



Sealing Coriusim and Coriuseal technologies





- Welded stopper for improved fatigue resistance
- Easily disassembled thanks to PTFE coating
- Optimum sealing performance
- Conforms to most surface finishes on rebuilt engines
- Improved anti-friction properties for reduced gasket fretting
- Enhanced initial gas sealing on start-up
- High-performance engineered elastomer

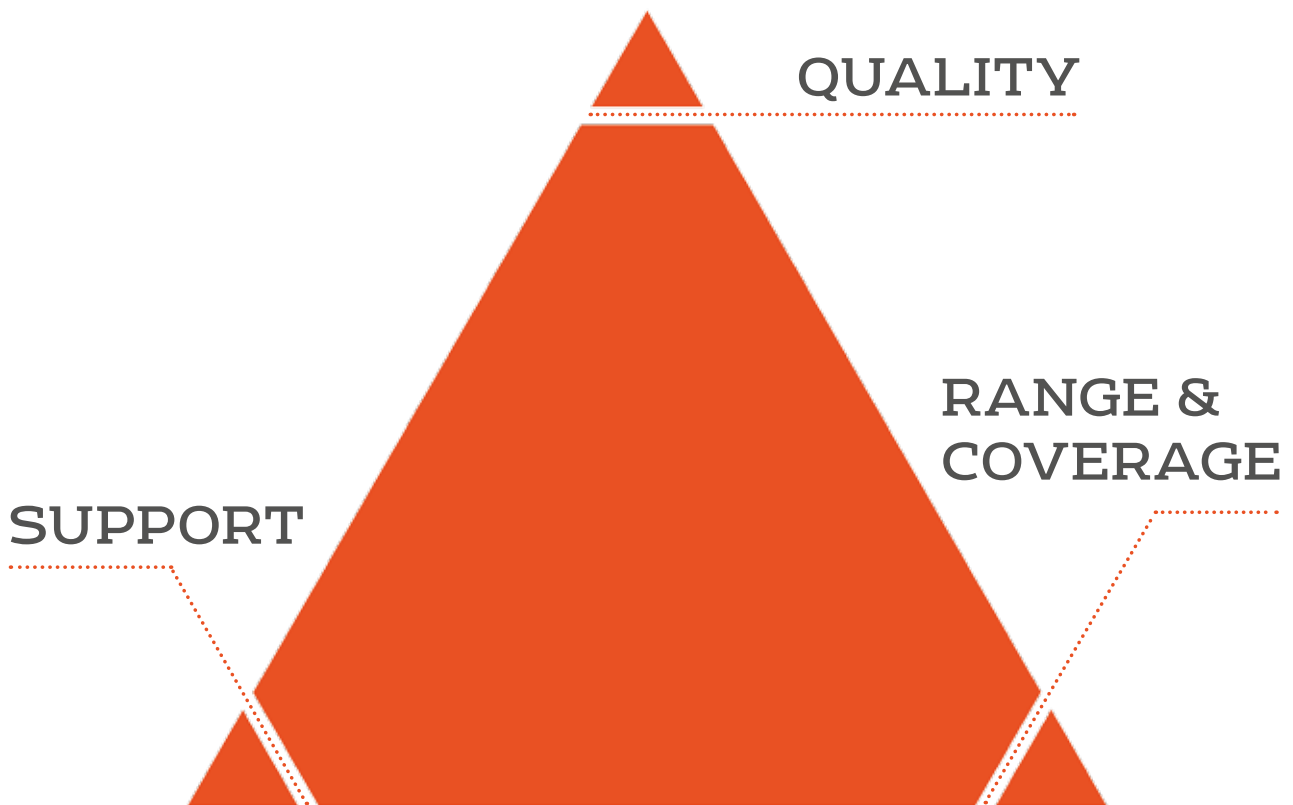
- **Welded stopper**
Disc of metal is welded around the bore and blanked out
Result: stronger stopper and less subject to fatigue
Folded stopper: metal is bent around itself. This puts stress on the metal and could promote fatigue in the stopper on certain engines.
- **Easily disassembled**
PTFE coating doesn't stick to the engine block, thus the gasket can be easily removed.
- **Reduced gasket fretting**
PTFE coating helps to protect the gasket from thermal motion between the head and the engine block.
- **Initial gas sealing**
The soft surface coating ensures that there is an initial gas seal at the bores on start up. This removes the risk of gas blowing past the bores into the cooling system.



- SIM1-impregnated
- Readily cured
- Increased micro-sealability
- Impregnated cut edges for flawless fluid hole sealing
- Superior performance and durability
- Superseding Astadur technology for OE/OES parts
- No use of organic solvents
- Helps minimize bore distortion to reduce oil consumption and optimize piston ring performance

- **Readily cured**
When parts are impregnated, they go in the oven for curing. No running in required.
- **Flawless fluid sealing**
When the coreplate is blanked, the impregnation is soaked up through the cut edges of the holes, so there is a richer concentration of sealants.
- **Superseding Astadur technology**
Astadur will also be phased out in OE/OES. But Coriusim will cater specifically for aftermarket needs.
- **Helps minimize bore distortion**
Inadequate bore loading: combustion gas not fully sealed; bore loading too high: excessive bore distortion potentially created causing piston ring wear and leading to emission problems.

THE QUALITY SOLUTION
FOR YOUR AFTERMARKET NEEDS



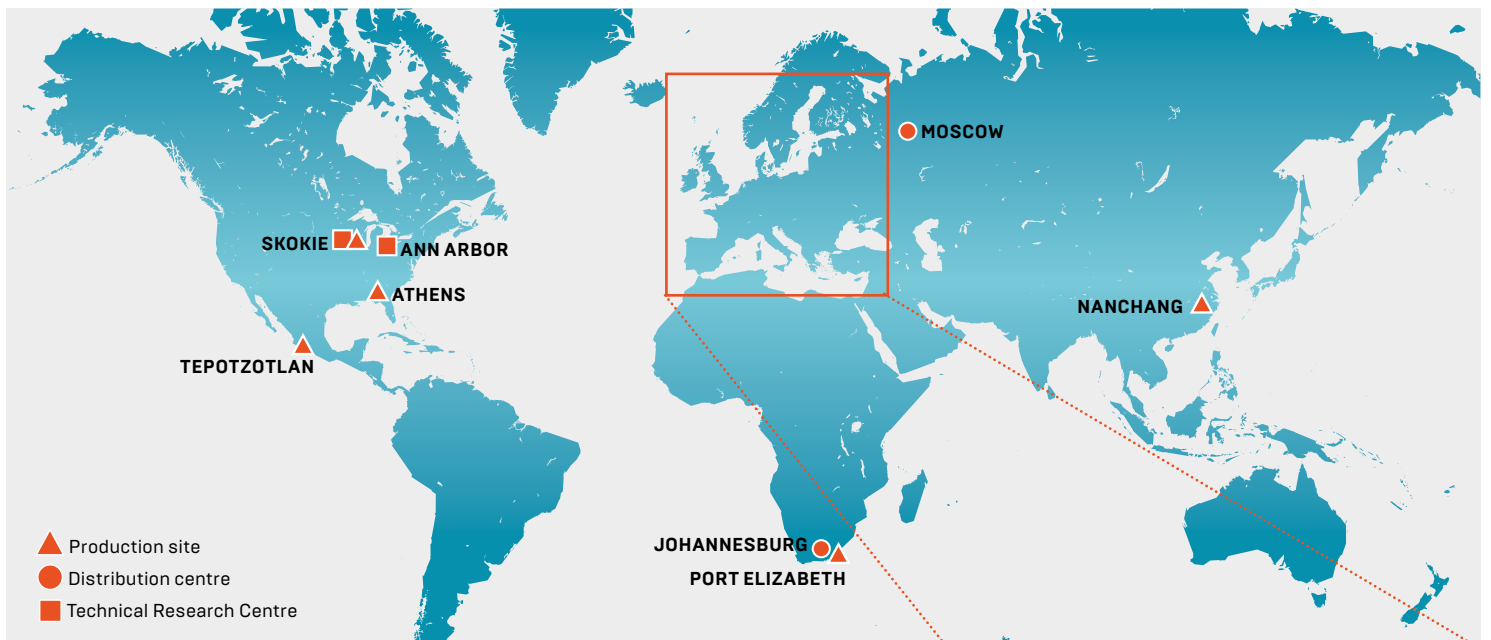
PERFORMS UNDER PRESSURE

QUALITY

Applied OE heritage to serve Aftermarket needs

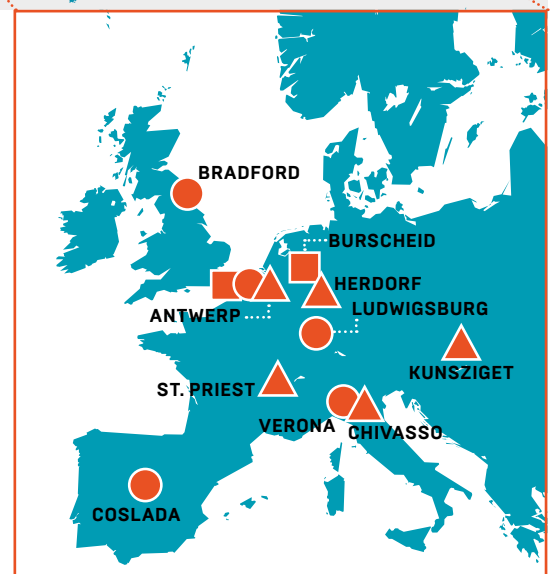
With a clear focus on innovation, it's our day-to-day objective to deliver excellent quality and performance

That's why 90% of all Payen gaskets are produced in-house in factories with an OE pedigree. Our production sites are spread all over the world, and enable us to consistently deliver excellent quality gaskets to the OE and Aftermarket.



Federal-Mogul facility in Herdorf, Germany:

- Premium manufacturer of Payen gaskets
- Received 'TOP 100' Award from the German Ministry of Economic Affairs
- Produced more than 43 million OEM MLS head gaskets
- Highly advanced R&D facility (Burscheid)



Our technologies

HTA (High-Temperature Alloy):

- Offers excellent sealing at high temperatures
- Won Automotive News PACE™ Award for product innovation
- High-temperature coating resists exhaust temperatures up to 1000°C
- Ideal for turbocharged diesel and petrol engines

LEM (Liquid Elastomer Moulding):

- Conforms perfectly to contact surface
- Great high-pressure resistance
- Excellent flange distortion
- Low clamping load
- Patented technology



NEW

Latest developments

Our newly designed **CORIUSIM™** and **CORIUSEAL™** gaskets perfectly demonstrate our understanding of what professionals are looking for in an Aftermarket product. This new range of green gaskets not only helps you achieve a **perfect seal**, it also delivers **excellent performance from the very start**.

CORIUSEAL™

PTFE coating: Non stick superior chemical and thermal properties

- Welded stopper for improved fatigue resistance
- Easily disassembled thanks to PTFE coating
- High-performance engineered elastomer
- Optimum sealing performance
- Conforms to most surface finishes on rebuilt engines
- Improved anti-friction properties for reduced gasket fretting
- Enhanced initial gas sealing on start-up



CORIUSIM™

Optimum sealing on rough surfaces

- SIM1™-impregnated and readily cured
- Impregnated cut edges for flawless fluid hole sealing
- Ready to conform to head and block surfaces
- Increased micro-sealability
- Superior performance and durability
- Superseding Astadur technology
- No use of organic solvents
- Helps minimize bore distortion to reduce oil consumption and optimize piston ring performance

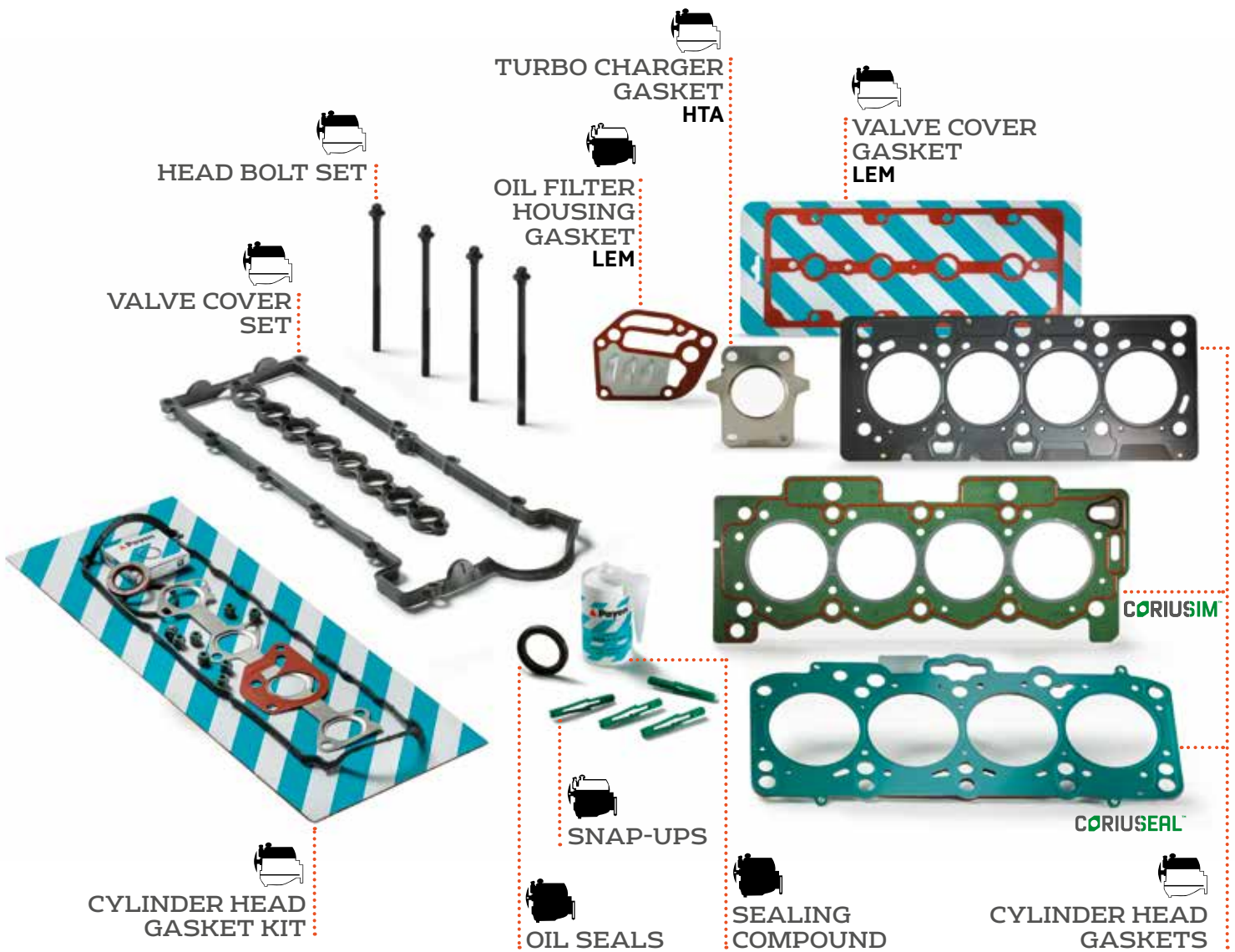


RANGE & COVERAGE

A complete sealing range

Covering your engine from top to bottom

Decades of experience working with engine rebuilders have led us to develop a comprehensive range of high-performance sealing products. It covers everything from cylinder head and valve cover gaskets to oil seals and head bolts. A tight engineering approval process ensures that all our developments come with the ultimate Payen quality guarantee.



A Payen solution

For every type of car

Working together with all the major vehicle manufacturers offers us **a key role in the development of the engines of tomorrow**. This also means that when tomorrow comes, we are capable of **bringing all the latest OE technologies to the Aftermarket** and supply you with the top-quality sealing parts you need.

But our commitment to the Aftermarket goes even further. Our corporate investment culture aimed at boosting national coverage rates has led us to complete no less than **314 New Product Introductions (NPIs)** for all vehicle makes and models **in the last 18 months**. This clear focus on NPIs allows us to realise one of the most competitive coverage rates on the market.

Discover below a selection of our latest NPI's



FIAT GRANDE PUNTO



CITROËN C5



MERCEDES GLK-CLASS



TOYOTA AURIS



SEAT IBIZA



NISSAN X-TRAIL



VOLVO V70



OPEL INSIGNIA



BMW 3



PEUGEOT RCZ



RENAULT MASTER



ALFA ROMEO BRERA



RANGE ROVER SPORT

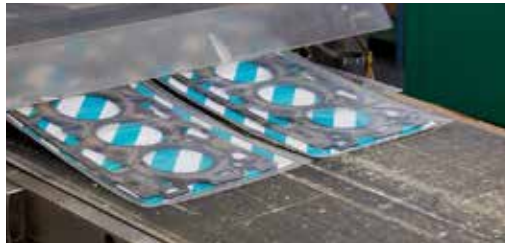


SUPPORT

Always in stock

By continuously adapting our global stock numbers to market needs, we manage to achieve an availability rate above 90%, enabling you to implement just-in-time servicing, bring down your inventory costs and manage your resources efficiently. Compared to other premium brands, you can obtain any Payen part with the speed of a heartbeat. And that's a promise.

To better keep our availability in check, we have invested in an in-house packaging line for our distribution site in Kontich (Belgium).



A clear focus on Aftermarket support

In April 2015, the Federal-Mogul test lab and training centre was established in Kontich, Belgium to provide the Aftermarket with an answer to its needs as quickly as possible. Located in the Benelux headquarters, it's the ideal European operations centre for:

- Comprehensive NPI testing and post-launch quality checks
- OE and comparative competitor testing
- Swift response to customer technical queries
- Technical and commercial training courses for employees and customers



The support you want when you need it



DATA MANAGEMENT

- Paper catalogue
- E-catalogue



You can find our digital catalogue at www.fmecat.eu. It contains all the technical details for more than 10,500 product references. A convenient search utility lets you easily browse and order the parts you are looking for. And you can verify the authenticity of your Payen products with the anti-counterfeit tool.

TECHNICAL SUPPORT

Register for F-M Campus at www.fmcampus.eu for immediate access to our online technical training courses. Compatible with PC, iPad and Android tablets, F-M Campus offers a convenient platform for in-depth training at a time, tempo and place of your choice, even offline. Additionally, our service engineering bulletins, installation guides, product bulletins and trouble tracer charts are there to fully support you in the technical department.

F-M CAMPUS ONLINE TRAINING

WWW.FMCAMPUS.EU
F-M TRAINING CENTRE
CAMPUS



PRODUCT BULLETINS

PERFORMS UNDER PRESSURE

INSTALLATION GUIDES

PERFORMS UNDER PRESSURE

TROUBLE TRACER CHARTS

PERFORMS UNDER PRESSURE

SERVICE ENGINEERING BULLETINS

PERFORMS UNDER PRESSURE

IN-FIELD SUPPORT

- Technical managers in all our sales teams to better understand your needs and offer you the appropriate support



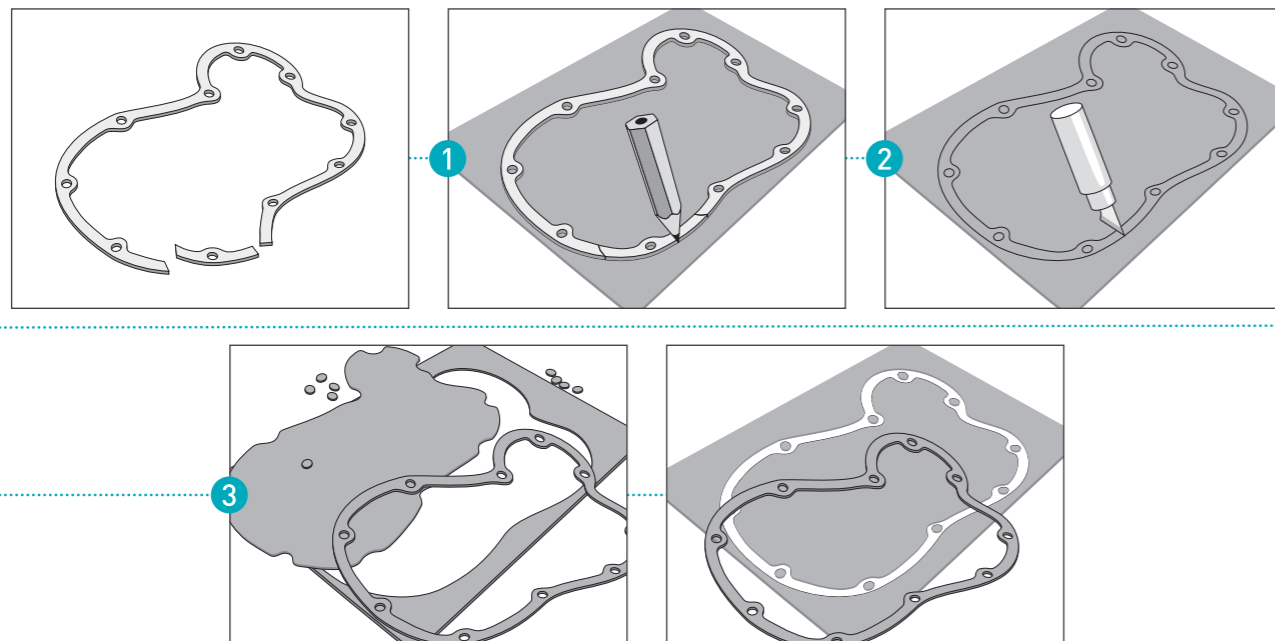
To subscribe to the Engine Expertise newsletter to receive the latest updates, news and New Product Introductions (NPIs) please ask your sales representative.

ENGINE EXPERTISE



INSTRUCTION 2 MAKING A NEW GASKET USING THE OLD GASKET

- > Place the old gasket on a piece of gasket material and draw the outlines with a pen ①.
- > Make the holes into the gasket material. Cut holes out with a punch (if you have one) otherwise use a sharp knife. Cut the outside of the gasket, then the inside. ②
- > The gasket is now ready ③, align the gasket to the part and see if its fits!



WARNING

- > Clean the part with brake cleaner or an appropriate cleaner.
- > Remove the old gasket or sealing material by carefully using a scraper. Make sure not to damage the surface of the flanges.
- > Too much or too little oil leads to an imprecise imprint.
- > Be careful with sharp knives!
- > Using a wooden or plastic cutting board, place the gasket material on it and punch out the holes first.
- > Select a punch that makes the holes a little bit bigger than the imprint hole. This to avoid the bolt fouling the gasket.
- > If you need to make round corners in the inside of the gasket, first use a punch to cut out the edges then cut out the other sections.

GASKET MATERIALS

WHAT IS A GASKET MATERIAL?

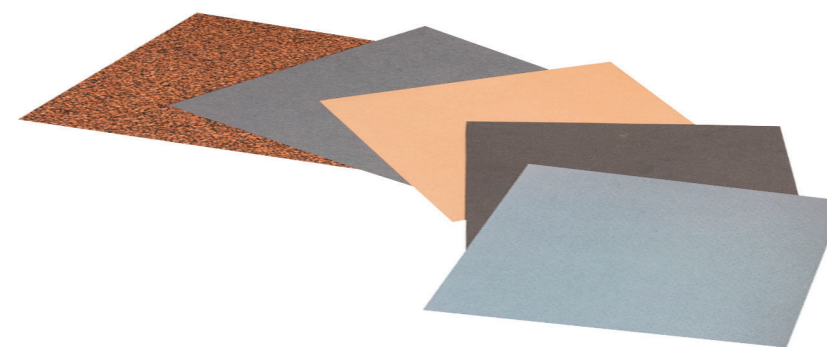
To ensure our customers can respond quickly to engine repair opportunities, Payen offers a range of gasket materials that can be cut to any specific shape. This makes it easy to instantly provide the correct gasket in all aftermarket environments. This may include dealing with variable flange surface conditions to situations in which the OEM has already put a pre-formed gasket or sealant in place with no ready-made gaskets available.

WHY USE PAYEN GASKET MATERIAL?

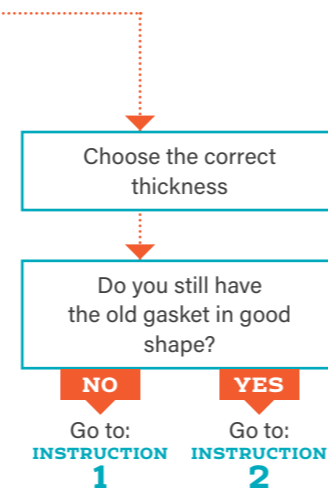
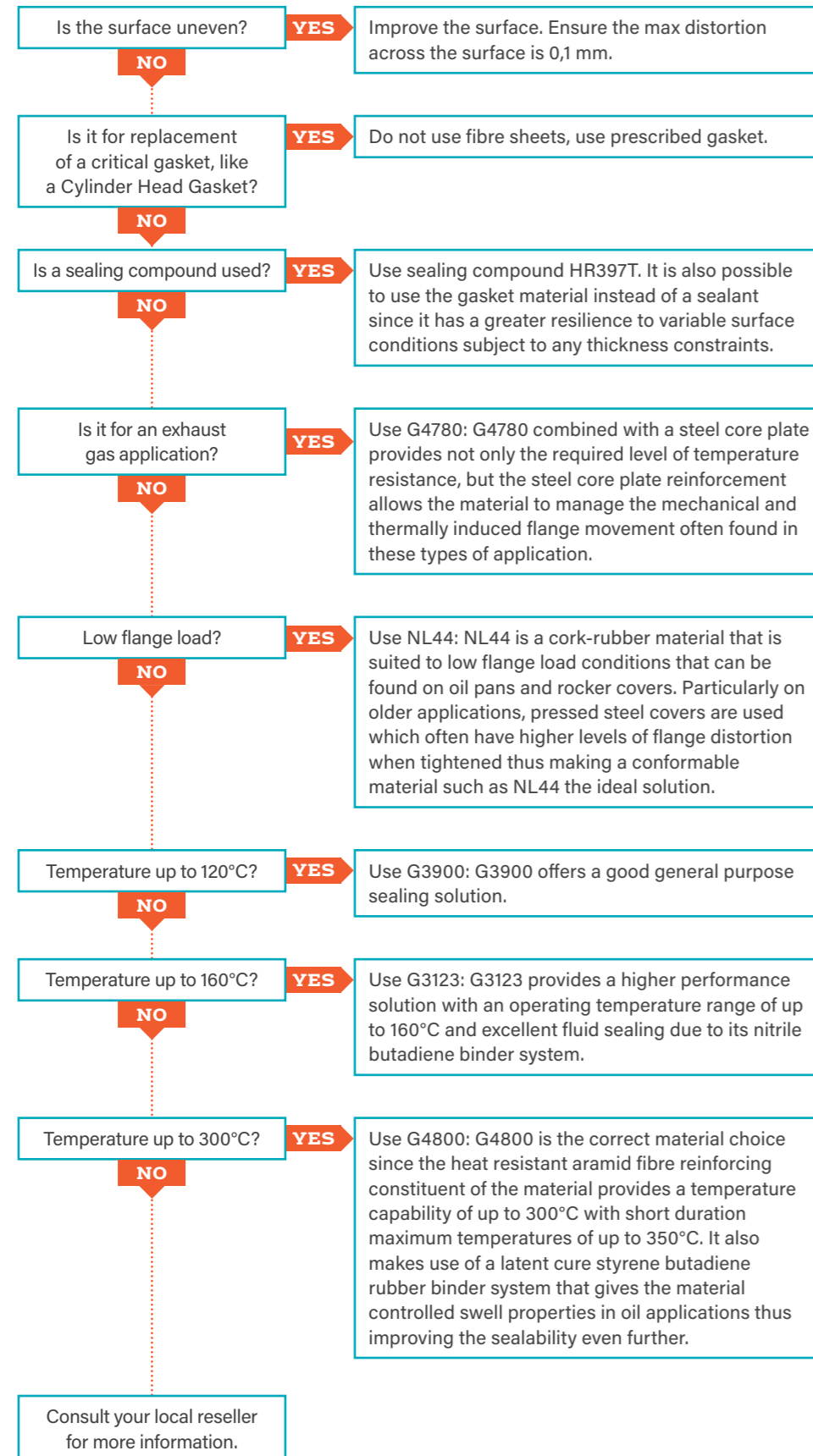
- BECAUSE IT IS:**
- AN ECONOMIC REPAIR
 - EASILY OBTAINABLE
 - SPECIALIZED GASKET MATERIAL
 - SEVERAL THICKNESSES AND TYPES AVAILABLE TO MEET YOUR REQUIREMENTS
 - SUITABLE FOR A WIDE RANGE OF APPLICATIONS

WHAT TYPE OF GASKET MATERIAL DO I NEED TO USE?

It is important to select the correct material to take into account the expected service temperatures, sealed fluid and available clamp loads. Use the flowchart to find out what type of gasket material is best for you and how to use it.



WHAT FIBRE DO I NEED TO USE?



INSTRUCTION 1 MAKING A NEW GASKET WITHOUT HAVING THE OLD GASKET

- > Always clean the surface of the part ①. Ensure that the old gasket or sealant has been totally removed ②.
- > Place the part on the gasket material to assess the required material size and cut out the approximate shape ③.
- > Put a little bit of oil on the housing, so you can use it as a pattern ④.
- > Press the part firmly to the gasket material, remove it and compare the imprint with the part to see if it matches ⑤.
- > Mark the outline of the imprint with a pen since the oil may spread out ⑥.
- > Start with making the holes in the gasket material. Cut holes out with a punch ⑦ (if you have one) otherwise use a sharp knife.
- > Cut the outside of the gasket, then the inside.
- > The gasket is now ready ⑧, align the gasket to the part and see if its fits ⑨!



NEW AND IMPROVED PACKAGING

As of now, the **Payen HR397 sealing compound** comes in a small and handy cartridge with several benefits:

- Easy application
- Clean finishing
- Fits standard professional applicator guns
- In line with OES



Fluid sealing

Our HR397 sealing compound is particularly intended to create durable fluid sealing of cylinder liners, synthetic housings, and all surfaces in engines, gearboxes and axles. This all-purpose sealer is suitable for uneven and rough surfaces in all makes of engines and vehicles.

Universal sealant

One specification fits all. ~~HR354~~ > HR397.

Note

The Payen HR397 sealing compound **can only be ordered in multiples of 12.**



1 carton needed
of Payen HR397 sealing compound



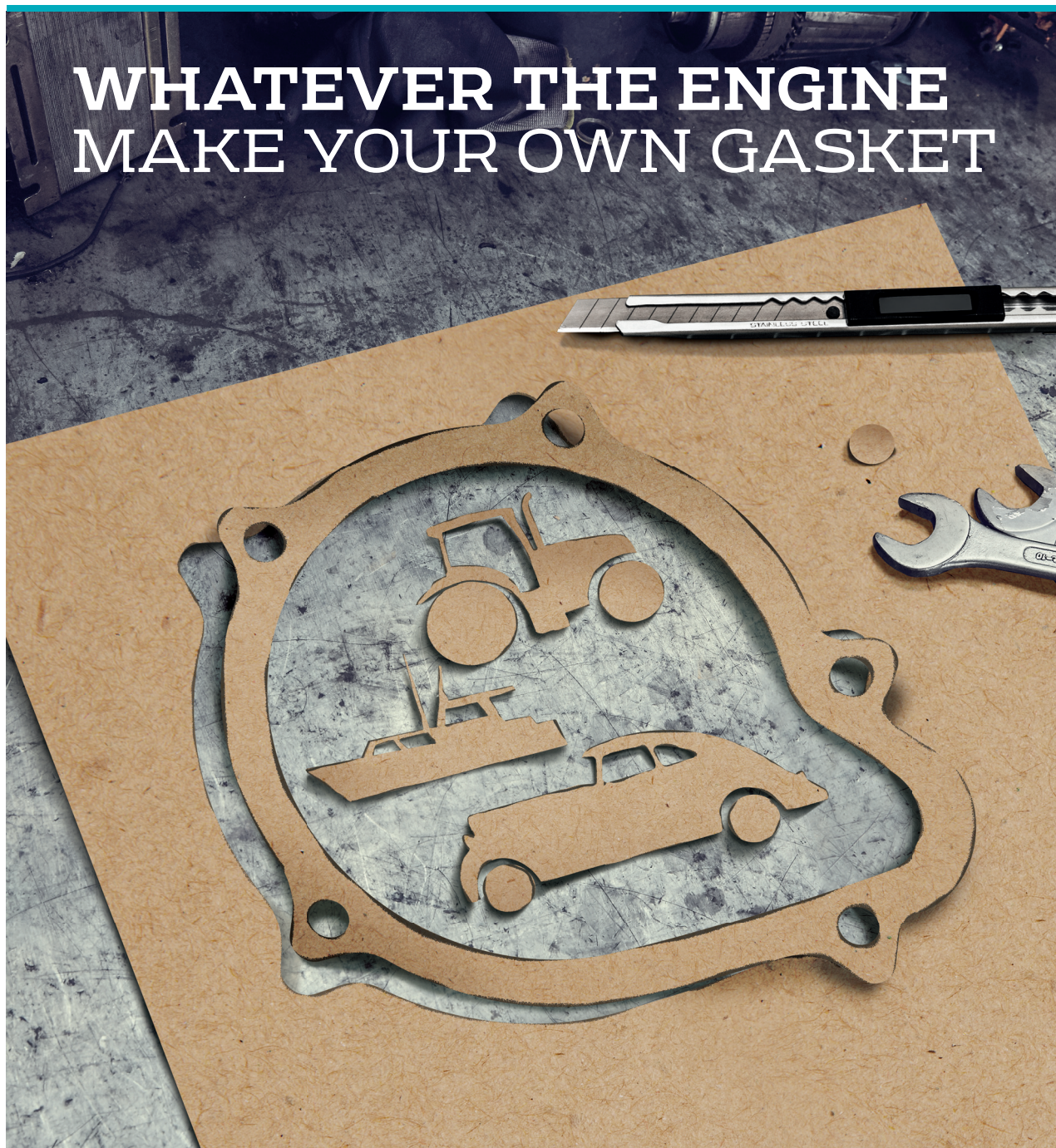
order 12x HR397



CHECKOUT QUANTITY = 12

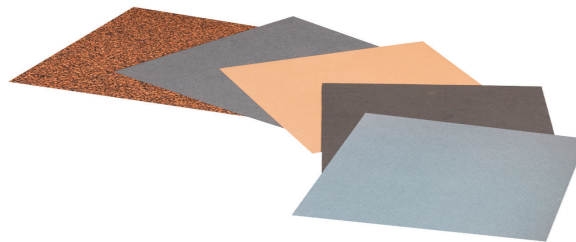
PERFORMS UNDER PRESSURE

PRMIPA1502



**PAYEN'S UNIVERSAL GASKET MATERIAL
COMPACT RANGE, ENDLESS POSSIBILITIES**

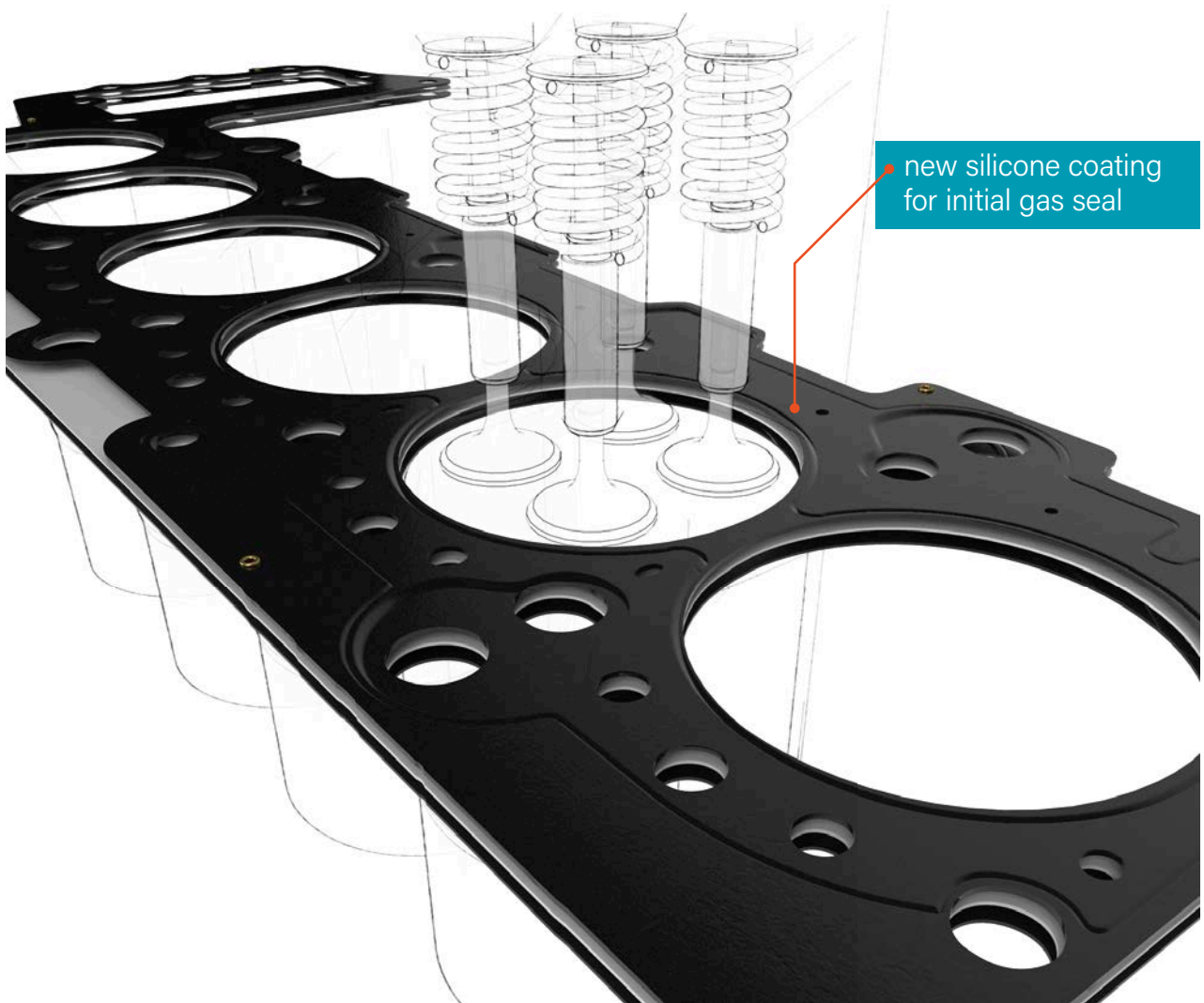
- Multi-purpose sheets for a wide range of engines
- Quick and effective repair
- Easily obtainable
- As used by professionals



ENGINE EXPERTISE
BY  **FEDERAL-MOGUL
MOTORPARTS**



IMPROVED MLS GASKET DESIGN



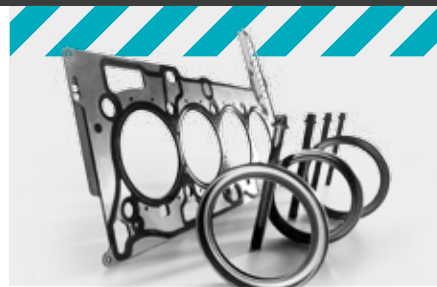
FEATURES

- **New silicone coating** for initial gas seal
- Especially suited for **aftermarket needs**
- **Improved product, same part number**





Oil Seal sets



Payen offers a wide range of oil seals for camshaft and crankshaft applications. The sets will allow the installer to have all the required oil seals for a specific engine repair in a single box.

IMPORTANT:

1. The oil seal material and design is optimised for each shaft on the engine. This is important to ensure long term durability.
2. A range of high performance engineering elastomers are used in seal manufacture and the required engine assembly conditions may vary. For example, the elastomeric seals require a little oil to help with assembly whereas the PTFE seals must be fitted in a dry condition using the supplied fitting sleeve and be allowed at least four hours to conform to the shaft.
3. To ensure the correct seal is used, the seal size can normally be checked against the old seal by comparing the old seal by comparing the shaft, bore and width sizes marked on the seal face.
4. If there are seals of identical size, check the rotation arrow on the seal to ensure that the appropriate direction seal is used.
5. Ensure that the shaft is not worn beyond the engine manufacturer's limits or is heavily scored. It may be necessary to recondition the shaft and use a fitting sleeve to obtain the correct surface characteristics.
6. Thoroughly clean the shaft and housing to avoid any dirt, debris or other contamination being trapped by the oil seal. The presence of dirt or debris will significantly shorten the seal's life.
7. Use the correct assembly tool to ensure that the seal is properly aligned to the shaft and housing when fitted.

HL5010

EAN 4044197442089



Components	Dimension	Quantity
NA5191	42x62x7mm	1
NF841	35x50x8mm	1
PSA (Peugeot - Citroën) 1.8 D/TD 1.9 D/TD XUD7 XUD9 ->12/93 Horizon BX/C15/C25/Visa/XM/ZX/205/305/309/405/605/J5		

HL5011

EAN 4044197442096



Components	Dimension	Quantity
NF870	42x66x6mm	1
NF817	36x50x7mm	1
PSA (Peugeot - Citroën) 1.0 1.1 1.2 1.3 1.4 1.6 8V AX/Berlingo/BX/C15/C2/C3/Saxo/Xsara/ ZX/106/1007/205/206/306/309/405/Partner 1.4 1.4 D 1.5 D 1.6 TU3D/F TU5D/F AX/BX/C15/Saxo/Xsara/ZX/106/205/206/306/309/405		



Oil Seal sets



HL5012

EAN 4044197442102



Components	Dimension	Quantity
NA5191	42x62x7mm	1
NF841	35x50x7mm	1
FIAT 1.8 D 1.9 D/TD 2.1 TD Ducato/Scudo/Ulysse I		
LANCIA 2.1 TD P8C Zeta		
PSA (Peugeot - Citroën) 1.8 D/TD 1.9 D/TD 1.9 HDi DW8/B XUD7/9 01/94-> Berlingo/C15/Evasion/Jumper/Jumpy/Xantia/Xsara 206/306/406/806/Boxer/Expert/Partner		
ROVER 18 TD XUD7 200/400 ->10/95		

HL5013

EAN 4044197442119



Components	Dimension	Quantity
NF843	50x68x10mm	1
NF846	25x42x7mm	1
NF849	30x40x7mm	1
RENAULT 1.6 D 1.9 D/TD F8M F8Q ->07/97 Clio/Express/Megane/Rapid/R19/R21/Scenic 1.7 1.8 2.0 FIN F2N F3N F3P F3R ->05/97 Super 5/Clio/Espace/Laguna/Megane/R9/R11/R19/R21/Trafic		
VOLVO 1.6 1.7 1.8 1.9 D 2.0 340/360/440/460/480/S40/V40		

HL5014

EAN 4044197442126



Components	Dimension	Quantity
NF843	50x68x10mm	1
NF823	35x47x7mm	1
NF849	30x40x7mm	1
PSA (Peugeot - Citroën) 2.0 2.2 J6R J6T ZEJ ZDJ CX/505		
RENAULT 2.0 2.2 J5R J6R(829) J7R J7T Espace/Fuego Master/R18/R20/R21/R25/Safrane/Trafic 2.1 D/TD 852 J8S Cherokee/Espace/Fuego Master/R18/R20/R21/R25/R30/ Safrane/Trafic		



Oil Seal sets



HL5015

EAN 4044197442133



Components	Dimension	Quantity
NF823	35x47x7mm	1
NA5053	30x42x7mm	1
DACIA 1.4 1.6 E7J K7J K7M Logan/Solenza RENAULT 1.1 1.2 1.4 1.6 E5F E7F E6J E7J K7M Clio/Express/Kangoo/Megane/Rapid/R19/Scenic/Thalia		

HL5016

EAN 4044197442140



Components	Dimension	Quantity
NA5191	42x62x7mm	1
NA5035	27x47x7mm	1
NA5035	27x47x7mm	1
FIAT 2.0 JTD Ducato/Scudo/Ulysse I LANCIA 2.0 JTD RHZ Zeta PSA (Peugeot - Citroën) 2.0 HDi 2.2 HDi DW10TD/ATED/BTED DW12TED/ Berlingo/C5/Evasion/Jumpy/Jumper/Xantia/Xsara 206/306/307/406/607/806/807/Boxer/Expert/Partner		

HL5017

EAN 4044197442157



Components	Dimension	Quantity
NA5036	42x54x6mm	1
NF846	25x42x7mm	1
RENAULT 1.9 dCi/dTi F9Q Clio/Espace/Kangoo/Laguna/Master/Megane/Nevada/ Scenic/Thalia/Trafic		



Oil Seal sets



HL5018

EAN 4044197442164



Components	Dimension	Quantity
NB984	66.6x89.3x10mm	1
NB785	28x38x7mm	1
FORD 1.8 D/TD Escort/Fiesta/Mondeo/Orion/Sierra		

HL5019

EAN 4044197442171



Components	Dimension	Quantity
NA5191	42x62x7mm	1
NF817	36x50x7mm	1
FIAT 1.8 2.0 2.0 T XU Ducato/Ulysse		
LANCIA 1.1 Spi 1.2 Spi 176B2 188A4 840A3 Y/Ypsilon		
PSA (Peugeot - Citroën) 1.6 1.8 1.9 2.0 XU5 XU7 XU9 XU10 Berlingo/BX/Evasion/Jumper/Jumpy/Visa/Xantia/XM/Xsara/ZX/ 205/305/306/309/405/406/605/806/Boxer/Expert/Partner 2.0 XU10 2C/J2/J2TE Evasion/Jumper/Xantia/Xsara/XM/ZX/306/405/406/605/806/Boxer		

HL5020

EAN 4044197442188



Components	Dimension	Quantity
NA5001	32x47x10mm	1
NA5001	32x47x10mm	1
NA5001	32x47x10mm	1
FORD 1.9 Tdi Galaxy ->04/00		
VAG (Volkswagen, Audi, SEAT, Skoda) 0.8 0.9 1.0 1.1 1.3 1.4 1.5 1.6 1.7 1.8 2.0 Essence 8V 80/90/100/A4/A6/Alhambra/Caddy/Cordoba/ Corrado/Felicia/Golf/Ibiza/Inca/Jetta/Octavia/Passat/Polo/ Scirocco/Sharan/Toledo/Transporter/Vento 1.4 D 1.5 1.6 D/TD 1.7 Sdi 1.9 D/TD/Sdi/Tdi/ 80/90/A4/A6/Alhambra/Arosa/Caddy/Cordoba/Felicia/Golf/Ibiza/ Inca/Jetta/Lupo/Passat/Polo/Santana/Scirocco/Sharan/Toledo/ Transporter/Vento		



Oil Seal sets



HL5021

EAN 4044197442195



Components	Dimension	Quantity
NF856	32x44x6mm	1
NA5053	30x42x7mm	1
RENAULT 1.1 D7F Clio/Kangoo/Twingo		

HL5022

EAN 4044197442201



Components	Dimension	Quantity
NF776	75x90x11.5mm	1
NF741	29x46x10mm	1
PSA (Peugeot - Citroën) 2.5 D/TD M25 U25 CRD93/LS CX/C25/J5		

HL5023

EAN 4044197442218



Components	Dimension	Quantity
NF861	46x59x7mm	1
NF858	33x43x7mm	1
RENAULT 2.2 D/TD G8T Espace/Laguna/Safrane		



Oil Seal sets



HL5024

EAN 4044197442225



Components	Dimension	Quantity
NB815	23x35x7mm	1
NA5053	30x42x7mm	1
AUTOBIANCHI 1.0 Fire Y 10		
FIAT 750 1.0 1.1 1.1Mpi/Spi 1.2 Mpi Cinquecento/Doblo/Palio/Panda/Punto/Seicento/Strada/Tipo/Uno		
LANCIA 2.0 T RGX Zeta		

HL5026

EAN 4044197442249



Components	Dimension	Quantity
NA5255	35x47x7mm	1
NA5215	28x42x5mm	1
NA5215	28x42x5mm	1
RENAULT 1.5 dCi K9K Clio/Kangoo/Megane/Modus/Scenic		

HL5027

EAN 4044197442256



Components	Dimension	Quantity
NF866	64x88x6mm	1
NB959	35x50x7mm	1
PSA (Peugeot - Citroën) 2.5 D/TD/TDi DJ5 DJ5T DJ5TED Boxer/Jumper		



Oil Seal sets



HL5029

EAN 4044197442270



Components	Dimension	Quantity
NF823	35x47x7mm	1
NA5215	28x42x5mm	1
NA5215	28x42x5mm	1
RENAULT 1.4 16V 1.6 16V K4J/M Clio/Kangoo/Laguna/Megane/Modus/Nevada/Scenic/Thalia		

HL5030

EAN 4044197442287



Components	Dimension	Quantity
NA5070	31x41x7mm	1
NA5053	30x42x7mm	1
NA5069	55x68x8mm	1
ALFA ROMEO 1.4 1.6 1.8 16V 145/146/147/155/156/GTV/Spider FIAT 1.8 16v 1.8 MPi 2.0 2.4 20V Barchetta/Bravo/Coupé/Marea/Punto/Stilo LANCIA 1.8 MPi 16V 183Al Dedra/Delta/Lybra 2.0 2.4 20V Kappa/Lybra/Thesis		

HL5031

EAN 4044197442294



Components	Dimension	Quantity
NA5070	31x41x7mm	1
NA5053	30x42x7mm	1
FIAT 1.4 12V 1.9 DS/JTD 2.4 TD/JTD Brava/Bravo/Croma/Doblo/Idea/Marea/Multipla/Palio/Punto/ Stilo/Strada LANCIA 1.4 Spi Y 1.9 2.4 JTD 2.4 TDS Kappa/Lybra/Musa/Thesis OPEL 1.9 CDTi 2.2 2.5 DTi 16V Z19DT G9T G9U Astra/Movano/Signum/Vectra/Vivaro/Zafira		

Oil Seal sets



HL5032

EAN 4044197442300



Components	Dimension	Quantity
NF885	70x159x16mm	1
NP068	55x70x8mm	1
FIAT 2.5 D 2.5 Tdi 2.8 DS 2.8 JTD 2.8 Tdi Sofim Ducato		
OPEL 2.5 D S8U Arena/Movano		
PSA (Peugeot - Citroën) 2.8 D/TD 2.8 HDi Sofim Jumper/Boxer		
RENAULT 2.5 D S8U Master/Trafic		

HL5033

EAN 4044197442317



Components	Dimension	Quantity
NA5259	40x55x6.4mm	1
NA5258	27x47x7mm	1
FORD 1.4 TDCi 1.6 TDCi Fiesta/Focus/Fusion		
PSA (Peugeot - Citroën) 1.4 HDi 1.6 HDi DV4/DV6 Berlingo/C1/C2/C3/C4/C5/Picasso/Xsara/1007/107/206/207/307/ 308/407/Expert		

HL5034

EAN 4044197442324



Components	Dimension	Quantity
NA5106	35x48x10mm	1
NA5124	32x47x10mm	1
FORD 1.9 Tdi Galaxy 04/00->		
VAG (Volkswagen, Audi, SEAT, Skoda) 1.6 1.8 1.9 2.0 2.1 2.2 2.5 A3/Alhambra/Altea/Beetle/Bora/Caddy/Cordoba/Golf/Ibiza/Jetta/Léon/ Passat/Octavia/Sharan/Superb/Toledo/Touran/Transporter		
1.2 Tdi 1.4 Tdi 1.9 Sdi 1.9 Tdi 2.0 Sdi 2.0 Tdi 2.4 D 2.5 D 2.5 Tdi A2/A3/A4/A6/Alhambra/Altea/Arosa/Beetle/Bora/Caddy/Cordoba/Fabia/ Fox/Golf/Ibiza/Jetta/Léon/LT/Lupo/Octavia/Passat/Polo/Sharan/Superb/ Toledo/Touran/Transporter		
2.1 2.1 Turbo 2.2 2.2 Turbo 200/Coupé		
VOLVO 2.0D 2.4D 2.5D 240/740/760/850/940/960/S70/S80/V70		



Oil Seal sets



HL5035

EAN 4044197442331



Components	Dimension	Quantity
NF861	46x59x7mm	1
NA5053	30x42x7mm	1
NA5053	30x42x7mm	1
RENAULT 2.2 dCi 2.5 dCi G9T/U Avantime/Espace/Laguna/Master/Trafic/Vel Satis		

HL5036

EAN 4044197442348



Components	Dimension	Quantity
NF856	32x44x6mm	1
NA5261	28x47x8mm	1
NA5053	30x42x7mm	1
RENAULT 1.2 16V D4F Clio/Kangoo/Modus/Thalia/Twingo -> 10/05		

HL5037

EAN 4044197442355



Components	Dimension	Quantity
NA5256	40x55x6.5mm	1
NF817	36x50x7mm	1
NF817	36x50x7mm	1
FIAT 2.0 16V Scudo/Ulysse LANCIA 2.0 16V RFN Phedra/Zeta PSA (Peugeot - Citroën) 1.8 2.0 EW7J4 EW10J4/S C4/C5/C8/Evasion/Jumpy/Picasso/Xsara/206/307/406/407/607/ 806/807/Expert		



Oil Seal sets



HL5038

EAN 4044197442362



Components	Dimension	Quantity
NF870	42x66x6mm	1
NA5260	38x50x6mm	1
PSA (Peugeot - Citroën) 1.6 16V TU5J4 TU5JP4 C2/C3/C4/Saxo/Xsara/Picasso/1007/106/206/307/Partner		

HL5039

EAN 4044197442379



Components	Dimension	Quantity
NA5036	42x54x6mm	1
NA5257	28x47x5.5mm	1
RENAULT 1.8 16V 2.0 16V F4P/R F5R Avantime/Clio/Espace/Laguna/Megane/Nevada/Scenic/Trafic/ Vel Satis		

HL5040

EAN 4044197442386



Components	Dimension	Quantity
NA5106	35x48x10mm	1
NA5124	32x47x10mm	1
NA5124	32x47x10mm	1
VAG (Volkswagen, Audi, SEAT, Skoda) 1.6 1.8 20V 2.0 Fsi 16V 2.0 20V A3/A4/A6/TT/Alhambra/Altea/Beetle/Bora/Cordoba/Golf/Ibiza/ Jetta/Léon/Octavia/Passat/Sharan/Toledo/Touran 2.0 Tdi 16V 2.5 Tdi V6 24V A3/A4/A6/Altea/Golf/Jetta/Léon/Passat/Toledo/Touran 1.9 2.0 2.0 D/TD 2.1 2.2 2. Turbo 2.3 2.4 D 2.5 Tdi 80/90/100/200 2.4 V6 2.6 V6 2.7 V6 2.8 V6 80/100/A4/A6/A8/Beetle/Bora/Golf/Jetta/Passat/Sharan/ Superb/Touran		

A range to save you time, money and effort

Payen's freshly conceived Pro-Fit range offers you all of its professional service products under one hallmark. It guarantees you tools and materials of excellent quality that enable you to carry out a quick and clean OE-standard fitment at a competitive price. Discover what Payen has to offer you:

All-purpose sealing

Silicone application gun

- compact size
- convenient usage

Sealing compound: adheres to any surface in all makes of engines and vehicles

- Easy and clean application
- 1-hour curing time at room temperature
- Resistant to temperatures from -70 to +300°C
- Impervious to oil, fuel, antifreeze and salt spray
- Seals cylinder liners, synthetic housings,
and all surfaces in engines, gearboxes and axles



Reference to order: **LZ005** silicone gun,
use with **HR397** sealing compound.

Snap-ups

Attaching the oil pan is no longer a two-man job

- Keep oil pan and gasket in place while you insert the bolts
- Fast and easy
- Available in two sizes: 6 & 8 mm
- Packed per 4

Reference to order:

LZ002 6 mm

LZ003 8 mm



Washer box

Quick and easy washer selection

- Increased efficiency
- Contains 210 washers and 2 oil drain plugs
- 14 references, ranging from 10 to 22 mm
- Handy reference chart on the inside of the lid
- Can be customised on request

Reference to order: **HL5192**



Wellseal jointing compound

The complete answer to your sealing problems

- Easy to use and free from abrasive fillers
- Non-corrosive, non-flammable and non-hardening
- Ideal for threaded connections or flat-faced joints
- Can be used with or without gasket (depending on assembly design)
- Highly resistant to commonly used lubricants and coolants

Reference to order: **WS3000**



General purpose gasket sheets

- Suitable for a wide range of oil, air and coolant sealing applications
- OE-quality
- Useful solution for non-standard applications
- Selection of different thicknesses and sizes available

For reference numbers please consult our separate product bulletin



SO MANY ENGINES, JUST ONE SEALANT



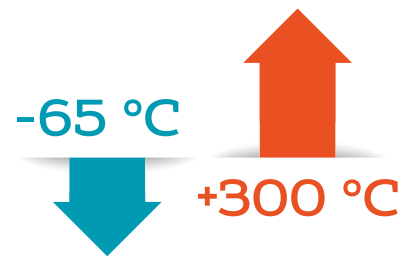
Your benefit? Only 1 part to stock

Payen's HR397T sealing compound is particularly intended to create durable fluid sealing of cylinder liners, synthetic housings and all surfaces in engines, gearboxes and axles.



Features

- 70 ml
- Colour: black
- Includes accessories: nozzle and key
- Fast curing (0.1 mm/h)
- **Withstands -65°C to +300°C**
- Resists oil, grease, water, antifreeze, seawater, dilute acids and alkalis



How to order

1 carton* of
Payen HR397T needed



Order **30** x HR397T
Code EAN: **14044197916105**



Checkout quantity = **30**

For your re-sale convenience EAN code 4044197916108 per 1 pcs has been introduced.



*sold per full carton only.

Always at Reach

Payen's **HR397T sealing compound** is particularly intended to create durable fluid sealing of cylinder liners, synthetic housings, and all surfaces in engines, gearboxes and axles. This all-purpose sealant is suitable for uneven and rough surfaces in all engine makes.

The convenient sized compact tube ensures easier access to areas within the engine that are difficult to reach. Always keep one in your toolbox!

HR397T

- Content: 70 ml
- Includes nozzle and key
- - 65°C to +300°C
- Fast curing 0.1 mm/hour



How to order

1 carton* of
Payen **HR397T** needed



Order **30** x HR397T



Checkout quantity = **30**



* sold per full carton only

Safety data sheet available on TecDoc.

Quick and easy washer selection

With the Payen washer box, you'll have the right washer readily at hand, wherever and whenever you need it. The handy reference chart printed on the inside of the lid allows you to quickly find the correct washer. You can also customise the content of the box according to your professional needs. It's an indispensable gadget for any garage that guarantees a professional fit.

Reference to order **HL5192**



Three spare compartments allow you to customize the content to your needs.

NEW

- Increased efficiency
- Contains 210 OE-quality washers and 2 oil drain plugs
- 14 references, ranging from 10 to 22 mm
- Handy reference chart on the inside of the lid
- Individual reference can be reordered

Please check out our Payen® Pro-Fit service products range.

Symptoms

Cylinder head gasket sealing can fail for many reasons. A minor leak if left unattended, will become progressively worse, affect other engine functions and eventually lead to a catastrophic engine failure. One symptom rarely appears independently of another, although the following chart will assist diagnosis.

General effects

When a damaged cylinder head gasket is examined, it will invariably show oil and water stains, discolouration due to the effects of heat, carbon deposits, compression marks and possibly areas of burning and erosion. To determine the cause of the problem, close attention must be paid to determine the key effect, otherwise an incorrect diagnosis is possible. Experience, and a specific knowledge of the engine being considered (oil and water flowpaths, manufacturers' service bulletins etc.) will assist the analysis. Well over 80% of gasket sealing failures are caused by; incorrect bolt tightening (which leaves the gasket insufficiently compressed), failure to check the bolts after a specified mileage, general engine overheating or abnormal engine combustion.

Water	Low/falling water level in radiator plus:	Overheating plus:
1. Water leaks externally.	Wet engine. Evaporation stains. Water on chassis/floor.	Hot engine smell, combustion knock, contraction noises on shut down.
2. Water leaks to oil-way.	White emulsion in rocker cover and sump. Oil level appears to increase.	As above plus rapid engine wear leading to bearing noises and increased blowby to crankcase.
3. Water leaks to cylinder.	As above plus evaporation stains around radiator cap and wet exhaust.	As above plus power loss, steam from exhaust and radiator cap.
Oil	Falling oil level plus:	Slow overheating as oil level falls plus:
1. Oil leaks externally.	Oil engine. Dirt adhesion. Oil on chassis/floor.	Bearing knock and piston seizure if oil depleted.
2. Oil leaks to water passage.	White emulsion in radiator.	As above with faster overheating due to radiator core blocking.
3. Oil leaks to cylinder.	Fouled spark plugs/injectors.	Poor starting. Power loss. Blue smoke from exhaust
Combustion gas	High fuel consumption plus:	Poor starting & power loss plus:
1. Gas leaks externally.	Burnt surfaces and carbon around leak.	Exhaust fumes in engine bay. Hissing/whistling noise in time with engine.
2. Gas leaks to water passage.	Evaporation marks around radiator cap and generally around engine bay.	Overheating. Pressurisation and water loss from radiator.
3. Gas leaks to oilway.	Valve gear may appear dry due to oil flow disruption to cylinder head.	Valve gear noise. Possible crankcase pressurisation.
4. Gas leaks to next cylinder.	Black carbon deposits in exhaust pipe.	Overheating. Severe power loss. Possible backfiring. Fuel rich exhaust smell Black smoke. Hissing noise.

Overheating



Symptom: Gasket materials are hard and carbonised. Surface cracks are evident. Bore eyelets are discoloured.
Cause: Overheating causes hardening of the gasket materials and possible material degradation. This will reduce the sealing effectiveness of the gasket.
Remedy: Maintain cooling systems in good order. Rectify leaks immediately. Replace cylinder head gasket if engine has been severely overheated. A planned repair is better than an unexpected failure. or replace damaged cylinder components. Ensure any piston under crown cooling jets are functioning correctly.

Loose assembly

Symptom: There will be no or few compression marks on the gasket faces. The thickness of the gasket will be almost the same as a new un-compressed gasket. Leakage occurs in first few hours.

Cause: Cylinder head bolts insufficiently tightened.

- Damaged or dirty threads.
- Excess oil or water in bolt holes.

(In the above cases, the correct torque may be applied, but insufficient load is generated). Old bolts re-used ('Stretch' or 'yield tightened' bolts should always be replaced).

Remedy: Always follow the engine manufacturers' procedures for the replacement and tightening of cylinder head bolts, particularly the torque setting and the tightening sequences. Ensure that threads are not damaged and that bolt holes are clear. When a bolt is tightened, about 90% of the applied torque is used to overcome friction. The remaining 10% provides the actual bolt tension. It is therefore most important to know and to follow the manufacturers' recommendations for cylinder head bolt lubrication. Be aware that some manufacturers pre-coat bolts and recommend their installation in a 'dry' condition.

Abnormal combustion



Symptom: Gasket material is burnt away, often between cylinders, or at a location where detonation or pre-ignition occurs. Discolourations are indicative of elevated temperatures around the bore eyelets and combustion gas leakage paths are evident.

Cause: Detonation and pre-ignition increase the localised surface temperatures in the combustion chamber and damage the gasket by burning away the gasket material. In addition, the excessive cylinder pressures are generated which counteract the clamping load leading to a fatigue failure of the gasket bore seal.

Remedy: Keep the ignition system in good order. Ensure the spark plugs have both the correct heat rating and electrode gap. Use the correct grade of fuel specified for the engine and check the compression ratio if major engine machining operations have been undertaken.

Retorque omitted



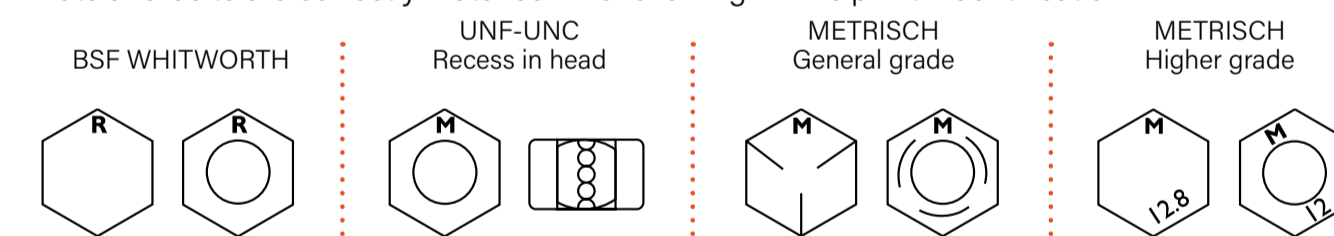
Symptom: Displacement of the gasket material and cracking of the bore eyelets due to the clamping force reduction. Leakage occurs within the first few thousand miles.

Cause: Depending upon the type of material and construction, some cylinder head gaskets settle slightly when exposed to heat and vibration. If the cylinder head bolts are not retorqued after an initial period of engine operation, the clamping load is reduced and leakage occurs.

Remedy: Always follow the manufacturers' instructions about retorquing cylinder head bolts after a specified mileage. If the engine is to pass out of your control, clearly label it that a retorque will be required.

Bolt identification

Threads in today's modern vehicles are almost without exception metric. However, many older vehicles are still to be found with a mixture of thread systems. It is extremely important that nuts and bolts are correctly matched. The following will help with identification.



Surface finish



Recommendations: To ensure an effective seal between the cylinder head gasket and the joint face is obtained, the surface finish of the cylinder head must be taken into consideration. Too smooth a finish may allow gasket movement, resulting in failure. Too rough a finish will prevent adequate surface sealing between the gasket and the engine surfaces, allowing seepage to occur. The table below gives the approximate surface finish requirements in micromillimetres from the various types of gasket available. These are general guidelines but should be used when alternative OE specifications are unavailable.

Surface Feature	Gasket Type			
	Fibre	Graphite	Multi-Layer Steel	Steel-Elastomer
Maximum Roughness Rz (Sampling Length)	12µm - 15µm (0.80mm)	12µm - 15µm (0.80mm)	< 12.5µm Depending on Coating thickness (0.80mm)	12µm - 15 µm (0.80mm)
Waviness Wt (Sampling Length)	< 10µm (2.5mm)	< 10µm (2.5mm)	< 10µm (2.5mm)	< 10µm (2.5mm)
Flatness	80µm over 150 mm	50 µm over 150 mm	<25µm over 150 mm <25µm overall	50 µm over 150 mm

Torque conversion chart

Unit	Nm	Kgf.m	Kgf.cm	Lbf.ft	Lbf.in
1 Nm =		0.102	10.20	0.738	8.85
1 Kgf.m =	9.806		100	7.233	86.79
1 Kgf.cm =	0.098	0.01		0.072	0.868
1 Lbf.ft =	1.356	0.138	13.80		12.00
1 Lbf.in =	0.113	0.011	1.152	0.083	

Other problems



Entrapment: Gaskets and components must be thoroughly cleaned before assembly. Any foreign material trapped between the mating surfaces will seriously impair the gaskets sealing performance.



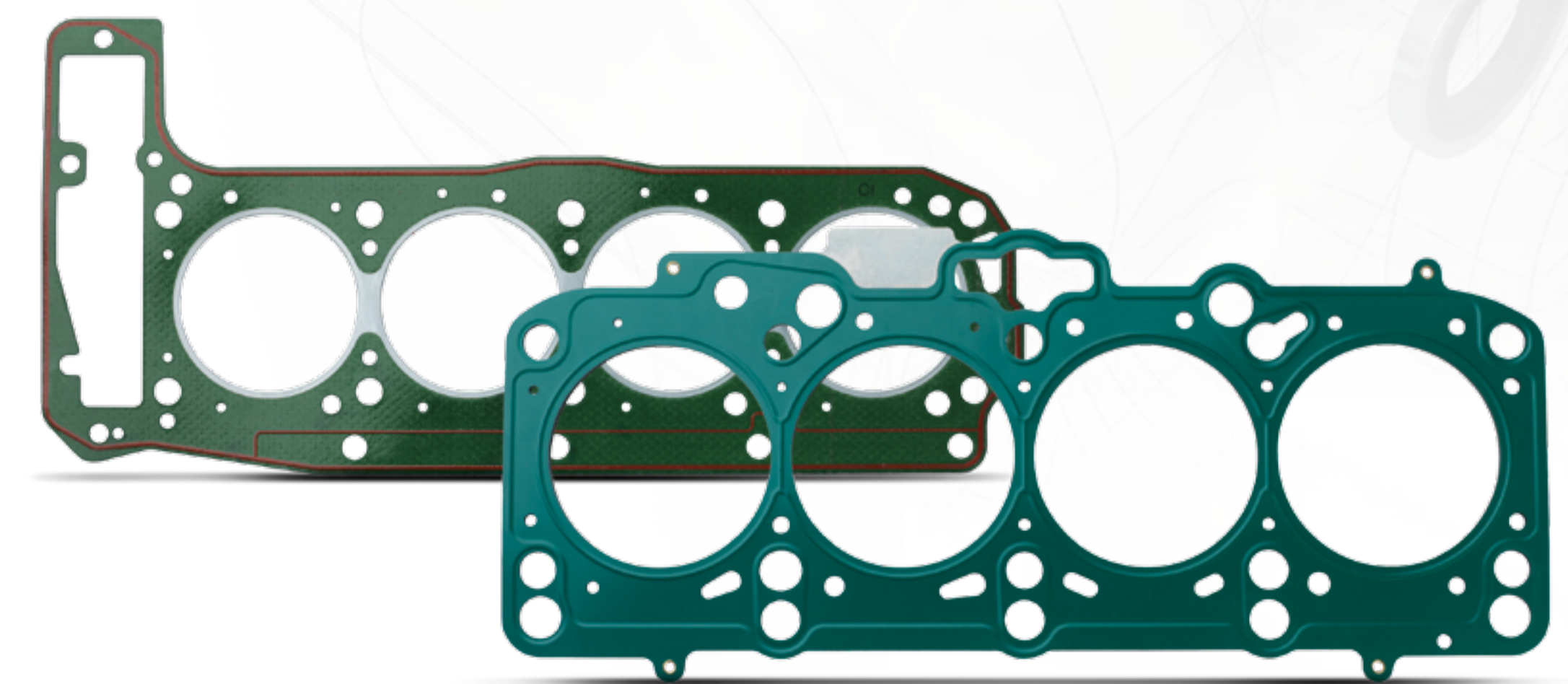
Damage: A cylinder head gasket is a delicate component and easily damaged. Always inspect a gasket before assembly and never install one that has been folded or creased. Never re-use a cylinder head gasket.

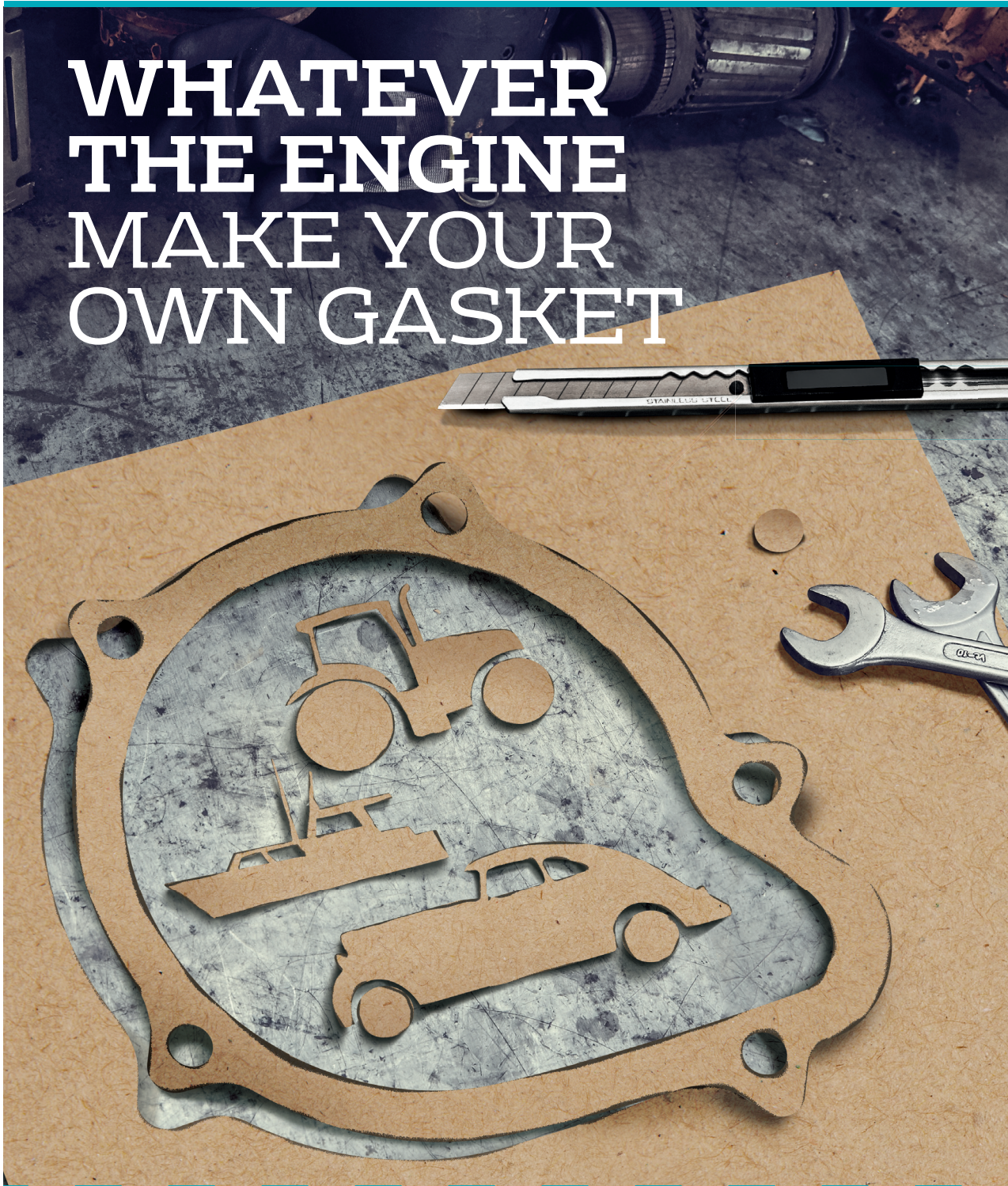


Distortion: Cylinder head gaskets are designed to seal flat surfaces. Distorted cylinder heads and engine blocks will impair gasket sealing performance. Always check that surfaces are within the manufacturer's specification for flatness, particularly with aluminium components. It is difficult to give a figure for all engines but a distortion of 0.1 mm over the length of the average cylinder head should be considered the maximum allowable.

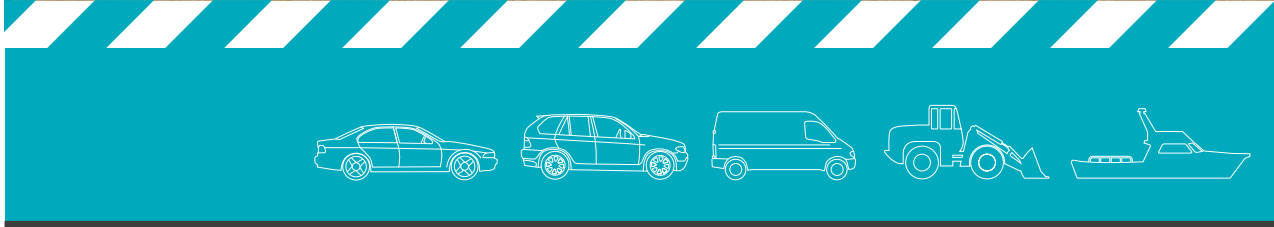


Sealants: In general, sealants should never be used when fitting a cylinder head gasket. If a sealant is considered necessary at, for example, 'T' Joints, then avoid overuse. Excess sealant can block passageways and cause bolts to lock hydraulically in blind holes.





**WHATEVER
THE ENGINE
MAKE YOUR
OWN GASKET**


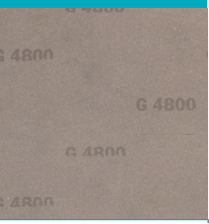

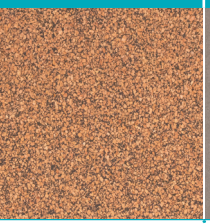



ENGINE EXPERTISE
BY **FEDERAL-MOGUL**
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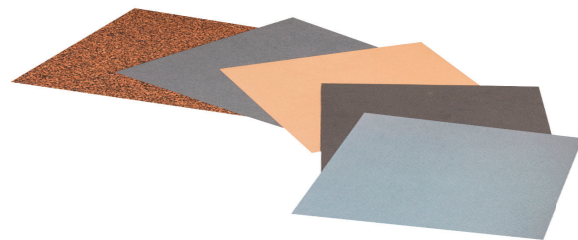
**PAYEN'S UNIVERSAL GASKET MATERIAL
COMPACT RANGE, ENDLESS POSSIBILITIES**

- Multi-purpose sheets for a wide range of engines
- Quick and effective repair
- Easily obtainable
- As used by professionals

REF. TO ORDER	LZ006 to LZ013	LZ014 to LZ016	LZ017 to LZ019	LZ020 to LZ023	LZ024 to LZ025
					
MATERIAL	G3900	G4800	G3123	NL44	G4780
APPLICATION	Axles Carburettor Flange Fuel pumps Gearbox Oil pumps Steering housing Thermostats Water pumps etc.	Axles Gearbox Inlet manifold Oil sump Pumps Valve cover etc.	Axles Gearbox Inlet manifold Oil sump Pumps Valve cover etc.	Control units Gearbox cover Oil sump Valve cover etc	Exhaust manifold Inlet manifold Gas sealing applications
TEMPERATURE RANGE [°C]	< 120	< 300	< 160	< 135	< 400
CHEMICAL RESISTANCE	Fuel Oil Antifreeze and anti-corrosion products	Fuel Oil Antifreeze and anti-corrosion products	Fuel Oil Antifreeze and anti-corrosion products	Fuel Oil	Fuel Oil Antifreeze and anti-corrosion products

REF PAYEN	SALES QTY*	PACK CONTENT	MATERIAL	SHEET DIMENSION	THICKNESS
LZ006	1 pack	3 sheets	G3900	1m x 0,5m	0,25mm
LZ007	1 pack	3 sheets	G3900	1m x 0,5m	0,40mm
LZ008	1 pack	3 sheets	G3900	1m x 0,5m	0,80mm
LZ009	1 pack	1 sheet	G3900	1m x 0,5m	1,60mm
LZ010	1 pack	3 sheets	G3900	1m x 0,5m	0,25mm
LZ011	1 pack	3 sheets	G3900	1m x 0,5m	0,40mm
LZ012	1 pack	3 sheets	G3900	1m x 0,5m	0,80mm
LZ013	1 pack	1 sheet	G3900	1m x 1m	1,60mm
LZ014	1 pack	3 sheets	G4800	1m x 0,5m	0,4mm
LZ015	1 pack	3 sheets	G4800	1m x 0,5m	0,8mm
LZ016	1 pack	3 sheets	G4800	1m x 0,5m	1,6mm
LZ017	1 pack	3 sheets	G3123	1m x 0,5m	0,4mm
LZ018	1 pack	3 sheets	G3123	1m x 0,5m	0,8mm
LZ019	1 pack	3 sheets	G3123	0,5m x 0,5m	1,60mm
LZ020	1 pack	4 sheets	NL44	0,45m x 0,45m	2mm
LZ021	1 pack	4 sheets	NL44	0,45m x 0,45m	3mm
LZ022	1 pack	4 sheets	NL44	0,45m x 0,45m	4mm
LZ023	1 pack	4 sheets	NL44	0,45m x 0,45m	5mm
LZ024	1 pack	4 sheets	G4780	0,67m x 0,3m	1,15mm
LZ025	1 pack	4 sheets	G4780	0,45m x 0,3m	1,25mm

* price is for 1 full pack content



ENGINE EXPERTISE
BY  **FEDERAL-MOGUL
MOTORPARTS**



Choose the packaging type that best fits your operational needs

Payen's **all-purpose HR397 sealing compound** is now available in **two packaging types**, empowering you to match the design and format to your own practical requirements:

HR397

- Type: cartridge
- Content: 80 ml
- Clean finish
- Fits standard professional application guns



HR397T

- Type: tube
- Content: 70 ml
- Compact
- Includes nozzle and key



Fluid sealing

Our HR397 sealing compound is particularly intended to create durable fluid sealing of cylinder liners, synthetic housings, and all surfaces in engines, gearboxes and axles. This all-purpose sealer is suitable for uneven and rough surfaces in all makes of engines and vehicles.

How to order

1 carton of Payen HR397 sealing compound needed > Order 12 x HR397 > Checkout quantity = **12**

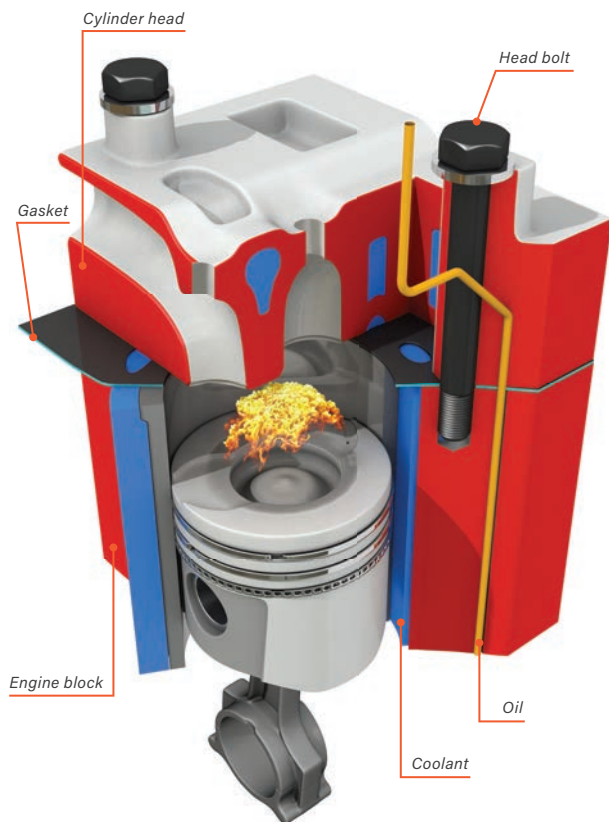
1 carton of Payen HR397T sealing compound needed > Order 30 x HR397T > Checkout quantity = **30**



Understanding cylinder head bolts

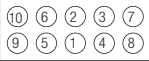
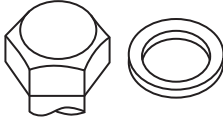
CYLINDER HEAD BOLT FUNCTION

The purpose of the cylinder head bolts is to generate sufficient clamp load for the head gasket to seal gas and fluids.



FITTING PROCEDURE

The effective generation of bolt load is critical to the sealing of the cylinder head gasket. Approximately 80% of the effort put into turning a head bolt is just to overcome friction. The remaining 20% generates the clamp load.

Space 2.0 J5R 88 x 4 x 1995	HBS116 1 = 50 Nm 2 = 80 Nm 3 = 90° 4 = 93 Nm	
Traffic 2.0 J5R 88 x 4 x 1995	M12 x 1.50 x 243 (10)	
Master 2.0 J5R 716/722/726/720 88 x 4 x 1995		

M12 X 1.50 X 243 (10)

If the bolt is not turned enough an inadequate load level will be generated. However if the bolt is turned too far into yield the bolt is likely to fail.

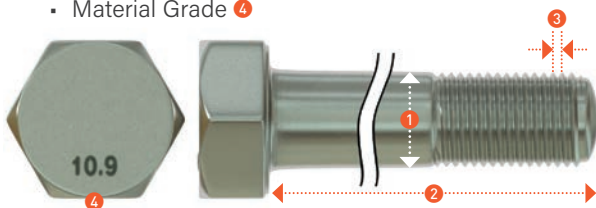
BOLT TIGHTENING METHODS

Traditionally, cylinder head bolts were tightened using a measured amount of torque in several steps. It is now more common for a combination of torque and angle tightening to be used. This generates a more consistent amount of bolt load since it is independent of the friction conditions.



IMPORTANT BOLT DIMENSIONS:

- Major diameter 1
- Length 2
- Thread pitch 3
- Material Grade 4



DON'T REUSE HEAD BOLTS!

This could lead to inadequate load generation due to:

Rusty bolts



Damaged bolt threads



Corrosion



Stress corrosion cracking



Previous overtightening

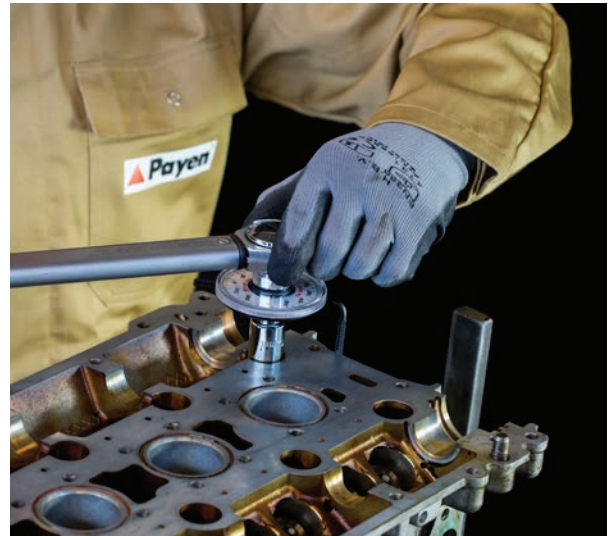


Previously yielded giving permanent extension and plastic deformation



PAYEN TIPS & TRICKS

- Inspect bolts for damage.
- Clean and lubricate or seal threads as recommended.
- Inspect bolt hole threads and depth.
- Blind bolt holes should be dry at the bottom.
- Ensure that the joint surfaces are clean and free of oil.
- Torque the bolts using the recommended sequence.
- Stop pulling the torque wrench when it clicks.
- Use a degree wheel when required.
- Verify the accuracy of the torque wrench regularly - certainly after it has been dropped!



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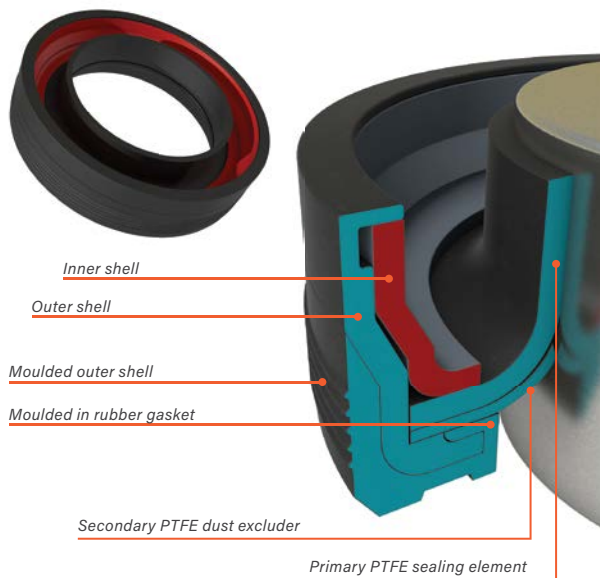
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Understanding PTFE seal technology

PTFE SEAL INTRODUCTION

The materials used for oil seals have been developed over the years in response to increased performance requirements. The elastomeric materials used for oil seals have been changed to provide improved levels of temperature resistance and durability. The use of PTFE (Polytetrafluoroethylene) for oil seals has now become more common as not only does it provide excellent resistance to the wide range of oil conditions found in modern engines, but also provides lower friction at the shaft interface.

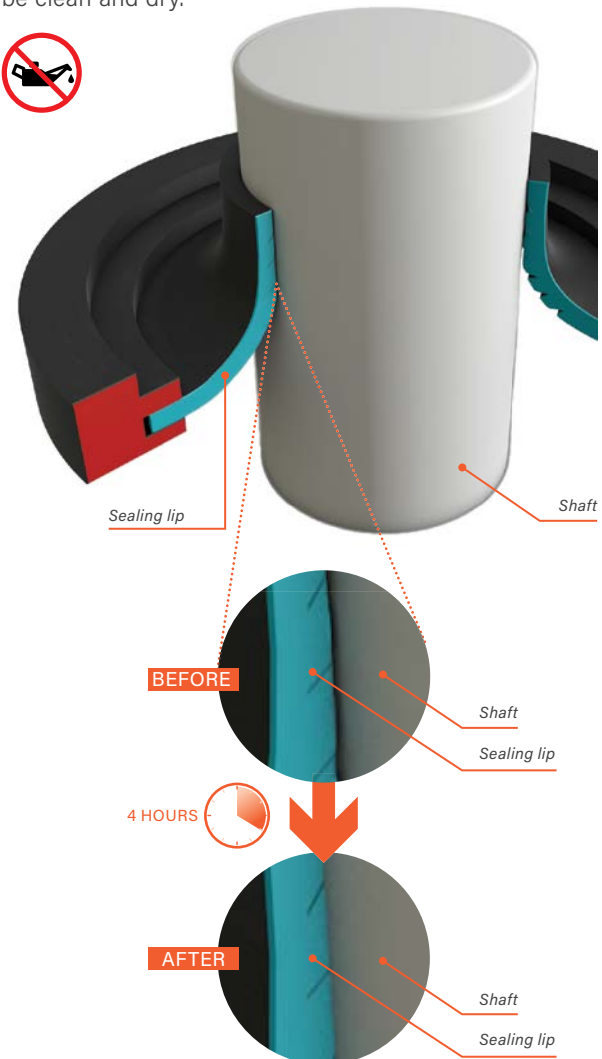


KEY FEATURES

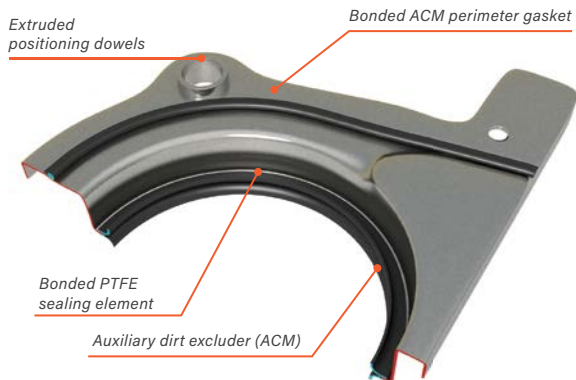
- Excellent chemical resistance against attack and contamination from engine oil.
- Provides enhanced durability and supports longer oil change intervals.
- Offers superior temperature resistance, so it is suitable for the higher temperatures found in modern engines.
- Reduces shaft wear due to the lower friction conditions.

BEDDING IN ON A DRY SHAFT

PTFE seals require a different assembly technique when fitting to an engine. The seal normally comes with a plastic collar that fits over the shaft. The collar is withdrawn and the seal then needs a minimum of four hours to adapt to the shaft. At no stage during this process must any oil be used and all the surfaces must be clean and dry.



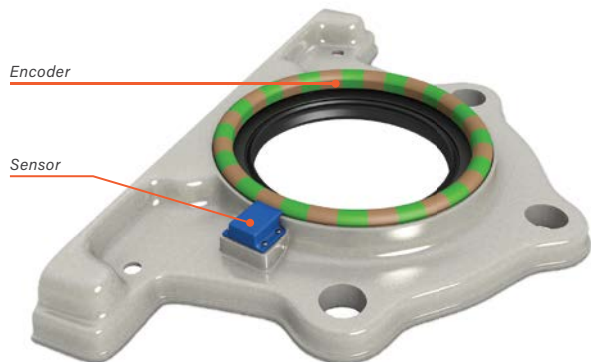
INTEGRATED PTFE OIL SEALS



For rear crank seal applications, the oil seal housing and gasket are often now combined into a single unit known as an integrated oil seal which also provides a better level of overall sealing ability. The design of these integrated oil seals means that replacement of the individual sealing elements is not feasible and the unit will need to be replaced as a complete item.

SEAL MODULE WITH INTEGRATED ENCODER

The module can also contain the crank sensor and encoder.



TIPS & TRICKS

- PTFE seals require careful fitting using the plastic collar provided with the seal.
- Don't remove the plastic collar before fitting and avoid touching the PTFE lip to prevent contamination.
- Always fit on a clean and dry shaft without any oil or grease.
- Fully tighten the bolts used in fitting an integrated seal before removing the plastic collar.
- Once the plastic collar is removed, make 2 full rotations, allow 4 hours for the seal to recover onto the shaft before starting the engine.



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THE NEXT STEP IN USER FRIENDLINESS

From now on, attaching the oil pan and gasket to the engine block is no longer a two-man job. Simply insert Snap-ups in four corners of the block and slide all parts into place: two small protrusions keep the oil pan and gasket suspended, so you can easily insert the bolts that keep everything together. It's fast. It's easy. And it makes servicing a whole lot easier.

NEW

AVAILABLE IN TWO SIZES (PACKED PER 4)

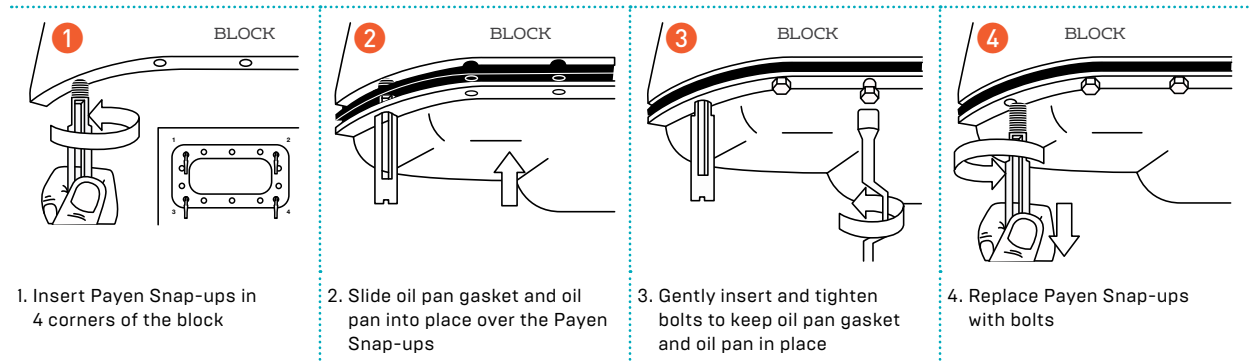
LZ002 (ref to order) > 6 mm



LZ003 (ref to order) > 8 mm



How to use



Watch the video tutorial:



PERFORMS UNDER PRESSURE