the combined expertise of Nissens Automotive and AVA, we can offer you a comprehensive thermal management parts solution you can rely on.

The Nissens AVA AC range encompasses a huge range of high quality replacement parts, including **blowers, compressors, condensers, evaporators, expansion valves, heaters, receiver driers, and resistors**. Meanwhile, the engine cooling selection comprises **fans, fan clutches, intercoolers, oil coolers, radiators, and thermostats**.

All Nissens and AVA components maintain a rigorous quality standard, guaranteeing exceptional performance, durability, and hassle-free installation. Each part undergoes meticulous packaging, including all essential accessories required for completion, such as appropriate

O-rings, mounting screws, or the requisite compressor oil.

Furthermore, Nissens goes beyond merely supplying replacement parts. They offer an abundance of technical support and training resources, from comprehensive technical tips to specialised tools like the oil and gas finder. For more information, visit [nissens.com/ac-fillings](http://nissens.com/ac-fillings) or scan the QR code below.

Nissens can assist your business in repairing even the most advanced thermal management systems, including those found in hybrid and electric-drive vehicles.

We recommend Nissens to all our customers because we trust Nissens Automotive and AVA to provide reliable thermal management solutions.



## UK's Leading Repackager and Distributor for Honeywell Solstice® yf Refrigerant

### Is the Clock Counting Down On R134a?

The refrigerant R134a, with a Global Warming Potential (GWP) of 1,430, has been used as the coolant of choice in our car air-conditioning systems for almost 30 years, but that could all be coming to an end sooner than you may think. In 2017 it became illegal to manufacture cars in Europe using a refrigerant with a GWP over 150, so most now contain the refrigerant R1234yf (GWP 4).

To encourage the change to more environmentally friendly refrigerants, a new quota system was introduced in 2015 meaning anyone wanting to manufacture or import these F-Gases into Europe, (inc. UK), must have a legitimate registered quota. This quota system has planned reductions every 3 years throughout its 15-year phase down program.

As quota allocations are cut, refrigerants with higher GWP's become less available and more expensive, to the point where it is no longer economically viable to produce them. At some point this will happen to R134a, and with 21M cars registered in the UK before 2017, a significant proportion of these will still rely on R134a to run their AC systems.

The last quota reduction took place in 2023 and reduced the overall quota down to just 31%. This may only have been a 14% cut of the original 100%, but it was equivalent to almost 30% of 2023's availability. The current F-Gas legislation in Europe is also under review, calling for the 14% cut to be increased to almost 24%. This equals a reduction of almost half of this year's availability. When the UK left the European

Union it adopted Europe's current F-Gas legislation directly into UK policy. It is currently unconfirmed as to whether any changes to the E.U policy would also be adopted into UK legislation. One thing, however, is clear, there will be at least 30% less available quota from 2024 to 2027.

Eventually there won't be any original R134a cars left on UK roads, apart from a small number of classic cars. The question is, will the supply of R134a last long enough? Unfortunately, R1234yf cannot be used in R134a systems due to its flammability, and should only ever be used in a system specifically designed for using flammable refrigerants.



**Honeywell Solstice® R1234yf is the chosen fluid for all manufacturers in their A/C systems**

**[www.nationalref.com](http://www.nationalref.com)**







# SACHS CLUTCH KITS FOR PASSENGER CARS

Fast and practical installation for optimum transmission reliability

All necessary parts are included for total convenience and simplicity



Choose SACHS and you don't just choose any part. You choose superior design, outstanding quality and engineering expertise. That's why you can trust SACHS car clutch kits. Featuring the technical innovation of DMF and XTend, excellence comes as standard.

Made from high quality materials, SACHS manufacture products that are quite simply state-of-the-art. Renowned for exceptional performance and outstanding reliability, SACHS puts you – and your customers – in the driving seat.

## QUALITY YOU CAN TRUST

Fast and practical installation. Optimum transmission reliability. Unequalled driving experience. Long service life. Always engineered to the highest OE quality standards, SACHS clutch kits for cars give you the reassurance of excellence.



### SACHS WORKSHOP TIPS



#### TIP #1 CLUTCH SLIPPING

Clutch slipping symptoms can be as varied and wide-ranging as the causes. In this case, there are a few things to check:

1. Facings – are they worn down to rivet heads?
2. Facings – heavily contaminated with oil or grease?
3. Clutch facing – is it burnt or has it disintegrated?
4. Facing – does it contact the entire surface?
5. Clutch pressure plate – has it overheated?
6. Actuation system – signs of wear and tear?
7. Diaphragm spring – is it fractured?
8. Guide cams – are there any wear-induced ridges?

#### Things you can do to resolve the problem:

- Release system wear, check freedom of movement and adjust if required
- Check vehicle has correct parts fitted
- Check the flywheel is correctly reworked
- See if any lubricant has contaminated the friction surfaces
- Check if there has been a deformation and/or warping of the friction surfaces on the flywheel and pressure plate

Find out more at [aftermarket.zf.com/sachs/pc-clutches](http://aftermarket.zf.com/sachs/pc-clutches)

PROVEN PERFORMANCE  
DESIGNED TO LAST



3 YEAR  
36,000 MILE  
GUARANTEE

## NAP CLUTCHES



100%  
NEW  
CLUTCH



MATCHING  
QUALITY  
CERTIFIED

### ALWAYS BRAND NEW

We ensure a strict policy of 100% new clutches for all of our products. This is our guarantee of using NO re-manufactured or reconditioned items to help minimise failures, issues and returns.

### BEYOND STANDARD

All our clutch specifications either match or exceed the standards set by the original equipment manufacturer. You simply can't get better.

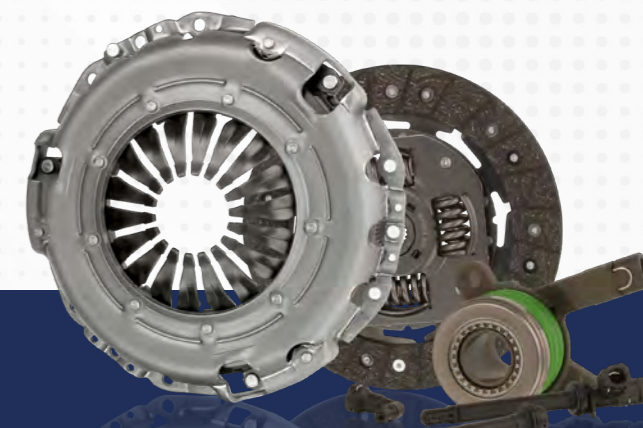
### QUALITY ASSURED

We use the finest materials and conduct comprehensive full-life testing on all our clutches and kit components, ensuring our products are fit for purpose.

### 3 YEARS / 36,000 MILES

We're so confident in the abilities of our clutch products that we offer a special 3 year / 36,000 miles guarantee. All returns are minimised and fixed without issue.

- 100% Brand new units
- All specifications meet or exceed those of the OEM
- Matching Quality certification as defined by EEC Commission Regulation 461/2010
- Certified quality management systems and procedures in accordance with BS EN ISO 9001:2015
- "Full Life" Testing on all clutches and kit components
- Standard clutch kits, Concentric Slave Cylinder (CSC) kits and Single Mass Flywheel (SMF) kits available for conventional solid or dual mass applications.
- Full 3 year / 36,000 mile guarantee.



ALL NAP CLUTCHES ARE  
100% BRAND NEW.



# CD Shock Absorbers

As drivers bounce all over the state of our roads in the current climate of ever increasing costs, the value of high quality shock absorbers at appealing prices has never been so important.

Working constantly to keep all of the wheels in optimum contact with the road surface, shock absorbers play a vital yet often overlooked role in the optimum performance of a vehicle.

Considered safety critical parts, the

fitting of a quality replacement pair brings a whole array of benefits to the end user. New, evenly matched shock absorbers contribute to a balanced return to the vehicles original ride height, with more fully responsive handling and cornering.

The improvement in tyre contact adds to the braking performance, as well as better fuel economy and more even tyre wear. When fitted in pairs, both shock absorbers work together with

the same strengths and advantages.

Although shock absorbers are often replaced in singles, replacing with matching pairs can certainly appeal to customers - especially with CD's competitive pricing.

Manufactured to both ISO and TUV standards to achieve OE matching quality, CD Shock Absorbers offer the confidence of a quality performing solution at market friendly prices.

## Original equipment quality

Manufactured to ISO and TUV standards

## Advanced Technology

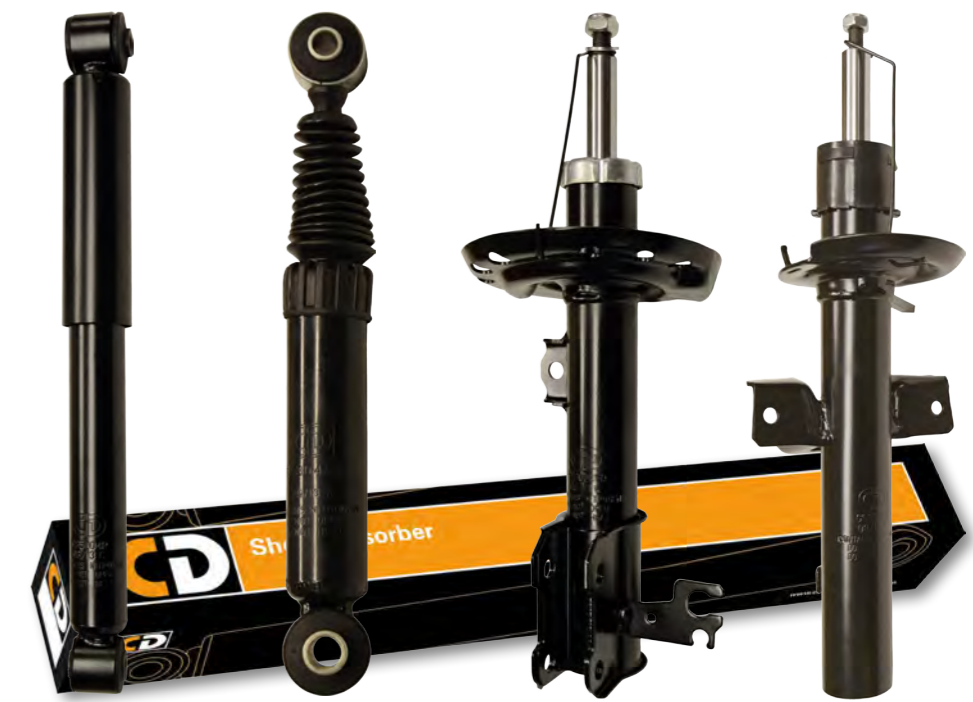
Advanced Nitrogen gas-charged technology

## Comprehensive range

All popular modern cars and light commercial vehicles

## 2 year warranty

## Aftermarket prices



## Original equipment quality

Manufactured to ISO and TUV standards

## Premium One Box solution

Vehicle specific matched front pairs with factory mounted fittings

## Comprehensive range

All popular modern cars and light commercial vehicles

## Complete rear arms

## Aftermarket prices

# CDPlus Wiper Blades

With modern vehicles having a greater variation in windscreen sizes, differing lengths for the driver and passenger side front wiper blades has become more common, along with vehicle specific adaptors.

CDPlus Direct-Fit wiper blades answer all of these varying requirements in a single premium 'one box' solution for each vehicle.

Fast and simple installation with no more need for assorted adaptors.

Every vehicle specific wiper blade is boxed in matched front pairs and rear singles, complete with exact fittings pre-mounted in the factory.

CD's flat, aerodynamic design is built around a solid 'flexed' pre-tensioned steel beam blade to evenly distribute contact pressure for increased wiping performance. An integrated spoiler reduces lift even at higher speeds.

The CDPlus Rear Arm and Blade range is the answer for the growing number

of vehicles where it is only possible to replace the rear wiper blade along with the arm as a complete unit.

All CDPlus wiper blades are made to original equipment quality matching standards and engineered for the highest levels of performance.

Fast and reliable sales, competitive pricing and Autocat V9 certified data gives complete confidence that each CDPlus set and single wiper is the perfect fit - first time, every time!

# CD Coil Springs

While drivers face ever higher costs, the ever present blight of potholes continues to accelerate the demand for replacement coil spring repairs.

Although only single coil springs are often replaced and CD springs are sold in singles, there are compelling reasons behind CD recommending replacing coil springs in pairs.

When one spring fails, its axle partner will have travelled the same journey, experiencing millions of cycles that

cause fatigue and diminish the springs strength and flexibility. The improved performance of a new spring on an axle only adds to the stresses of the old spring.

Sitting at the heart of the suspension setup and playing a vital role in the overall performance of any vehicle, fitting quality coil springs can rightly be considered safety critical.

Made to ISO and TUV standards with the latest OE specification steel for OE

matching quality, CD Coil springs offer the confidence of a quality performing solution at market friendly prices.

Giving optimum vehicle handling, original ride height and balanced wheel contact with the road surface, replacing with matching pairs may likely appeal to customers - especially with CD's competitive pricing.

Quick and accurate parts identification for all popular vehicles supported by the latest Autocat V9 certified data.

## Original equipment quality

Made to ISO and TUV standards

## OE specification steel

Latest in OE-specification spring steel to ensure strength & integrity

## Advanced protection

Coatings protect against corrosion

## Comprehensive range

All popular modern vehicles

## 2 year warranty

## Aftermarket prices





## EuroFlo explores the critical role of a quality exhaust system in maintaining vehicle performance and sound control

A quality exhaust system doesn't just keep exhaust noise to an 'acceptable' level, it also has a major role to play in maintaining optimum vehicle performance. Let's break down some of the ways that this happens:

### Optimum Exhaust Gas Flow

A quality exhaust system is designed to balance exhaust gas flow capacity and velocity. This balance ensures efficient removal of exhaust gases from the combustion chamber, and manages backpressure, which if incorrect, can hinder performance and increase fuel consumption.

### Pulse Management

The exhaust gases in a 4-stroke engine are produced in pulses. These pulses create low-pressure areas behind them, assisting in the scavenging of exhaust gases from the cylinder. A well-tuned exhaust system maximises the vacuum effect created by these pulses, especially at low RPM where the effect is more pronounced.

### Customised Design

EuroFlo exhaust components feature heavily engineered construction, including perforated inner pipes with unique configurations of holes. This customisation ensures optimum performance for each specific application, unlike a 'one size fits all' approach, using standard perforated tubing which can negatively impact performance.

### Advanced Technology

EuroFlo incorporates advanced technologies such as multiple chambers, unique hole patterning, and sound control chamber technology to maximize sound absorption and performance. This contrasts with older technologies like e-glass, which may compromise performance and durability by trapping moisture and chemicals.

### Aluminised Construction & Extended Warranty

EuroFlo's exhaust systems feature fully aluminised construction, providing extended product life, enhancing durability and ensuring long-term performance. All of this enables EuroFlo to offer their industry leading 3-year warranty.

### EuroFlo Quality Product

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](http://www.euroflo.co.uk) or contact your local branch

## MORE SUPPORT FOR BELT-IN-OIL SPECIALISTS



Gates is demonstrating its continued support for installers of Belt-in-Oil systems with the introduction of new kits for the aftermarket. In addition to delivering the promise of all parts required for the job, the kits include belts that offer improved resistance to wear and chemicals, lower belt elongation potential (and therefore enhanced lifetime safety) plus improved belt back resistance.

These are all qualities that help to enhance installer confidence thanks to increased product reliability.

### Greater emissions control

Belt-in-Oil or Wet Belt systems were introduced around ten years ago, in response to increasingly stringent automotive engine emissions regulations. Vehicle manufacturers currently using the technology include Ford, PSA Group, VAG Group, Hyundai and Kia. Some use belt-in-oil timing belts in conjunction with belt-in-oil oil pumps. Others chose to employ oil pump belt-in-oil technology only.

The designs were able to reduce emissions by exploiting the benefits of less weight, greater engine layout flexibility, and reductions in friction. Gates soon emerged as a strong player in the design and production of belt-in-oil systems for its vehicle manufacturer partners. Consequently, the company has been supplying such systems for OE installation since 2016. Aftermarket products have been readily available through its distributor partners since 2019.

### Kit innovation plans

This new range of Gates kits already provides coverage for prestigious vehicle manufacturers such as Ford, Citroen, Peugeot, and

Vauxhall/Opel. Plans to enhance the range with Super Kits, which will contain additional parts wherever appropriate, are well advanced. These new options look likely to become available in 2024.

As the company that pioneered the introduction of timing belt kits (for Synchronous Belt Drive Systems) and accessory belt kits (for Accessory Belt Drive Systems) for the aftermarket, the introduction of Belt-in-Oil Kits by Gates is a logical step with clear marketing advantages. It's an opportunity for distributor partners and their installer customers to stake an early claim in the replacement market for belt-in-oil technology. That's because vehicles equipped with such systems, that require repair/parts replacement, are rolling onto garage forecourts in increasing numbers.

### Partnership benefits

An established Gates product development strategy is to introduce new OE quality parts ranges initially populated with references for the applications in greatest demand. It's a practice that has proved successful over many years. It provides revenue opportunities for distributor partners. Moreover, it presents clear sales advantages over alternative brands.

### Coverage and referencing

The belt-in-oil range by Gates includes two main categories. These are synchronous belts and oil pump belts. Synchronous belts are supplied as a single belt, or in various kit formats. Oil pump belts are supplied as a single belt.

All the models listed by Gates are 1.2 or 1.0 litre, 3-cylinder petrol engines that are either naturally aspirated or turbocharged. New kit applications include:

- Peugeot 208/308/2008/3008 and 5008 (for E-VTi/Vti/PureTech/THP engines)
- Citroen C3/C4 Cactus (for PureTech/THP/Vti engines)
- Vauxhall/Opel Corsa/Crossland X/Grandland X/ Mokka

Note that Gates has a unique product referencing system. Kits are always denoted by KO, while Belt-in-Oil part numbers always start with a T and end with the suffix HOB. For example, the T360HOB is designed for Citroen C3/C4 Cactus applications. It's a tried and tested system that helps to ensure clear product identification between dry and wet system timing belts.





## BUYING IN BULK DOESN'T MEAN COMPROMISING ON QUALITY!

Choosing the right engine oil presents a challenge for consumers and mechanics alike, given the vast array of options available on the market. However, purchasing oil in bulk doesn't have to mean sacrificing quality.



When selecting engine oil, it's crucial not to base your decision solely on viscosity grade. Vehicle manufacturers and international standards set additional criteria that should guide your choice. Ignoring these specifications can lead to increased wear and reliability issues.

Producing high-quality lubricants involves more than just selecting specific base oils and advanced additive technology. It requires precise blending to ensure compliance with all relevant standards and specifications.

These factors significantly impact oil performance. While using low-quality oil can lead to shorter drain intervals, decreased fuel efficiency, and harmful deposits, opting for high-quality oil is essential for maintaining engine health and performance.

At Planet, we believe that buying oil in bulk is perfectly fine as long as quality isn't compromised. Our automotive engine oils are crafted with top-tier base stocks and advanced additive technology by experienced lubrication specialists in the UK. Each batch undergoes rigorous testing in our cutting-edge laboratory, ensuring that Planet remains a trusted brand known for quality and reliability.

When choosing a bulk oil for your workshop, don't compromise on quality, choose Planet oil.

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- Semi Synthetic 10w/40 ACEA A3 B4
- Synthetic 5w/30 FMC
- Synthetic 0w/30 ACEA C2

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# Perfect Timing

## FAI Timing Chain Kits (TCK) - Over 500 to choose from!

To ensure all customer needs are met, FAI kits come in various forms, providing complete solutions as well as scaled-down versions, designed to service the top or bottom of the engine. Coverage of chain drive engines in the UK is over 90%, equating to millions of vehicles.

As with all FAI products, the TCK range is subjected to numerous testing phases to ensure the best production standards. A combination of endurance, durability, destruction and thermal shock testing, paired with stringent inspection, ensures a long and reliable service lifespan.

FAI TCKs include the latest technologies adopted by OE vehicle manufacturers, including newly developed 'High Torque' chains for many modern applications.

### Variable Valve Timing (VVT) Hubs:

Where applicable, FAI's complete kits contain VVT hubs, something that the brand strongly suggests are replaced when working on the timing components of these applications. For where this guidance hasn't been followed, FAI offer many VVT hubs individually.

FAI VVTs are manufactured to OE standards, which means they are made using the OE specification material and CNC machining processes. They are assembled in "clean rooms" which must be entered via an airlock ensuring no airborne contaminants can become trapped within the VVT mechanism. Each hub is also 100% tested before packing for total peace of mind. Despite this costly process, FAI VVT's and kits are very competitively priced, ensuring a good value repair.

### Kit Focus: Hyundai & Kia

1.1 D3FA : 1.4 D4FL : 1.5 D3EA : 1.7 D4FD

FAI stocks an industry-leading selection of kits for the engine codes listed.

As there are many variants of chain kits for these popular engines it can be confusing when asked by a customer, "Which one?". Application data often isn't enough to differentiate which kit is needed, as variants were fitted to the same engine codes. To help solve the issue for customers, FAI provide the differentiating OE references to ensure a perfect fit.







# STEERING & SUSPENSION

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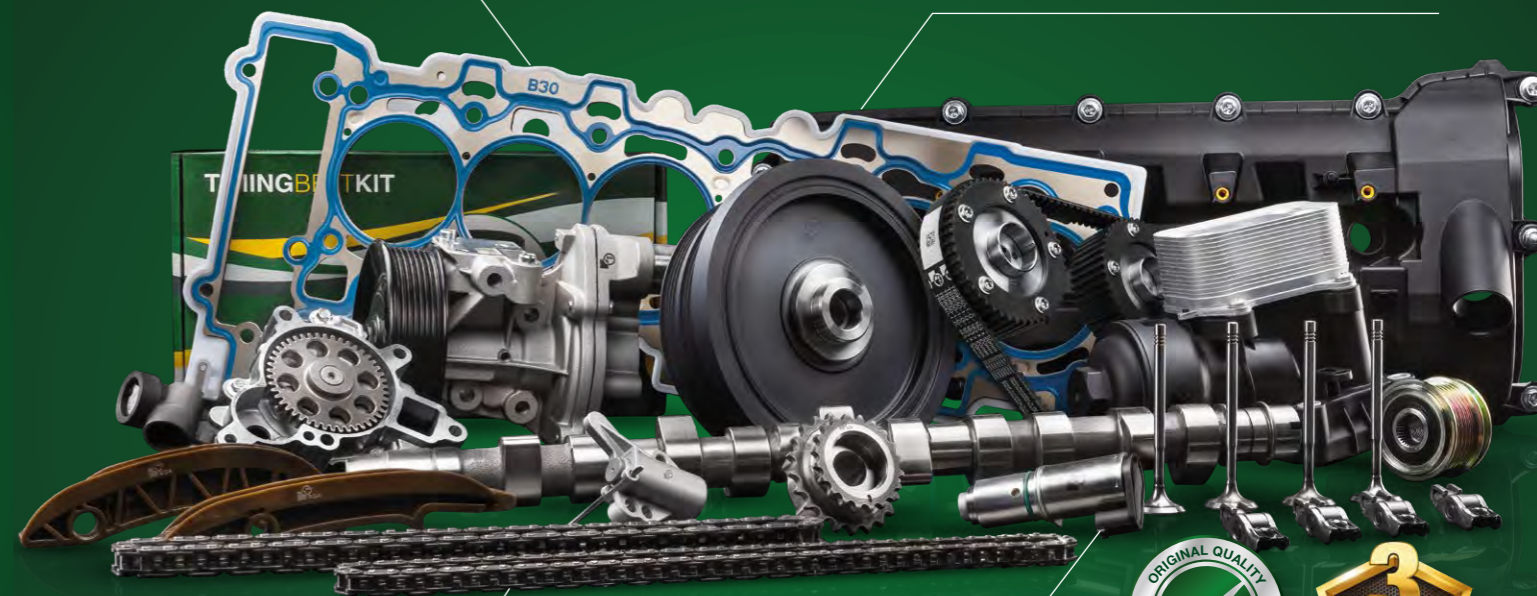


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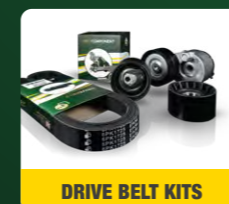
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DRIVE BELT KITS



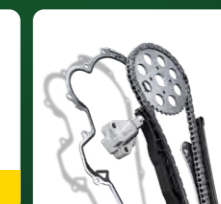
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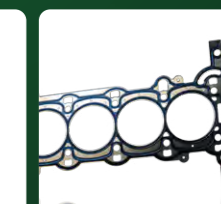
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TIMING CHAIN KITS



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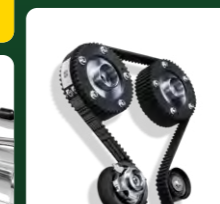
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# Prepare for any weather with Bosch Wiper Blades

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 and innovation

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. Modern generations of Bosch Aerotwin wiper blades feature a spoiler along the entire wiper length, ensuring an even contact pressure even at higher driving speeds.



### Special Bosch rubber compound

Power Protection Plus wiper rubber technology: the special blend is characterised by high resistance to ageing and abrasion. Innovative wiper rubber additive, the Longlife formula, makes the Aerotwin wiper blade even more robust against environmental influences and windscreen contaminants.

### 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 - Wiping Quality, Noise Level, High Speed Quality & Impact Resistance
- Environment Tests - Corrosion Resistance, Temperature Cycle, Heat Ageing & UV Resistance
- Over-stress Tests - Freezing & Snow-Load
- Chemicals Tests - Chemical Resistance

### Bosch wiper blades for electric and hybrid vehicles:

Electric and hybrid vehicles are continuing their expansion in 2024 in the European market, despite another unpredictable 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



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

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