



SMART CHOICE

ISSUE 52 + JANUARY/FEBRUARY 2020
All offers end 29 February 2020 and are subject to availability. All prices exclude VAT.

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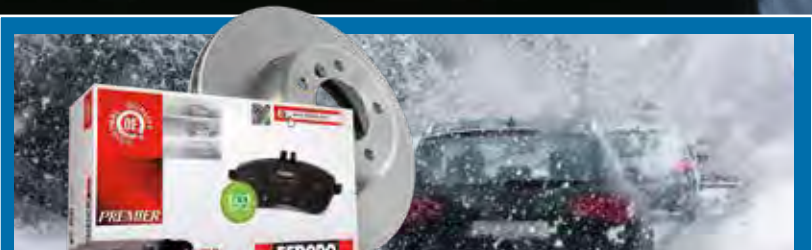


WIN a Dual Gas Kit... see inside for details

PLUS...



Clutch and Slave Cylinder Installation best practice guidelines...



Keep your customers safe this Winter!



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GREAT OFFERS - ON CHARGERS AND STARTERS



GEAR CONTROL CABLES - PREMIUM PRODUCTS, TECHNICAL SOLUTIONS



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WELCOME TO SMART CHOICE

ISSUE 52 JANUARY/FEBRUARY 2020

INSIDE THIS ISSUE

2 Ring	10 PRODUCT FOCUS: Yuasa	19 TECH TALK: Sachs	26 Comma / BGA
3 Hurricane	11 PRODUCT FOCUS: Trupart	20 Euroflo	27 PRODUCT FOCUS: Gates
4 Polyco / Shaftec	12 SGS Gases / AD Antifreeze	21 NEW TO RANGE: FAI	28 Delphi / Winter Essentials
5 PRODUCT FOCUS: Ferodo	13 PRODUCT FOCUS: Mahle	22 NGK	29 PRODUCT FOCUS: Tecalemit
6 AFTERMARKET FOCUS: IAAF	14 Autel	23 PRODUCT FOCUS: First Line	30 Beckermann
7 Simon's Specialist Stuff	15 Blue Print	24 Launch UK	31 Technical Hotlines
8 Wynn's / Sealey	16-17 Lucas Bulb Chart	25 GYS / INA	
9 TECH TALK: KYB	18 Knecht / Febi		

Smart Choice Terms & Conditions

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MAGflex Utility Inspection Lamp

UP TO 1000 Lumens	6000K Colour temp	UP TO 5h Operating time	5h Charging time
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Multi-angle	Rechargeable	Magnet
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- Rechargeable and cordless
- Ultra bright 1000 lumens utility lamp
- Versatile design makes the lamp ideal
For automotive, professional trade and DIY use
- Dual 180° ratcheting & strong magnetic bases
Allow hands free use



PRICE
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MAGflex Arc Inspection Lamp

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- 180° ratcheting design
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For hands-free use
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120 LUMEN



80 LUMEN

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160 LUMEN



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- 180° rotating head
- 10 hours maximum runtime
- Magnetic base



600 LUMEN



180° ROTATION

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100 LUMEN

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- Super bright SMD technology
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300 LUMEN

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360° ROTATION

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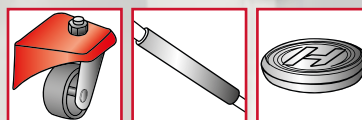


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- Longer lasting, real value for money - tests prove it!
- OE matched accessories as standard

*see our Weather Test results (below)

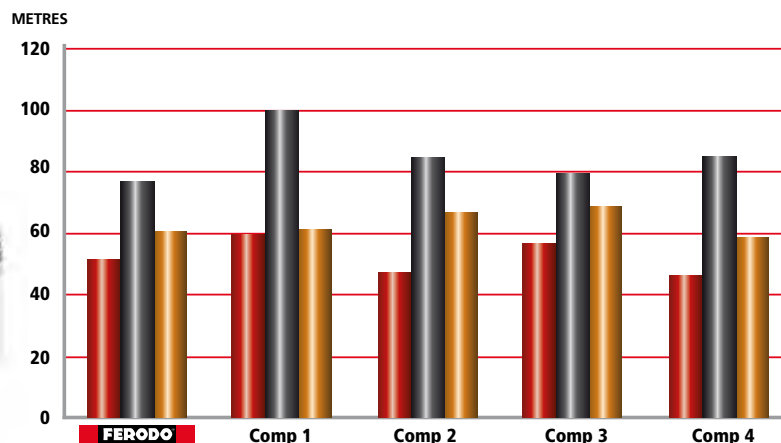
SITUATION: WEATHER TEST

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RIDE: LV Ford C1 (Focus, C-Max, Kuga) PLAYERS: ECO-FRICTION® vs. Competitors

Bedded dry: Test speed 80 km/h - 0 km/h with constant 30 bar stops. Soak wet: 10-minute wet soak, average 6 stops. Front brakes only. Tests are conducted in Federal-Mogul Motorparts Chapel, UK and Barcelona, Spain test centers. Test results available upon request. (info@fmmotorparts.com)

The Ferodo brand is a registered trademark of **FEDERAL-MOGUL MOTORPARTS**

Manifesto calls for action on fair digitalisation opportunities



European coalition urges EU legislation by 2020 to ensure a genuine digital level-playing field for remote access to in-vehicle data and functions.

The Independent Automotive Aftermarket Federation (IAAF) is co-ordinating UK activity as part of a broader European-wide coalition that urges the European Commission to introduce legislation that ensures fair remote access to in-vehicle data and functional resources.

The coalition of European federations – representing parts distributors, independent garages, insurers, data publishers, component and equipment suppliers, tyre suppliers, emergency breakdown associations, lease companies, oil and lubricants suppliers, consumers and SME representatives – argues that a legislative solution that ensures access will not only enable innovation but would also improve customer choice in the automotive aftermarket. Moreover, access to this vehicle data is essential in allowing for effective competition within the market and enabling the EU to become a front runner in connected and autonomous mobility and related services.

The new manifesto argues that independent operators need four key abilities – subject (where relevant) to the consent of the driver / owner of the vehicle – in order to provide competitive, innovative services and digital solutions to their customers.

These abilities are:

Independent and direct real-time access to in-vehicle generated data that is not monitored by vehicle manufacturers, including those which are time critical;

Bi-directional communication with the vehicle and its functions, independent from the vehicle manufacturer;

Safe, secure and independent remote interaction with the driver, using the in-vehicle human-machine interface functions (e.g. via the dashboard or voice commands);

Independent software running directly in the connected vehicle using onboard capabilities to process any dynamically generated data as closely as possible to its source.

However, these would not be possible with the model put forward by vehicle manufacturers, the so-called 'Extended Vehicle', which will channel all future communication and data access through the VM's backend server. As such, this would prevent all other service

providers 'around the car' from offering competing services to consumers, as only a small part of the vehicle generated data will be shared with independent service providers, compared to the data available to the VM.

In two recent Resolutions, the European Parliament called on the European Commission to take (legislative) action to ensure fair, secure, real time and technology neutral access to in-vehicle data for some third party entries.

From a UK perspective and its withdrawal from the EU, it is still vital that the UK position is taken into consideration and the new manifesto reaffirms the call for a European legislative solution by 2020 to ensure effective remote access to in-vehicle data and functional resources, which will guarantee competition, innovation, and free consumer choice.

Wendy Williamson, IAAF chief executive said: "We call on European and national policymakers to present a robust legislative proposal by 2020. By doing so, EU Member States would ensure a competitive services environment and become the leader in connected and autonomous mobility and related services, while at the same time safeguarding its SME-friendly, social and green market economy and benefits to consumers.

"The ability to unleash the innovative and competitive potential of the automotive servicing industry and mobility providers for their services 'around the car', must be allowed to continue in the future. We feel it will be detrimental to motorists if the vehicle manufacturers are able to have a monopoly on access to the vehicle's data/functions and legislation is needed to ensure a level playing field."

The IAAF, coordinating UK activity, will continue to play a crucial role in the coming year on discussions around access to in-vehicle data and resources.





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- Models: Transit mk7 2.2 TDI 11 > Transit km8 2.2 tdcI 14 >



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- Models: Vito 03 > / Sprinter 06 >



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Peak Amps
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5.0L

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560/95A 12/24V STARTER/CHARGER



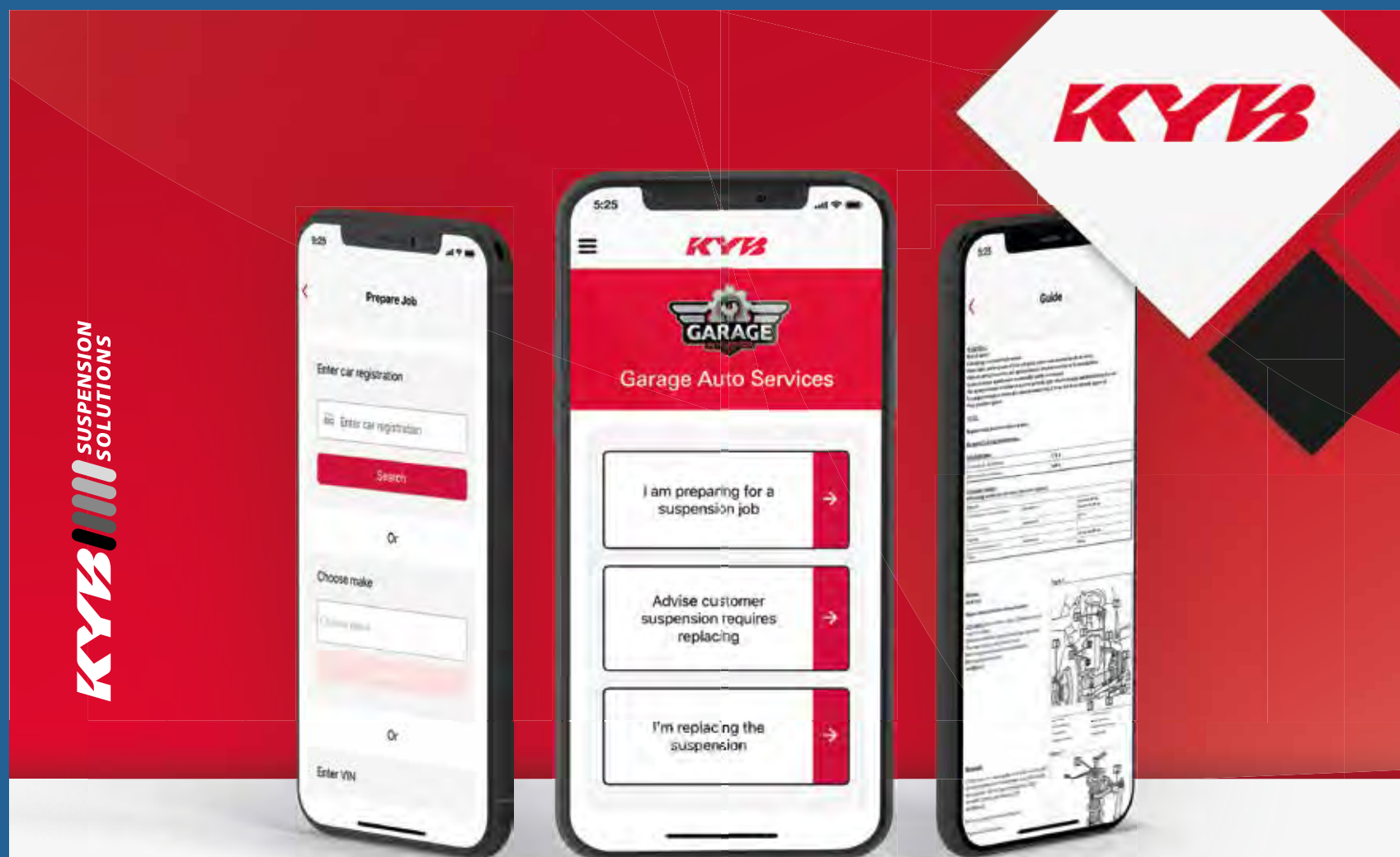
12V/24V



- Max. Charge: 95A (65A EN).
- Max. Start: 560A (360A EN).
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- Battery Range: 50-1000Ah.
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KYB Launches New Features for KYB Suspension Solutions App

KYB has launched an update for the popular Suspension Solutions mobile App. The App will now provide detailed, part specific technical advice for a suspension job, completely free. The technician can either enter the car make and model, the VIN number, or the registration number and they will be shown:

- The KYB part numbers required.
- A detailed technical bulletin for each job, which includes an illustrated step by step guide to fit the part, as well as the tools and torque settings required and an estimate for the time needed to complete the job.
- A KYB fitting video, if available.

The App aims to allow workshops to prepare jobs with ease and efficiency. Highlighting the tools and torque settings required will reduce the risk of damaging the components and the inclusion of a suggested fitting time for each job will help workshops to quote more accurately and plan more efficiently.

The App has two original features that are joined by the new fitting instructions. The first

allows the technician to suggest suspension work to a motorist. The technician assesses the vehicle and inputs the "symptoms" the vehicle is showing into the App, attaching a picture if required. The App then takes this information and creates a specific vehicle report, which is text to the customer, all for free. This report contains a button to "call the workshop"- on average this button is clicked by the motorist 1 in 4 times.

The second feature allows the technician to take "before and after" photos when working on a vehicle's suspension. The App takes these pictures and adds them to a vehicle report that is text for free to the customer. The report explains the work that has been done, the benefit it will have on the vehicle and shows pictures of the old and newly fitted components.

The KYB Suspension Solutions App is free to download and fully customisable so all reports sent out feature your workshop's name, contact number and logo. It is available to download for free from the App Store and Google Play. For more information, head over to kyb-europe.com/app/

Why choose Yuasa?



Yuasa are the world's leading battery manufacturer and global leader for quality and innovation. All batteries are engineered to provide long service life, maximum performance and exceptional reliability. Yuasa is an Original Equipment (OE) supplier to many of the world's top vehicle brands including BMW, Honda, Mercedes-Benz and Mitsubishi.

The manufacturer supplies a wide range of well-known and trusted automotive, motorcycle and commercial vehicle brands as well as ranges for leisure, marine, garden and specialist applications. Providing coverage of over 99% of the European vehicle parc, Yuasa cover more vehicles and applications than any other manufacturer.

Next Generation Vehicles

Replacing the battery on a modern vehicle is no longer a straightforward fit-and-forget task. On vehicles with advanced technology such as Start-Stop, battery replacement can be complex and time consuming. Mechanics and technicians should be aware of several key differences between these and traditional standard ignition vehicles:

For vehicles with advanced technology it is essential the battery is replaced with one of the correct specification. Ian Newham, Training Manager for GS Yuasa Battery Sales UK explains: "If a vehicle is fitted with an AGM Start-Stop battery then the replacement must also be AGM Start-Stop. The same applies to EFB equipped vehicles.

"Unlike standard ignition vehicles it is not possible to replace the battery with a lower capacity model or one of a different technology. Although this would physically fit, it would cause serious problems".

Battery Testing

Checking the health of an EFB or AGM battery should be done using a conductance battery tester. It is important to select the EFB or AGM setting on the tester to ensure that the results are accurate.

Battery Location

On many new vehicles the battery is not fitted under the bonnet and locating it can take time. The replacement process can also be extremely time consuming with the removal of trim panels and even seats required. For some high end BMW and Audi models replacing the battery can require up to an hour and a half of work.

Battery Management System and Battery Validation

Battery validation is rapidly becoming a mandatory requirement as part of the procedure for battery replacement. Ian Newham continues: "Most modern vehicles come fitted with a Battery Management System (BMS). This must be reset through the on-board diagnostics (OBD) port to tell the vehicle when the battery has been replaced.

"The BMS monitors the battery throughout its service life to maintain optimum charge efficiency ensuring the operation of the Start-Stop system.

"Failure to fit the correct battery or reset the BMS can cause serious issues such as battery failure, in car error messages, non-critical vehicle system shut-down and even complete loss of Start-Stop functionality."

Most diagnostic platforms within the workshop are equipped with the capability to validate new batteries to vehicles. Alternatively, the Yu-Fit Battery Configurator offers an easy to use handheld solution.

Yuasa Yu-Fit Battery Configurators

With a robust design and simple operation, the Yu-Fit offers great value for money and is one of the most user-friendly diagnostic tools on the market. Although garages may already own diagnostic equipment capable of this, to have such a centrally important tool tied up on a relatively straightforward task is not ideal.

Yuasa Online Battery Lookup

Alongside its extensive range of Original Equipment (OE) quality AGM and EFB batteries, Yuasa provides several easy-to use tools to make the entire replacement process much easier. Saving workshops valuable time and money.

The powerful online battery lookup systems can be accessed by visiting fit.yuasa.com or by pushing one of Yuasa's USB Smart Buttons. Users can then search for the right battery for a whole range of car, light van and commercial vehicle applications by simply entering the registration number or VIN/Chassis number. They can also search by make/model.

The system will then identify the correct battery and show important details including estimated fitting time, battery and OBD location, technical data sheets and battery replacement procedures. This enables workshops to price accordingly and save valuable time spent on the job.

GS Yuasa Academy

The new GS Yuasa Academy is the first dedicated online battery training system available. Featuring over 20 certified courses, tailored to different industry job roles, it provides users with valuable knowledge and practical skills to further enhance business growth and battery potential. The system can be accessed on any device by visiting academy.gs-yuasa.eu



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MSP3880/1	Ford Transit Mk8 9 [Exc. Custom] (3/14>)
MSP6316/7	VW Golf [Exc. Estate] (09 - 6/13), Touran (10 - 15)
MSP3966/7	Ford Fiesta (10/08 - 17), B-Max (12 - 18)
MSP3844/5	Ford Focus (3/08 - 18), Mondeo (11 - 3/15)
MSP9354/5	Fiat Ducato, Citroën Relay, Peugeot Boxer (06>)



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- Premium 3 Year life

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Smart Choice caught up with Jonathan Walker Managing Director MAHLE Aftermarket Ltd and Head of Aftermarket Western Europe (MEW) for a few insights on the world of filtration.

"Delaying an oil change may save money in the short term but it increases the risk of terminal engine damage..."

Q: WHAT IS NEW IN THE WORLD OF FILTERS?

Most new vehicles are fitted with a basic cabin filter. However, within the MAHLE range carbon activated filters remove gases, and Caremetix is available as an upgrade to remove all odours and bacteria. These can improve the customer in-car experience and enhance loyalty.

Garages are also asking for a "service kit" which can lead to parts being supplied from several different manufacturers. They need to request quality brands from their supplier to protect their reputation – MAHLE is a heavily specified brand.

Q: HOW IMPORTANT IS IT TO FOLLOW THE MANUFACTURER SCHEDULE ON FILTER REPLACEMENT?

The message from MAHLE is simple: As an Original Equipment supplier, MAHLE products have been tested to the most stringent of standards and have unrivalled technical support. Low quality filters will not efficiently remove contaminants from the vehicle's fuel, causing problems with diesel fuel injectors and engine components.

MAHLE has range of literature available to garages to promote regular filter replacement to motorists. Delaying an oil change may save money in the short term but it increases the risk of terminal engine damage.

MAHLE will ONLY offer products that meet the OE specification, and all MAHLE products supplied are covered by a comprehensive warranty. One in every 2 vehicles on roads worldwide feature MAHLE products as Original Equipment, and we are a trusted development partner to every major vehicle manufacturer.

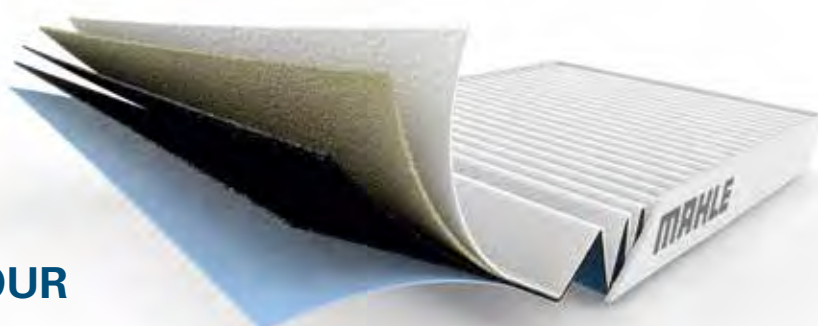
To ensure maximum vehicle performance over the winter months, it's essential that oil filter checks are carried out before temperatures dip to freezing. An oil and filter change is warranted before the winter cold sets in, as contaminated oil can end up causing major damage to the engine.

Only oil of the correct grade and specification for the vehicle must be used. The oil filter should also always be replaced in the process, as only a clean filter has sufficient capacity to remove contaminants, such as dust, metal and combustion residues from, the oil.

Q: HOW IS THE CHANGING FACE OF THE VEHICLE ENGINE AFFECTING FILTERS?

In modern engines, oil has many functions besides lubricating the engine and, in many cases, the turbocharger. Vehicle manufacturers are constantly updating the required specifications of oil, to extend service intervals whilst lowering viscosity to improve efficiency. However, low quality filters are the weak link in a high performance oil system, resulting in premature failure and component damage.

Air filters control the quality of the air being delivered to the engine – not just in cleanliness, but also flow stability. To ensure correct combustion performance whilst minimising engine wear from the intake of particles, the air filter must be as specified by the vehicle manufacturer.



FOR MORE INFORMATION CONTACT YOUR LOCAL BRANCH TODAY!

DS 808eu

Promotion! ~~£995~~ **£795** excl. VAT



includes:
 Extended 2 year warranty
 Extended 2 year free updates

The DS808EU is Autel's base Pro-Range tool. The DS808EU is the 'little brother' of the MaxiSYS MS906 and the UK edition is loaded with the **same software as the MS906**, making the DS808EU fabulous value for money.

The DS808EU is powerful with 4 core processor, colour 7" touch screen, built in lithium battery, 32GB of memory and Smart AutoVIN technology. The DS808EU is a smaller tablet than the MS906 and is not supplied with pre-OBD connectors. This stream-lining enables us to significantly lower the price to our end customers.

- Extensive vehicle coverage for more than 80 US, Asian and European vehicle makes
- Exceptional OE-Level system coverage for all electronic systems
- Complete capabilities for codes, live data, active test, ECU information, adaptation, matching, etc.

SUPER FAST UNBEATABLE VALUE

4.4.4 Android	1.5GHz Cortex-A9	32G internal memory	AC
1024x600	Ultra fast power on	3200mA lithium-polymer battery	Oil and water screen resistant

2 YEARS SOFTWARE UPDATES INCLUDED

80+ Manufacturers / 24 Month UK Warranty

MS 908IM KEY PROGRAMMER

£3,200 excl. VAT



includes:
 Extended 2 year warranty
 1 year free updates incl. Key Programming Software

The MaxiSYS MS908IM is our new all in one Key Programming and diagnostic Software Tool.

It is equipped with XP400 key programmer and MaxiFlash J2534 ECU programmer to provide complete coverage of IMMO and programming functions. Together with the ability to quickly diagnose all modules of the majority of the makes and models on the market, MS908IM provides you with all the special functions of the MS908.

The MaxiSYS MS908IM retains the powerful MS908 hardware and offers a 15 second boot up and is built on the multi-tasking Android operating system.

IMMO KEY PROGRAMMING

- Read PIN / CS (All Key Lost)
- Key Generation
- Key Learning / Remote Learning
- Backup / Restore IMMO Data
- IMMO ECU Reset / Adaptation, Refresh / Coding
- BENZ 3rd Generation IMMO Add Key, All Key Lost, Key Learning
- BMW FEM / BDC Key Learning and ECU Adaptation
- BMW CAS4/3/2 Key Learning
- VW / AUDI MQB Key Learning, 48 Transponder(96-bit) Add Key,
- All Key Lost, A6 All Key Lost

4.4.2 KitKat	CortexA7+A15 six-core processor	64GB internal memory	3X Ultra fast
1024x768 TouchScreenLCD	Ultra fast power on	11000mA lithium-polymer battery	Oil and water screen resistant

XP400 KEY & CHIP PROGRAMMER

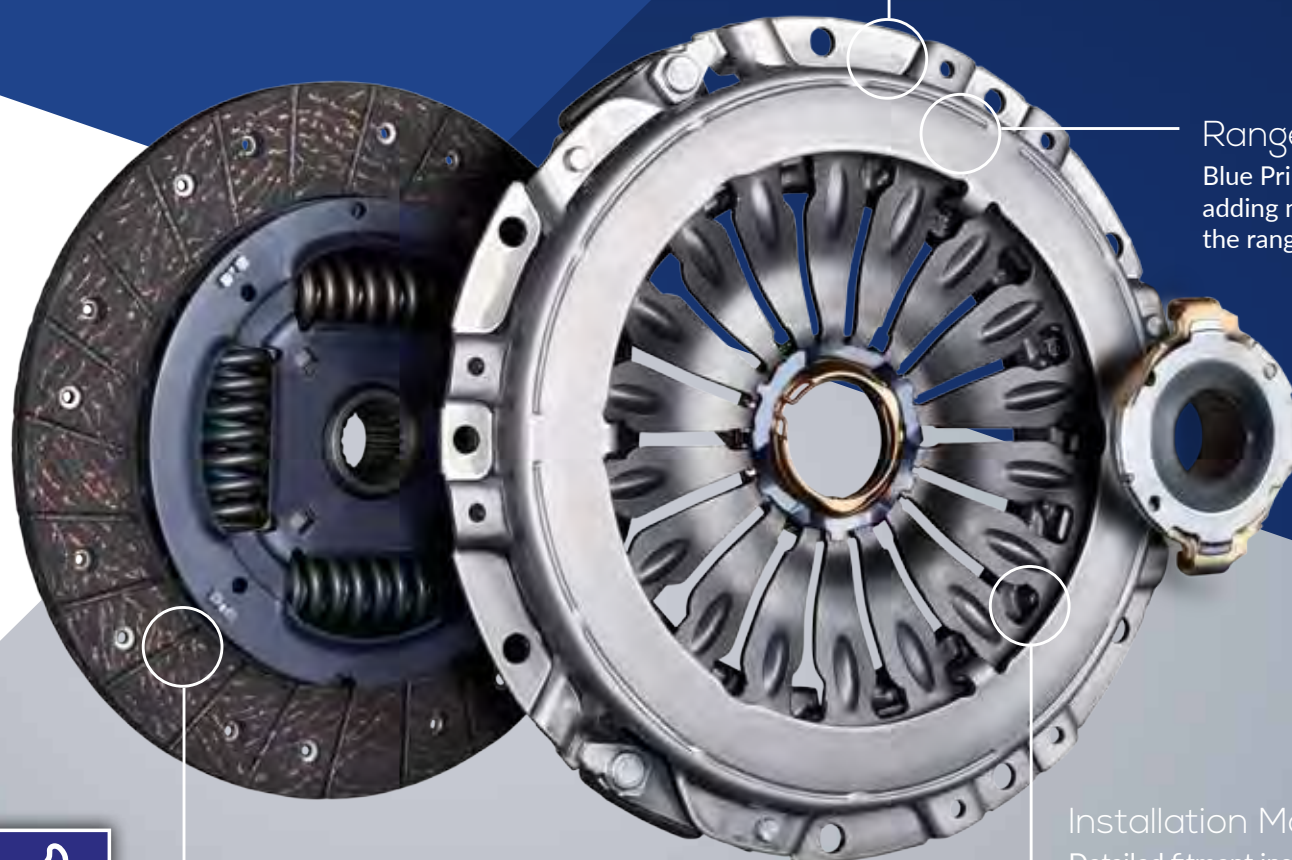
- Read / Write Transponder Data
- Read / Write MC9S12 Encryption Chip
- Read / Write IC Card
- Read / Write ECU / MCU / EEPROM Data
- Read / Write Mercedes Infrared Key
- Detect Remote Frequency



One Brand.
All Clutches.



Blue Print range extended to include European Vehicles



High Quality

All Blue Print clutches are specified to exacting standards to guarantee a direct replacement to the original fitment.

Range Coverage

Blue Print is constantly adding new products to the range.

Installation Made Easy

Detailed fitment instructions are supplied with all clutches, so even the most complex repairs can be clearly understood.

Tailor-Made Solutions

We offer product enhancements that are tailored to a customers' requirements.



THE QUALITY ALTERNATIVE TO THE MARKET LEADER

bilsteingroup[®]
CLUTCH COMPETENCE CENTRE



The aftermarket specialist now offers you more than 1,100 clutch kits for **European** and **Asian** makes and models, covering over 30,000 passenger cars and light commercial vehicles applications.

Get more information about our complete offer of clutch components at our online catalogue: partsfinder.bilsteingroup.com

3 YEAR WARRANTY

INCLUDING A NO QUIBBLE WARRANTY ON CLUTCHES*

*See warranty statement.

Our quality promise:

- CLUTCH COMPETENCE CENTRE with its own test laboratory
- Stress tests on endurance test beds
- Road tests and calibration drives in test vehicles
- All articles in OE matching quality
- Only new parts (no reconditioned components)
- Seamless documentation to ISO 9001:2008

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bilsteingroup[®]

HALOGEN BULBS

H1 P14.5s	V	W	i	Part No.
	6v	55w		LLB465
	12v	55w		LLB448
	12v	100w		LLB481
	12v	55w	130%	LLX448XLT
	12v	55w	50%	LLX448BL50
	12v	55w		LLX448BL
	24v	100w	XR	LLX481BL
	24v	70w		LLB466
	24v	100w		LLB491
H2 X511	V	W	i	Part No.
	12v	55w		LLB479
	12v	100w		LLB482
	24v	100w		LLB492
H3 PK22s	V	W	i	Part No.
	6v	55w		LLB455
	12v	55w		LLB453
	12v	100w		LLB483
	12v	130w		LLB489
	12v	55w		LLX453BL
	24v	50w		LLB444
	24v	70w		LLB460
	24v	100w		LLB495
	24v	130w		LLB496
H4 P43i	V	W	i	Part No.
	12v	35/35w		LLB1046
	12v	60/55w		LLB472
	12v	100/55w		LLB473
	12v	100/80w		LLB484
	12v	130/90w		LLB490
	12v	60/55w	130%	LLX472XLT
	12v	60/55w	50%	LLX472BL50
	12v	60/55w		LLX472BL
	12v	100/80w	XR	LLX484BL
	24v	75/70w		LLB475
H4 P45i	V	W	i	Part No.
	12v	60/55w		LLB012
	12v	100/80w		LLB485
	24v	75/70w		LLB024
	24v	100/80w		LLB497
H7 PX26d	V	W	i	Part No.
	12v	55w		LLB477
	12v	100w		LLB784
	12v	55w	130%	LLX477XLT
	12v	55w	50%	LLX477BL50
	12v	55w		LLX477BL
	12v	100w	XR	LLX784BL
	24v	70w		LLB775
	24v	100w		LLB785
H8 PGJ19-1	V	W	i	Part No.
	12v	35w		LLB708
H9 PGJ19-5	V	W	i	Part No.
	12v	65w		LLB709
H9B PGJY-5	V	W	i	Part No.
	12v	65w		LLB9009
H10 PY20d	V	W	i	Part No.
	12v	42w		LLB710
H11 PGJ19-2	V	W	i	Part No.
	12v	55w		LLB711
	24v	70w		LLB776
H12 PZ20d	V	W	i	Part No.
	12v	53w		LLB712
H13 P26.4i	V	W	i	Part No.
	12v	60/55w		LLB713
H15 PGJ231-1	V	W	i	Part No.
	12v	15/51w		LLB715
	24v	20/60w		LLB196
H16 PGJ19-3	V	W	i	Part No.
	12v	19w		LLB716

HALOGEN BULBS

H18 PY25d-1	V	W	i	Part No.
	12v	65w		LLB718
H19 PU43i-3	V	W	i	Part No.
	12v	60/55w		LLB719
HB3 P20d	V	W	i	Part No.
	12v	60w		LLB9005
	12v	100w		LLB9005A
	12v	60w		LLX9005BL50
HB3A P20d	V	W	i	Part No.
	12v	60w		LLB9005XS
HB4 P22d	V	W	i	Part No.
	12v	51w		LLB9006
	12v	80w		LLB9006A
	12v	51w		LLX9006BL50
HB4A P22d	V	W	i	Part No.
	12v	51w		LLB9006XS
H27W/2 PGJ13	V	W	i	Part No.
	12v	27w		LLB881
H27W/1 PG13	V	W	i	Part No.
	12v	27w		LLB880
T3 1/4 Right Angle	V	W	i	Part No.
	12v	50w		LLB886
P29i	V	W	i	Part No.
	12v	65/45w		LLB9004
PX29i	V	W	i	Part No.
	12v	60/55w		LLB9007
HIR1 PX22d	V	W	i	Part No.
	12	65		LLB191
HIR2 PX22d	V	W	i	Part No.
	12	55		LLB190
BA9s MCC (MINIATURE CENTRE CONTACT)	V	W	i	Part No.
	12v	20w		LLB433
	12v	10w		LLB433A
	12v	5w		LLB433B
BAY9s / BAX9s	V	W	i	Part No.
	12v	21w		LLB436
	12v	21w		LLB436A
	24v	21w		LLB435
	12v	6w		LLB434
BA15s SCC (SINGLE CENTRE CONTACT) HALOGEN	V	W	i	Part No.
	12v	5w		LLB467
	12v	10w		LLB468
	12v	20w		LLB470
	24v	20w		LLB469
	12v	50w		LLB795
	24v	50w		LLB1051
BA15d (SMALL BAYONET CAP)	V	W	i	Part No.
	12v	10w		LLB471

GAS DISCHARGE BULBS

D1R PK32d-3	V	W	i	Part No.
	85v	35w	R	LLD1R
D1S PK32d-2	V	W	i	Part No.
	85v	35w	S	LLD1S
	85v	35w	S	LLD1SBL
D2R P32d-3	V	W	i	Part No.
	85v	35w	R	LLD2R
D2S P32d-2	V	W	i	Part No.
	85v	35w	S	LLD2S
	85v	35w	S	LLD2SBL
D3R PK32d-6	V	W	i	Part No.
	42v	35w	R	LLD3R
D3S PK32d-5	V	W	i	Part No.
	42v	35w	S	LLD3S
	42v	35w	S	LLD3SBL
D4R P32d-6	V	W	i	Part No.
	42v	35w	R	LLD4R
D4S P32d-5	V	W	i	Part No.
	42v	35w	S	LLD4S
	42v	35w	S	LLD4SBL
D5S PK32d-7	V	W	i	Part No.
	12v	25w	S	LLD5S
D8S PK32d-1	V	W	i	Part No.
	40v	25w		LLD8S

FESTOON BULBS

C5W S8.5s	V	W	i	Part No.
	6v	6w	42/3411	LLB253
	6v	10w	35x11	LLB1059
	6v	15w	44x11	LLB1060
	12v	5w	42x11	LLB258
	12v	5w	40x11	LLB239
	12v	6w	38x11	LLB254
	12v	7w	40x10	LLB232T
	12v	10w	42x11	LLB264
	12v	10w	38x11	LLB272
	24v	5w	38x11	LLB242
	24v	5w	42/3511	LLB243GT
	24v	5w	42x11	LLB260
	24v	10w	42x11	LLB274
	24v	5w	42x11	LLB653
CW S8.5s	V	W	i	Part No.
	6v	18w	42x15	LLB1061
	12v	10w	42x15	LLB265
	12v	15w	42x15	LLB267
	12v	18w	42x15	LLB270
	12v	21w	42x15	LLB273
	24v	21w	42x15	LLB275
	24v	18w	42x15	LLB276
	24v	15w	42x15	LLB277
S7	V	W	i	Part No.
	12v	3w	35.5x7.2	LLB256
	12v	5w	28x8.2	LLB54T
	12v	5w	36x8	LLB261
	12v	3w	37x6	LLB268
	12v	3w	35.5x8.7	LLB263T
	24v	3w	35.5x8.7	LLB266T
S8.5	V	W	i	Part No.
	12v	10w	28x10	LLB269
S5.5	V	W	i	Part No.
	24v	3w	35.5x6	LLB257



Automotive Bulbs Identification Chart

CLASSIC BULBS				STANDARD BULBS				GLOBE BULBS																																																																																																											
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ZF Aftermarket Provides Best Practice Guidelines for Clutch and Slave Cylinder Installation



ZF Aftermarket supplies the automotive aftermarket with original equipment clutches and associated driveline components under ZF's product brand Sachs. As with any product, a certain level of warranty returns can be expected despite stringent checks at every stage of manufacture and during quality assurance procedures. However, where Sachs clutch components are concerned, investigation reveals that problems are usually related more to fitting technique than to product quality.

Based on a review of recent warranty claims, Wayne McCluskey, technical training manager at ZF Aftermarket UK Ltd, offers some advice on adhering to best practice when installing a Sachs clutch or concentric slave cylinder.

SACHS CLUTCH INSTALLATION TIPS

Despite clutch replacement being a routine operation for aftermarket workshops, ZF Aftermarket still receives Sachs clutches returned under warranty showing telltale signs of incorrect installation. In most cases, simple precautions during component replacement will avoid such problems, saving time, cost and risk to reputation from dissatisfied customers.



Clean the bellhousing and clutch actuation system first

CLEAN AND INSPECT

Before installing a new clutch, clean the inside of the bellhousing and the clutch actuation system including the release fork, release bearing guide sleeve, and transmission input shaft splines. Once spotless, identify any signs of wear that could prevent the new clutch from releasing or engaging correctly and replace any affected components before proceeding further.



Check the driven plate for lateral runout

MEASURE LATERAL RUNOUT

Sachs clutches are manufactured to state-of-the-art production standards, but multiple opportunities for careless handling in the supply chain mean damage can occur during transit to the workshop. It's therefore advisable to measure lateral runout of the clutch driven plate prior to installation. To prevent drag and ensure smooth gearshifts, runout should be less than 0.5 mm, so correct any distortion before fitting.

CENTRE THE DRIVEN PLATE

Precisely centre the driven plate on the flywheel to ease installation of the transmission and minimise the risk of damaging the hub spline in the process.



Apply lubricant sparingly and remove excess

Lubricate sparingly and keep friction facings clean. A special high performance grease is included with a new Sachs clutch to prevent fretting corrosion. Apply this carefully to the driven plate hub splines – a toothbrush is an ideal tool for this – then slide the hub back and forth a few times on the input shaft splines and remove any excess lubricant. Ensure that the pressure plate and friction material are not contaminated by grease.



The CSC combines the clutch release bearing and slave cylinder into a single compact unit

Sachs Concentric Slave Cylinder (CSC) Fitting Tips
Most CSC failures occur during or immediately after fitting or bleeding. If the clutch exhibits stiffness, juddering or fluid leaks following CSC replacement, this suggests a damaged CSC.

BASIC PRECAUTIONS

Check that the size and position of the new CSC's hydraulic pipe connection matches that of the unit being replaced. Always use the correct mounting screws and ensure the CSC is flush with the surface of the bellhousing before tightening them. Over-long screws may prevent the guide sleeve

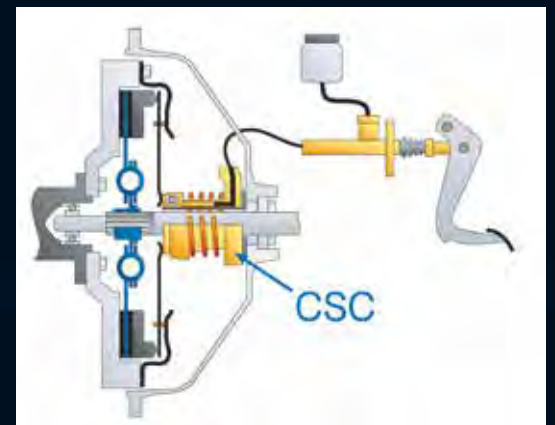
being firmly clamped to the bellhousing, causing it to separate from the housing and the seal when pressurised. If additional sealant is needed, apply evenly to avoid the cylinder becoming skewed.

HANDLING

Do not compress the CSC before fitting; this can damage the rubber seals before they are fully lubricated. Many CSCs rely on their backplate being secured in place by the gearbox, and prior compression can dislodge this plate causing a leak. Never pressurise the CSC until it is fully installed in the gearbox.

FLUSH AND BLEED

Flush old hydraulic fluid from the system and refill with fresh fluid before fitting the new CSC and bleeding. Ensure the fluid is the correct specification, otherwise the CSC seals may swell or disintegrate.



Using a CSC to apply the hydraulic load directly to the clutch requires less pedal effort from the driver

OVERSTROKING

Low pressure bleeding is preferred over other methods; bleeding by rapidly pumping the clutch pedal can cause the CSC to overstroke. This will damage the internal seals when they contact the retaining ring on the end of the guide tube, causing fluid to leak into the gearbox bellhousing. Where a pressure regulating valve is incorporated in the hydraulic circuit, failure of this valve can also cause the CSC to overstroke.

DRIVEN PLATE ORIENTATION

If the driven plate is installed facing the wrong way, the hub boss could bear on the CSC guide tube, generating enough frictional heat to destroy the unit. Observe markings such as 'Getriebeseite' (gearbox side) on the driven plate indicating the correct orientation.

To find out more contact your local branch today.



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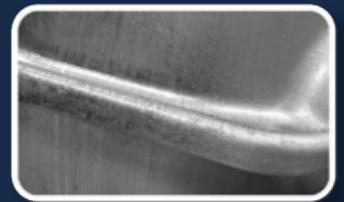
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Audi A4 - subtle and sophisticated...

The Audi A4, now in its fifth generation, still carries with it a sense of class that rivals have found hard to match. Audi know their customer base well and therefore adopt the 'subtle & sophisticated' approach when designing their executive saloons; the latest A4 is a perfect example of this.

The 3 Series may be the better drive and the C-Class a more exciting design but none can match the refinement offered by Audi's engineers. The A4 has found the middle ground when compared to all its direct rivals and as a result it doesn't ask its customers to compromise on much. Sales have been strong since its 2015 launch, selling in the thousands and they don't show any signs of slowing.

Brands such as Audi inspire confidence in both the consumer and in FAI's development plans; resulting in the early development of 14 steering & suspension components, with many more currently in production. All manufactured in state-of-the-art facilities, you can depend on FAI's quality.

Check out the FAI steering components available below.

FAI PART NO.	DESCRIPTION	OE REF
SS10081 / SS10082	TIE ROD END L / R	8W0423811 / 8W0423812
SS10080	RACK END	8W0423810A
SS9734K	ANTI-ROLL BAR BUSH KIT FRONT	8K0411327B
SS9822	BALL JOINT LOWER	8W0407689B
SS10014 / SS10015	CONTROL ARM FRONT UPPER FORWARD L / R	8W0407505C / 8W0407506C
SS9960 / SS9961	CONTROL ARM FRONT LOWER FORWARD L / R	8W0407151A / 8W0407152A
SS10012 / SS10013	CONTROL ARM FRONT UPPER REARWARD L / R	8W0407509B / 8W0407510B
SS7390	FRONT LINK ROD	8K0411317E
SS9977 / SS9978	ARM REAR UPPER FRONT L / R	8W0505323F / 8W0505324F



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GEAR CONTROL CABLE UPDATE

Premium Products and Technical Solutions



First Line Ltd is a highly regarded supplier of premium quality aftermarket components and with a comprehensive range of accelerator, brake, clutch, and speedometer, as well as a broad selection of gear control cables, is also one of the UK market leaders for replacement cables.

Specialist knowledge of the product group enables First Line to provide the trade with the specific details that help them to avoid problems. For example, in common with the traditional gear linkage, a control cable selects and engages the different gears within the transmission system via the gear lever. However, to ensure the vehicle retains its smooth gear selection, the control cable needs to be in good condition and replaced with a suitable alternative should it become worn. This fact is brought into focus when replacing gear control cables on the 1.6i R50 engine in the BMW MINI, manufactured between 2001 and July 2004.

On these early examples, MINI simply refer to the two possible variants for this particular application as 'Condition A' and 'Condition B', but there is no further information as to which cable is the correct replacement when a change is required.

First Line has however, brought clarity to the situation by clearly highlighting the differences, which are very noticeable once technicians have been informed of what distinguishes the two cables.

Although the length of the cables varies for each, the distinctive features are found in the gear shift housing, which is in fact, very different. The Condition A housing is white/light beige and incorporates obvious reinforcement ribs, whereas a Condition B housing is black with a smooth sloping front.

Due to the limited demand for Condition A cables, First Line have

only introduced the Condition B replacement, which incorporates an insert cable used for the forward gears (First Line part number FKG1126) and selector cable (FKG1125) for reverse gear.

First Line's comprehensive gear control cable range now has more than 250 references, with 60 new references being added this year alone. Highlights from this year's new to range additions include:

- **The gear control selector cable to fit the Audi A3 1.6 (FKG1207)**
- **The gear control cables to fit the Renault Trafic 1.6TD, RHD only (FKG1157)**
- **The gear control cable to fit the Vauxhall/Opel Insignia (M32 6 speed - FKG1168, F40 6 speed - FKG1171)**

The company has built its reputation by providing the trade with premium quality products, a huge depth of range, outstanding product availability and exceptional customer service. This level of support, backed up with excellent warranty terms has cemented First Line as a firm aftermarket favourite for more than 35 years.

Mini Condition A



Mini Condition B



About First Line Ltd

First Line Ltd is an internationally renowned distributor of premium quality replacement components, with more than 35 years' experience in the automotive aftermarket.

It offers a range of over 60 product lines that include a number of fast moving general service and repair products and with a strong focus on availability, range, service and quality, it has built long-standing business relationships with many customers.

Located in central England, First Line Ltd operates from a purpose-built distribution centre in Banbury, Oxfordshire, which provides more than 16,500m² of warehousing space and includes a technical training centre to highlight the importance of fitting and testing procedures to its customers, and the trade in general.

Alongside its highly respected First Line brand, the company is also the proud owner of the famous Borg & Beck brand. Since acquiring the 100-year-old brand in 2006, it has continued to invest in the products, test equipment and personnel to further develop Borg & Beck's leading position in the 21st century.

In 2012 First Line launched the Key Parts brand. Key Parts is a range of high quality products at competitive prices that offer the customer the best value for money possible. Covering only the key fast moving applications the Key Parts range offers minimum stock investment for maximum sales opportunity.

First Line Ltd is also a certified TecDoc data supplier and is ISO 9001:2015 accredited.

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The CRP 129 EVO is an intelligent and network friendly diagnostic tool based on Android. It has the OBD full functions that best meets the entry-level market demand for passenger cars, as well as the basic diagnostic functions of the four vehicle systems: Engine, Automatic Transmission, ABS and SRS. Compared with the previous CRP 129 Premium, the EVO has more vehicle service functions and the ability to be updated via WiFi directly, no need to connect to PC update tool.

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ref: 040366

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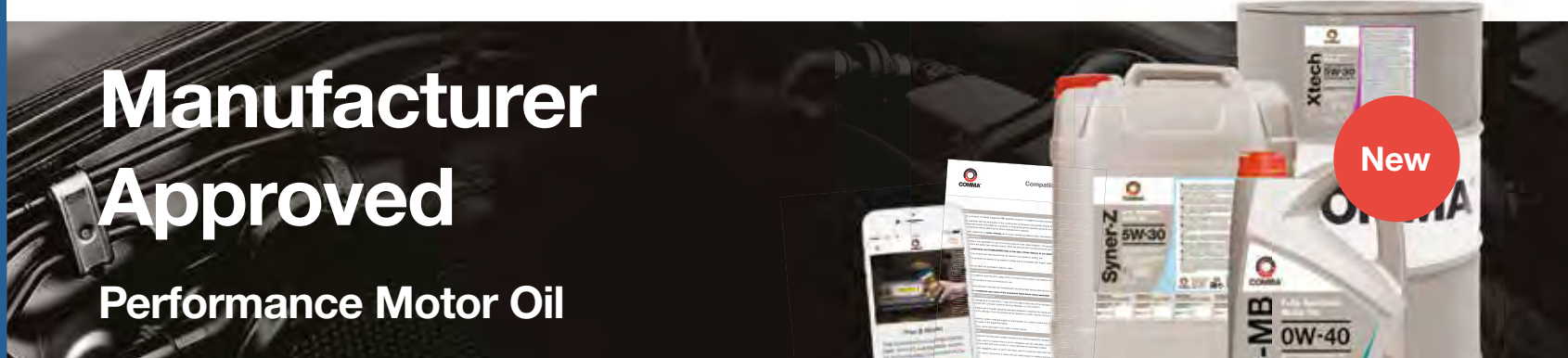


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The Gates range of thermostats continues to expand and some of the best-selling additions fit Citroen/Peugeot/Mini 1.4/ 1.6 engines (TH531105G1), just ahead of Citroen/Peugeot 1.4/ 1.6 engines with TH609105G1 and TH607107G1 part numbers.

It makes sense to ensure all of these vehicles can be covered from stock this season, by one of the smartest thermostat ranges in the aftermarket.

Using the Gates OE-design thermostat range is a solid business decision because, where appropriate, each box includes the right thermostat plus all of the matching seals and gaskets required to fit a wide range of vehicle types. It's a smarter way for garages to cover a larger number of vehicles with reduced stock holding and inventory costs

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2	TH00188G1	VW / AUDI 2.0TDI
3	TH12588G1	FORD 1.8TDI
4	TH507103G1	VAUXHALL ASTRA, CORSA 1.4
5	TH25782G1	FORD FOCUS, FIESTA 1.4/1.6



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Delphi Technologies

Delphi DS Diagnostics. Easy-to-use diagnostics and technical information for a complex vehicle parc.

One of the biggest challenges facing workshops in the UK is the number of vehicle makes and models on the roads. So in addition to a broad range of parts and services, workshops need to have available an equally broad, yet at the same time comprehensive, diagnostic capability, with technical information needed to service or repair these vehicles.

With either Delphi DS150 or DS450 diagnostic tools, technicians are able not only to perform the day to day tasks like service resets or caliper rewinds, but can also perform in-depth diagnostics and access advanced technical information for all makes and models, including trucks and buses. And all in one easy-to-use, cost effective package.

Available as a stand-alone VCI (DS150) or pre-configured tablet (DS450), Delphi's DS software provides advanced capability for 64 car and light commercial vehicle brands and 1184 models, with coverage of 30753 unique systems. The simple, yet highly intuitive software, gives technicians the ability to read and erase fault codes, code ECU's, reset service light and activate or adjust components. Take Citroen C4 for example. Vehicles fitted with a Petrol engine not only require battery programming when the battery is replaced, but also requires an electronic disconnection / reconnection procedure. As well as helping to diagnose any faults, Delphi's DS software provides this capability, ensuring that the vehicle is not immobilised after a battery disconnection and reconnection.

Delphi's Vehicle Technical Information (VTI), combines essential maintenance and repair data with detailed technical drawings, manuals and procedures for all makes and models. Integrated into its DS software, the vehicle identification is carried over from the diagnostic software to the VTI, so technicians will only see information relevant to the vehicle they are working on. But no matter what vehicle, the valuable information will enable technicians to quickly identify and resolve even the most complex of jobs in house, saving time and money by reducing non-billable hours and improving workshop efficiency, whilst also increasing customer retention.

Delphi also offers a comprehensive programme of training and technical support including leader-led training courses, a technical hotline, webinars and online information. All training is driven by the latest technology and designed to improve first time fix rate and maximise garage profits.

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MOT'S ON-LINE

The internet continues to play an ever increasing role in our day to day lives. Many activities that were historically undertaken without any dependency upon the internet, are now carried out either partially, or fully on-line.

It is therefore, of little surprise, that within the Motor Trade, the MOT Test is the latest area of the trade to be further impacted by on-line capability. As one of the UK's leading suppliers of DVSA approved equipment to the UK Motor Industry, Tecalemit Garage Equipment are at the forefront of this development activity, working in partnership with the Garage Equipment Association and the DVSA to facilitate the on-line connectivity of MOT Equipment.

Many will wonder why this is necessary, having operated DVSA approved MOT Testing Stations for many years, with approved equipment, a pen, some paper and a method for generating MOT Certificates. The reality is that there are a significant number of errors made every year by MOT Testing Stations that range from incorrect data entry covering mileage through to incorrect test results.

For many years, since many items of MOT Testing equipment have been based on a PC operating system, there is a significant quantity of vehicle test data that is captured during the test. Historically, a portion of this data has to be manually entered into the DVSA MOT system. Naturally, any manual entry is inefficient and leaves itself open to errors of transposition.

With the development of the Internet of Things, the platform for connectivity was formed and it was a logical step to link PC Based testing equipment with the the DVSA MTS.

As founder members of the Garage Equipment Association, Tecalemit Garage Equipment have been at the forefront of the development activity. As many readers will be aware, Roller Brake Testers were the first piece of equipment to be covered by the latest DVSA connectivity specifications. From October 1st 2019, all new Roller Brake Testers need to be compliant with the latest connectivity specification.

As manufacturers of MOT Testing equipment, Tecalemit Garage Equipment are undertaking development work ahead of forthcoming deadlines so that we can be ready with the correct equipment requirements to keep today's MOT Testing Stations compliant and ensure that all future MOT station applications have access to the correct equipment.

So with the Roller Brake Tester connectivity deadline in the rear view mirror, what can we expect as 2020 unfolds.

Decelerometers (class 3, 4, 5 and 7) are scheduled for 1st February 2020 and it is anticipated these will be followed by Diesel smoke meters & Exhaust gas analysers and then Headlamp beam testers.

As well as improved accuracy of data, the DVSA have estimated that by processing data automatically, it will save approximately two minutes per test. If you are running eight MOT tests a day, two hundred days a year, that all adds up to over fifty hours saved.

As a leading supply partner to the IFA group members, Tecalemit Garage Equipment are the number one choice for garages who are looking to install MOT capability in their business. With a national team of Garage Equipment Association Accredited MOT Equipment specialists, we work with IFA member branches to help garages install MOT testing equipment and comply with mandated DVSA specifications.

A typical MOT bay can generate annual sales revenue of £452,000 over five years. Two MOT's per week can cover the cost of weekly equipment lease payments. Tecalemit Garage Equipment specialists can provide a full workshop planning service to help you implement MOT Testing. For a no obligation quotation, contact us through your local branch, or call us on 01752 219111 and quote 'Smart Choice Jan2020' to enter a FREE* prize draw for a 'LA/738/COMP'.

*No purchase required. Entry will be confirmed by e-mail confirmation to all enquiries that agree to accepting to receive product information from Tecalemit Garage Equipment Ltd

A collage of various engine management components from Beckermann, including a white plastic fuel injector, a black air filter housing, a black plastic sensor, a silver metal fuel rail, and a black plastic sensor, all set against a yellow and red background.

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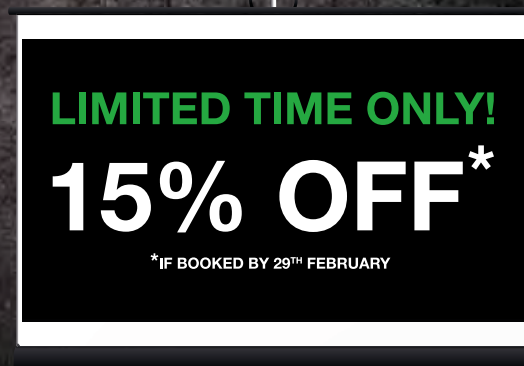
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