THE PARTS YOU NEED

FEATURING

RIMMER BROS V8 ENGINES

FULL ENGINES*
SHORT ENGINES*
**3.5, 3.9, 4.6, 4.8, 5.2 LITRES*
LONG ENGINES
CYLINDER HEADS

also:

- REBUILD KITS
- ENGINE COMPONENTS
- CLUTCHES
- MOUNTINGS
- WATER PUMPS
- FUEL SYSTEMS
- EXTRACTOR MANIFOLDS
- IGNITION SYSTEMS
- ACCESSORIES

as fitted to:-

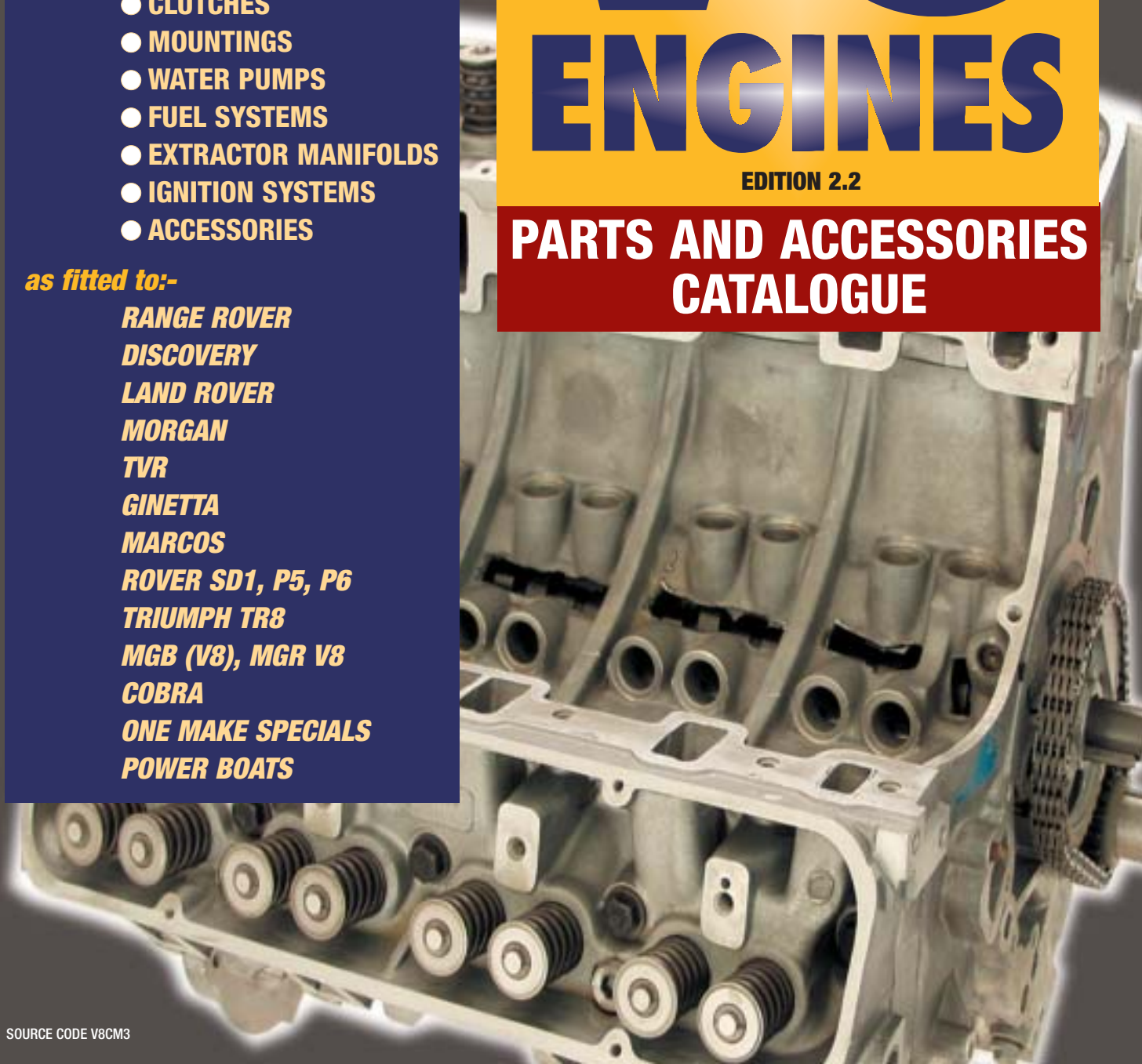
RANGE ROVER
DISCOVERY
LAND ROVER
MORGAN
TVR
GINETTA
MARCOS
ROVER SD1, P5, P6
TRIUMPH TR8
MGB (V8), MGR V8
COBRA
ONE MAKE SPECIALS
POWER BOATS

RIMMER BROS

ROVER V8 ENGINES

EDITION 2.2

PARTS AND ACCESSORIES CATALOGUE



SOURCE CODE V8CM3

THE RIMMER BROS SERVICE

WE HAVE THE PARTS

-

WE GUARANTEE THE QUALITY

-

WE'RE KEEN ON PRICE

-

WE DELIVER FAST

-

WE KNOW V8s

-

RIMMER BROS

FOREWORD

by DAVID HARDCASTLE

For the enthusiast there is no other engine able to offer as big a "bang for your buck" as the Rover V8. For sure there are engines that you can build yourself which can probably propel your vehicle towards the distant horizon at the same rate of knots, and there are engines you can build for less if you are so inclined. However when you consider the Rover V8's ready availability, its adaptability, light weight and its sheer presence, it surely has no equal. The glorious, intoxicating sound you get thrown in for free.

When I first became interested in the Rover V8, parts availability and choice, along with sound advice on the best options and the expertise needed to work on the engine effectively, was pretty thin on the ground. There were a number of companies prepared to separate the enthusiast from his or her hard-earned cash in exchange for ready-built road or race engines, but the resulting power plant did not always match up to expectations.

Things had moved on when I began writing, so I was fortunate in being able to meet some very competent individuals, who passed on their knowledge to me and allowed me to communicate their considerable expertise through my books.

With the publication of the Rimmer Brothers catalogue the Rover V8 "story" has, for the enthusiast, moved on yet again, with rebuilding and tuning becoming simplicity itself. Select from a vast range of parts, all available from one source. Take possession of one of these magnificent engines, choose from a comprehensive range of parts or built assemblies and elevate your Rover V8 to new heights of power and torque.

So, whatever magnificent machine (which it surely is with this engine to power it) you possess, be it a classic Rover saloon, Triumph sports car, Land Rover/Range Rover/Discovery, TVR, Morgan, Kit Car etc; however you choose to use your Rover V8 engine - on road, off-road, in race or rally - this catalogue should reside next to my books on your bookshelf!

David Hardcastle

Author of The Rover V8 Engine and Tuning The Rover V8 Engine published by Haynes Publishing. Available from Rimmer Bros, part number RX1429 & RX1430.

THE ROVER V8 ENGINE

Making its debut in the Rover P5 saloon in 1967, the Rover V8 engine has subsequently provided the power for three generations of luxury saloon, some of the fastest sports cars in the world and the most capable off-road vehicles ever produced. Its versatility is unquestionable.

Over the years, the engine has evolved, growing in capacity from 3.5 litres to 4.6 litres and bigger; compression ratios have varied (due to the changing demands of various world markets over three decades) and fuel systems have been developed to squeeze the very best economy from the vee-eight.

Nevertheless, the basic engine has changed very little over the years and parts for the latest versions of the engine can often be used to improve earlier versions.

The aim of this catalogue is to provide the best choice of parts for as many Rover V8 enthusiasts as possible. We stock a complete range of parts - from the smallest component to a complete engine - catering for every application, whatever the vehicle.

WHO ARE RIMMER BROS?

The company was formed in the early 1980s to cater for an ever-increasing demand for parts for classic Triumphs (Stag, TR4-TR8, Spitfire, GT6, 2000/2500 saloon, Herald/Vitesse, Dolomite) and more recently, Rover SD1, Range Rover and Discovery.

It is recognised as one of the leading organisations of its kind in the world, supplying parts worldwide to an ever-increasing list of customers.

The company is British Motor Heritage approved for Triumph and Rover SD1 models.

WHY THIS CATALOGUE?

We have been stocking parts for the V8 since 1985 when we first introduced TR8 (TR7 V8) conversion kits. Since publishing our Rover SD1 catalogue in 1995 we have always recognised the fact that the model application list for the V8 stretches much farther than Triumph and SD1 (something our customers kept reminding us of).

This catalogue aims to satisfy the requirements of owners of Land Rover, Rover P5/6, Morgan, TVR, Ginetta, Marcos, MGB, Cobra and a whole host of kit cars and specials. Whether it's a fully reconditioned engine or a gasket set, we should be able to help you.

THE STOCK WE NEED TO GIVE THE SERVICE YOU NEED

If you're looking for technical advice, we have experienced people who can help you with parts selection.

We are able to stock in depth just about any part you might need. Our computer system gives up-to-the-minute information regarding availability and price.

Our truly efficient mail order procedures ensure goods are dispatched quickly and efficiently - when the customer needs them.

THE PEOPLE YOU'RE DEALING WITH

This company really is owned by two brothers named Rimmer. Bill and Graham started their business from humble beginnings in the early 1980s, and it has grown to be one of the leading organisations of its kind in the world, supplying parts Worldwide to an ever growing list of customers.

Both Bill and Graham still work full-time in the business, helped now by over 50 members of staff.

The main qualification of membership of our staff is a recognition that our customers, and our company reputation, depend on our ability to get every aspect of our service right first time.

CUSTOMER SERVICE

The overall objective at Rimmer Bros is to achieve customer satisfaction at all times.

THIS CATALOGUE & OUR PRICE GUIDE

There are no prices in this catalogue. Use it to select the parts you need, then check their cost by referring to the separate Price Guide which represents the other half of our ordering system. The price guide is updated and reprinted more frequently, but we ask that you confirm all prices when ordering. It may also list additional parts (new lines) that we have introduced since this catalogue was printed, and it has more detailed information about ordering & delivery methods. It also has information on warranties and a 'Trouble Shooter Guide'.

ORDERING BY PHONE

Please quote your home postcode and part numbers where possible. This gives instant access to our computerised records and stock control system. If you have any difficulty in selecting the parts you need, our expert staff can help.

UK Payment for Phone Orders

(See also "Overseas Orders & Payment.")

When you have checked on price, availability and delivery costs you can place your order by phone using Visa, MasterCard, Delta/Connect, Switch, Solo, American Express, Diners Club, or JCB. You will merely need to tell us the card number, expiry date (or issue number), cardholder's full name and registered card address.

After Hours Ordering Service

We operate a 24-hour answering/ordering service which is available to card holders out of normal hours for both UK and Overseas customers. Just leave all necessary details on our telephone voice mails, ie your vehicle type, year, model, the parts and/or the part numbers you require, plus your name, address (inc, postcode), credit card details and delivery address (if different).

Writing out these details before phoning usually helps a caller to give us clear instructions. If at all possible, please also leave a daytime telephone number.

ORDERING BY POST

Triumph House, Sleaford Road, Bracebridge Heath, Lincoln, LN4 2NA, England.

We ask you to phone first if at all possible - to check your parts selection, and to advise of delivery charges. Because prices and availability sometimes change, we can also confirm the exact remittance needed avoiding unnecessary delays. If you have not been able to telephone, please give us all possible information - car type/year, RH or LH, front/rear etc - so we can check your selection (including your name, address and postcode) in all correspondence.

Use our Order Form if you can. It asks specifically for all the details we might need. Please photostat or request additional copies of the order form if required.

UK Payment for Post Orders *(See also "Overseas Orders & Payment.")*

Send your remittance with the order. The 'Pricing' section in the Price Guide tells you how to calculate the amount.

We accept payment by personal cheque even if the cheque guarantee card limit is exceeded. All we require is your full name and address on the back of the cheque along with your cheque card number and for business cheques, a relevant letterhead. Cheques or P.O.s made out "Rimmer Bros Ltd" please.

Note, if you are unsure as to the exact amount to send, you can write across the top of your cheque, "Cheque Value Not To Exceed £...". You can post us your credit card details if you prefer. If you send cash, note that we cannot accept responsibility for any loss, so registered mail is essential. Bank drafts and Building Society cheques are also accepted. For Bank Transfer information see Price Guide.

ORDERING BY FAX

UK CUSTOMERS: 01522 567600 OVERSEAS CUSTOMERS: +44 1522 567600

See also "Overseas Orders & Payment."

Another facility for customers who wish to make enquiries, or order by credit, debit or charge card. Again, we will need your name, address (inc. postcode), credit card details and delivery address (if different). Plus fullest possible car/parts details - as for orders by post.

ORDERING BY E-MAIL AND THE INTERNET

For Internet surfers our web site holds details on all our parts catalogues and has an on line ordering facility. Use our E-Mail address for sending your order or parts enquiry. State if you require us to confirm prices, as they can sometimes alter at short notice.

www.rimmerbros.co.uk

E-Mail: sales@rimmerbros.co.uk

RIMMER BROS

TELEPHONE NUMBER

SALES

01522 568000

(Overseas +44 1522 568000)

FAX NUMBER

SALES

01522 567600

(Overseas +44 1522 567600)

E_MAIL & INTERNET

E-Mail

sales@rimmerbros.co.uk

Internet

www.rimmerbros.co.uk

ADDRESS DETAILS

Rimmer Bros, Triumph House, Sleaford Road, Bracebridge Heath, Lincoln, LN4 2NA, England.

RIMMER BROS

ORDER

COLLECTING IN PERSON

If you wish to 'call and collect', you will always be made welcome at our shop and sales counter during business hours. Our Visitor Information Centre has lots of interesting details of each production model and the factories where they were produced.

Customers drive here regularly from all over Europe. Lincoln is a historic Cathedral city and is an excellent place to visit. We're about 2 miles south of Lincoln on the A15 Lincoln to Sleaford road (see map on back cover). We advise you to pre-check by phone that we have the part/s you want in stock.

We accept payment by credit card, cash, bank draft, travellers cheque, building society cheque, and personal cheque (when presented with a cheque card) even if the cheque card limit is exceeded, and by business cheque with accompanying letterhead.

PRICING

For full information and details on prices, VAT, & VAT exempt export sales, please refer to the latest Price Guide. Written quotations are available on request, for parts and/or delivery charges. Please confirm all prices when ordering - prices and availability can sometimes change at short notice. Up to date prices can be found on our web site.

OVERSEAS ORDERS & PAYMENT

We supply parts to classic car owners Worldwide. We have thousands of customers in Europe and regularly send parts as far afield as Australia, North America, Africa and the Far East. Delivery costs of course, vary greatly (depending on size/weight/urgency). We can quote accurately for the cost of parts and delivery once your requirements are known.

Our Multi-language European Order Forms explain how to order parts in English, Italian, German, Spanish and French.

TEL: +44 1522 568000
FAX: +44 1522 567600
E-MAIL: sales@rimmerbros.co.uk

Payment By Export Customers:

There is a choice of payment methods for customers overseas;

A) Credit card, Debit card or Charge card.
B) Bank cheque - in ££s sterling (Drawn on a London Bank)
C) Travellers Cheques (signed) - in ££s sterling.
D) Giro Cheques in ££s sterling.
E) By Bank Transfer - see Price Guide.

PLEASE NOTE THAT ALL TRANSACTIONS MUST BE IN ££s STERLING.

CHOICE OF DELIVERY METHODS

(For Further Information/Cost Details, Please Refer to Price Guide)

UNITED KINGDOM

There are numerous delivery options for the UK mainland ranging from Post (first class or parcel post) to overnight carrier services. We can advise of the best method of despatch when you telephone. The type of service that we recommend depends upon the size, weight and urgency of the parts you require.

Our price guide indicates the approximate costs, and we will confirm the final invoice total at the end of the call if required.

WORLDWIDE (NON EC COUNTRIES)

We started exporting parts Worldwide in 1982, and since then we have gained an excellent reputation for our speed & efficiency of service.

Delivery costs are based on size, weight, and method of delivery. We have discounted rates with well known carriers, so costs are kept to a minimum. Send us a list of the parts you need (using post, phone, fax or E-Mail), tell us quantities and urgency, and we will work out the best delivery method and quickly advise you of the cost.

Written quotations are available on request.

EC COUNTRIES

The European Community Single Market permits the free movement of goods between all EC countries. This allows us to provide a superb service to all our customers within the EC, with the benefits of improved delivery - via lower charges and easier documentation. Deliveries can be easily arranged using air or surface transport. Our Price Guide indicates approximate costs.

CATALOGUE CONTENTS

NEW & RECONDITIONED PARTS

Almost every part we list is sold brand-new, but in many instances we also offer you the facility to buy "Reconditioned" (usually giving us your old component in part-exchange).

Where there is a reconditioned version of a part, you will find the letter 'R' added at the end of the part number.

EXCHANGE SURCHARGES (REFUNDABLE)

Where parts are sold on an exchange basis, an "Exchange Surcharge" is applied – a deposit in effect, which is refunded to you when your old unit is received by us. This system allows you to make an exchange without having to send the old unit first ... it can often prevent your vehicle being off the road. The amount of the Exchange Surcharge is shown in the Price Guide in italics below the part number.

Before returning your old unit, please telephone our Customer Service Dept on 01522 568000 in order to obtain a return authorisation number. See reverse of invoice for full details of return procedure. Units must be drained of oil, water and be serviceable; we reserve the right to retain all or part of the surcharge if the unit is irreparable, damaged, or not identical to the type supplied.

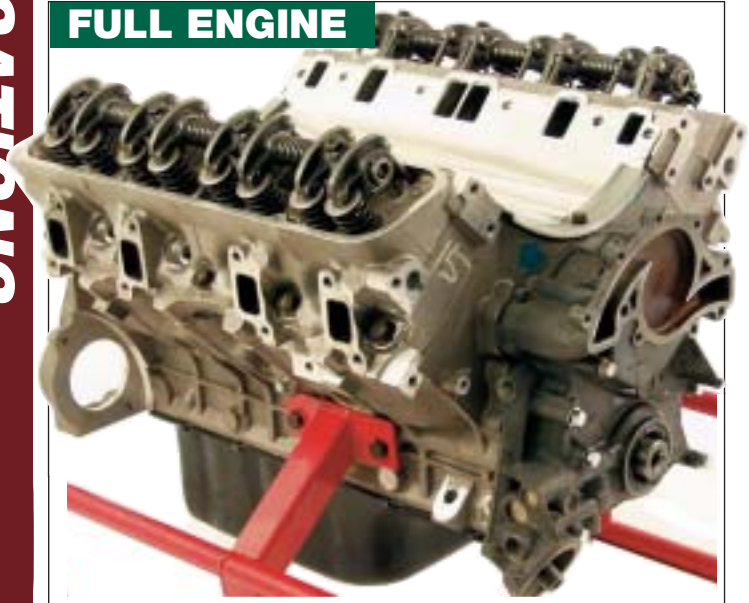
RIMMER BROS V8

Built by Race Engineers

QUALITY, PERFORMANCE & ENGINEERING EXCELLENCE AT AN AFFORDABLE PRICE.

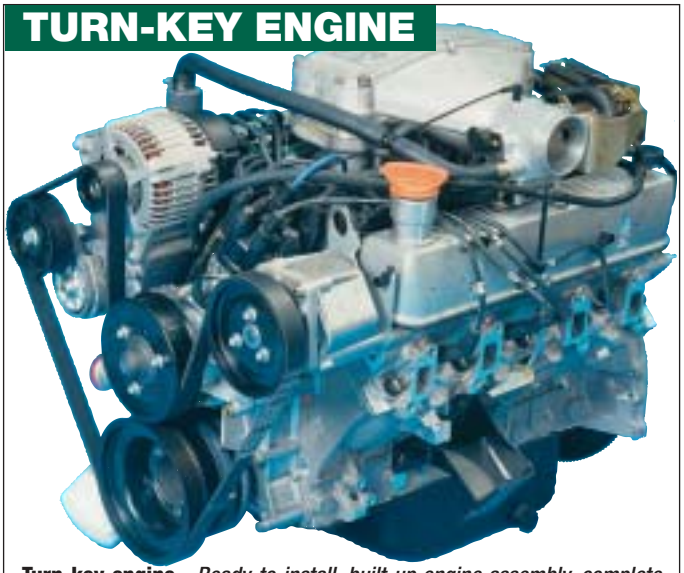
Engine Definitions

FULL ENGINE



Full engine - *Built-up engine assembly, comprising block (crank, rods & pistons), cylinder heads (valves, guides & springs), camshaft & timing gear, rocker gear, pushrods and fitted sump, timing cover and oil pump. Full engines are either bench-run or dyno tested.*

TURN-KEY ENGINE

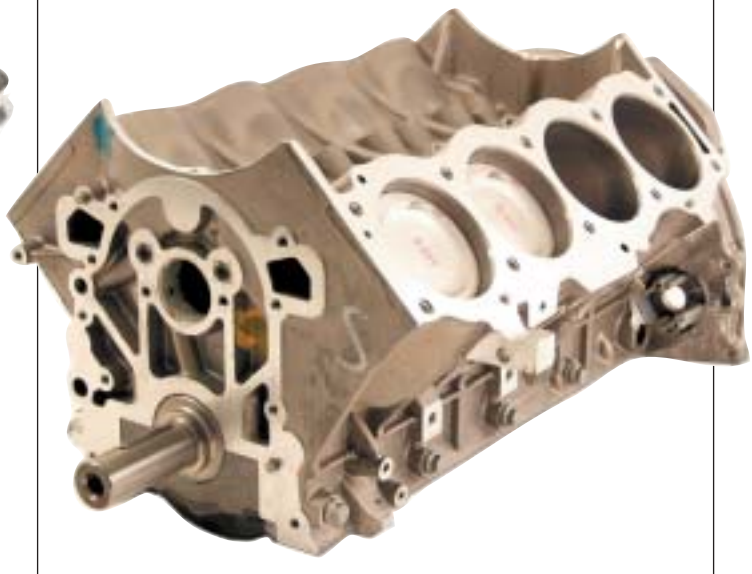


Turn-key engine - *Ready-to-install, built-up engine assembly, complete with all ancillary components, fuel system & engine mountings. Turn-key engines can also be supplied dyno-run.*
Please contact us for a quotation based on either one of our Standard or Performance Full engines with your choice of fuel system and ancillary components.

LONG ENGINE

Long engine - *Built-up block & cylinder heads assembly, including crank, rods & pistons, valves, guides & springs (less rocker gear), plus camshaft, followers & timing gear.*

SHORT ENGINE



Short engine - *Built-up block assembly, comprising crank, rods & pistons.*

Engine Types

All engines - Standard or Performance - are available in two formats: Saloon/Sports or 4x4.

'Saloon/sports' *engines are suitable for direct replacement of non 4x4 applications, such as Rover SD1, TR8, TVR etc. They are fitted with saloon type timing covers (see Note - Timing Covers on page 7) and sumps and, in the case of Performance engines, are fitted with fast road camshafts.*

'4x4' *engines are fitted with Range Rover type timing covers and sumps (see Note - Timing Covers on page 7) and, in the case of Performance engines, are fitted with high-torque camshafts.*

Please note: certain 3.9 & 4.2 litre engines fitted to Range Rover and Discovery models from 1994 onwards are fitted with an "intermediate" type timing cover, incorporating a distributor (as fitted to earlier engines), a crank-driven oil pump and a single, "serpentine" ancillary drive belt. These timing covers require a long-nose crankshaft and are therefore unsuitable for fitting to certain engines. However, they are available to special order at a small additional cost - please inform the sales department at the time of ordering.

Standard *engines are the choice for anyone wishing to replace a worn-out engine with one of a similar type. These engines are a straight swap, enabling the existing ancillary components and fuel system to be retained.*

Performance *engines incorporate modifications designed to increase horsepower & torque - such as big-valve cylinder heads and fast-road camshafts - and usually require modifications to the fuel system (including ECU if fitted).*
To gain maximum benefit from our Performance engines, we also recommend fitting tubular manifolds (Sports exhaust system) and K&N air filter(s).

ENGINE NUMBER IDENTIFICATION

We have included a reference chart of Rover V8 engine numbers from 1970 onwards, which will help you to identify the engine fitted to your vehicle. The engine number of most Rover V8s is stamped on the left hand side of the block deck, adjacent to the dipstick tube, although some very early engines had the number stamped on the bellhousing flange at the rear of the block. The chart also contains a brief description of features, such as compression ratio and gearbox type and also the approximate year of production. Therefore, if your engine has been changed at some time, it should still be possible to correctly identify it.
To ensure you receive the correct parts, please have your engine number ready before ordering.
Note: "Pulsair" and "Air Injection" are terms applied to engines equipped with Air Rail type cylinder heads; ie cylinder heads with steel pipes located in holes just above the exhaust ports (fitted to carb Range Rover & TR8 engines only). 'Detoxed" refers to a variety of emission control devices - including Air Rails - fitted to carb engines.

ROVER V8 ENGINE NUMBERS

Engine Number	Application	Approximate Year
FACTORY 3.5 LITRE ENGINES		
84000001A	P5 3500 10.5:1cr	
84100001A	P5 3500 10.5:1cr	
84300001A	P5 3500 10.5:1cr	
42500001A	P6 3500 auto 10.5:1cr	1967-1976
42700001A	P6 3500 auto 8.5:1:cr	1967-1976
43000001A	P6 3500S auto 10.5:1:cr	1967-1976
43200001A	P6 3500S auto 8.5:1:cr	1967-1976
45100001A	P6 3500 auto 10.5:1cr	1967-1976
45300001A	P6 3500 auto 8.5:1:cr	1967-1976
45500001A	P6 3500 auto 10.5:1cr	1967-1976
46600001A	P6 3500S auto USA	1967-1976
48100001A	P6 3500S manual 10.5:1:cr	1967-1976
48500001A	P6 3500S manual 10.5:1:cr	1967-1976
10A00001A	SD1 manual 9.35:1cr	1976-1987
11A00001A	SD1 auto 9.35:1cr	1976-1987
12A00001A	SD1 manual 8.13:1cr USA efi	1979-1980
13A00001A	SD1 auto 8.13:1cr USA efi	1979-1980
14A000001A	SD1 auto 8.13:1cr Sweden	1976-1987
15A00001A	SD1 auto 8.13:1cr Australia	1976-1987
16A00001A	SD1 auto 8.13:1cr Japan	1976-1987
17A00001A	SD1 V8S manual 9.35:1cr	1979-1980 *(VDP 1981 on)*
18A00001A	SD1 V8S auto 9.35:1cr	1979-1980 *(VDP 1981 on)*
19A00001A	SD1 manual 8.13:1cr Australia	1976 onwards
20A00001A	SD1 Australia 8.13:1cr efi	1982 onwards
21A00001A	SD1 Australia 8.13:1cr efi	1982 onwards
23A00001A	SD1 manual 8.13:1cr SE/VDP	1982-1987
24A00001A	SD1 auto, air con 8.13:1cr SE/VDP	1982-1987
25A00001A	SD1 manual 8.13:1cr SE/VDP	1982-1987
26A00001A	SD1 auto 8.13:1cr SE/VDP	1982-1987
27A00001A	SD1 manual, air con 8.13:1cr SE	1982-1987 *hot climate*
28A00001A	SD1 auto, air con 8.13:1cr SE	1982-1987 *hot climate*
30A00001A	SD1 Vitesse manual 9.75:1c	1982-1987
31A00001A	SD1 efi auto 9.75:1cr	1982-1987
32A00001A	SD1 Vitesse manual, air con 9.75:1	1982-1987
33A00001A	SD1 efi auto, air con 9.75:1	1982-1987
34A00001A	SD1 Switzerland 9.35:1cr	1982-1987
36A00001A	SD1 Switzerland 9.35:1cr	1982-1987
38A00001A	SD1 factory recon 9.35:1cr	1982-1987
39A00001A	SD1 factory recon 9.35:1cr	1982-1987
10E000001A	TR8 manual8.13:1cr	1980
11E000001A	TR8 auto 8.13:1cr	1980
12E000001A	TR8 federal efi manual 8.13:1cr	1980
13E000001A	TR8 federal efi auto 8.13.:1cr	1980
14E000001A	TR8 manual 8.13:1cr	1980
15E000001A	TR8 auto 8.13:1cr	1980
30A0000	Morgan +8 9.75:1cr efi	
37A0000	Morgan +8 9.75:1cr efi	
48600133A	Morgan +8 9.35:1cr carb	
37A0000	TVR 350i 9.75:1cr efi	
10G00001	Land Rover Stage 1 V8 8.13:1cr	1982
11G00001	Land Rover Stage 1 V8 8.13:1cr	1982
12G00001	Land Rover Stage 1 V8 8.13:1cr	1982
14G00001	Land Rover 90/110 8.13:1cr	1983 on
15G00001	Land Rover 90/110 8.13:1cr	1983 on
19G00001	Land Rover 90/110 Saudi	1983 on
20G00001	Land Rover 90/110 8.13:1cr	1983 on
21G00001	Land Rover 90/110 8.13:1cr	1983 on
22G00001	Land Rover 90/110 Australia	1983 on
24G00001	Land Rover 90/110 8.13:1cr	1983 on
27G00001	Discovery manual, carb 8.13:1cr	1989
22D00001	Discovery manual efi 8.13:1cr	1990
23D00001	Discovery auto efi 8.13:1cr	1990
24D00001	Discovery efi 9.35:1	1990

Engine Number	Application	Approximate Year
35500001C,D,ER	R.Rover carb 8.25:1cr	1970-1983
35500001F	R.Rover carb 8.13:1cr	1970-1983
34100001	R.Rover carb 8.25:1cr	1970-1983
35900001A	R.Rover carb CKD 8.25:1cr	1970-1983
39800001F	R.Rover carb Australia 8.13:1cr	1970-1983
11D00001A	R.Rover carb pulsair 9.35cr	1970-1983
13D00001A/B	R.Rover carb auto 8.13cr	1981-1985
15D00001A/B	R.Rover carb pulsair auto 9.35cr	1981-1985
16D00001A/B	R.Rover carb pulsair auto 9.35cr	1981-1985
17D00001A/B	R.Rover carb pulsair manual 9.35cr	1983-1985
18D00001A/B	R.Rover carb manual 8.13cr	1983-1985
19D00001A/B	R.Rover carb pulsair manual 9.35cr	1983-1985
20D00001B	R.Rover carb pulsair manual 8.13cr	1983-1985
21D00001B	R.Rover carb pulsair auto 8.13cr	1983-1985
22D00001	R.Rover/efi manual 8.13:1cr	1986 onwards
23D00001	R.Rover/efi auto 8.13:1cr	1986 onwards
24D00001	R.Rover/efi manual 9.35:1cr	1986 onwards
25D00001	R.Rover efi auto 9.35:1cr	1986 onwards
26D00001	R.Rover carb manual 9.35:1cr	1986 onwards
27D00001	R.Rover carb auto 8.13:1cr	1986 onwards
28D00001	R.Rover carb manual 8.13:1cr	1986 onwards
29D00001	R.Rover carb auto 8.13:1cr	1986 onwards
30D00001	R.Rover carb manual 8.13:1cr	1986 onwards
31D00001	R.Rover efi 8.13:1cr 8.13:1cr	1986 onwards
FACTORY 3.9 LITRE ENGINES		
47A00001	Morgan +8 9.35:1cr efi	
37A40P0000	TVR Chimaera 9.80:1cr efi	
47A40P0000	TVR Chimaera 9.80:1cr efi	
30G00001	Land Rover Defender Japan 9.13:1cr efi	
31G00001	Land Rover Defender 50LE efi auto	
35D00001	R.Rover/Discovery efi manual 9.35:1cr	1988 onwards
36D00001	R.Rover/Discovery efi auto 9.35:1cr	1988 onwards
37D00001	R.Rover/Discovery efi manual 8.13:1cr	1988 onwards
38D00001	R.Rover/Discovery efi auto 8.13:1cr	1988 onwards.
FACTORY 4.2 LITRE ENGINE		
40D00001	R.Rover 4.2efi 8.94:1cr	1992 onwards
FACTORY 4.0 LITRE ENGINES		
42D00001A	S2 R.Rover4.0 efi HC	1994-2002
44D00001A	S2 R.Rover4.0 efi LC	1994-2002
57D00001A	S2 R.Rover4.0 efi LC	1998-2002
58D00001A	S2 R.Rover4.0 efi HC	1998-2002
92D00001A	S2 R.Rover Canada 4.0 efi LC	1998-2002
95D00001A	S2 R.Rover NAS 4.0 efi HC	1998-2002
FACTORY 4.6 LITRE ENGINES		
46D00001A	S2 R.Rover4.6 efi HC	1994-2002
48D00001A	S2 R.Rover4.6 efi LC	1994-2002
59D00001A	S2 R.Rover 4.6 efi LC	1998-2002
60D00001A	S2 R.Rover 4.6 efi HC	1998-2002
93D00001A	S2 R.Rover Canada 4.6 efi LC	1998-2002
96D00001A	S2 R.Rover NAS 4.6 efi HC	1998-2002
MISCELLANEOUS ENGINES		
S46D0000A	Morgan +8 9.35:1cr efi	
37A50P0000	TVR Griffith/Chimaera 500 10:1cr efi	
47A43P0000	TVR Griffith 4.3 efi	
47A50P0000	TVR Chimaera 500 10:1cr efi	
47G50P0000	Sherpa 3.5	

Engine Cradles

All engine assemblies are bolted to a steel cradle, for ease of handling and to minimise the risk of damage whilst in transit.
There is a surcharge for the cradle, refundable on its return. When returning an exchange engine, use the cradle for sending the old unit back and we will then refund both surcharges together.
Engine cradles can also be bought outright.

Engine cradle - Part No. **S005000EC**

V8 ENGINE UPDATE

REVISED ENGINE SPECIFICATION AND LISTINGS
LONG AND FULL ENGINES

March 2005

APPLICABLE TO THE FOLLOWING CATALOGUES:-

LONG ENGINE

This update sheet lists the revised range of engine units that we now supply and is an addendum to our V8 Engine Catalogue (edition 2.2), Range Rover Catalogue (edition 2.2), Discovery Catalogue (edition 2.0), Defender Catalogue (edition 2.0), and our Rover SD1 Catalogue (edition 2.2).

The engine listings for both full and long engines along with their part numbers have changed. The following listings substitute both Standard and Performance units. There is also minor revision to Short Engines.

Due to on-going old core shortages and availability of Full Engines suitable for reconditioning, we now only supply 'Long Engines' for immediate delivery. Long Engines are supplied less timing cover, sump and rocker gear so you will need to re-use your existing units *(It is important that your timing cover is suitably inspected, overhauled or replaced as necessary. Additionally, the Rocker gear should be stripped, cleaned and checked for wear - all components are available at low cost - refer to catalogue).*

We will be pleased to recondition customer's own units (to 'full' engine specification) on request and can quote to do so on an individual basis.

The range of long engines listed is much simplified since they are now suitable for all applications both saloon car and 4x4 vehicle. Please note that for 1995 on applications: Range Rover Series 2 (P38A), Discovery, TVR and Morgan, the 'GEMS' type engine is required which has a crank sensor pick-up (for the ignition timing) at the rear of the block casting and is fitted with a camshaft with no provision for the distributor drive making it unsuitable for earlier applications.

Description | Qty Req | Part No.

V8 Engines - Standard 'Long' Units

The following listings replace those on page 7 in our V8 Engine catalogue.

ALL APPLICATIONS.
Supplied less timing cover, sump, & rocker gear.
Exchange unit must be 'Like for Like'.
Surcharge will only be refunded upon receipt & inspection of suitable old unit.

3.5 Litre Long Engine (1) **RB8000R**
Exchange.
Includes recon block, small journal crank (short keyway), 3/3 cylinder heads, cam, followers and timing gear.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

3.9 Litre Long Engine (1) **RB8001R**
Exchange.
Includes recon/relinered block (not cross bolted), small journal crank (long keyway), 3/4 cylinder heads, cam, followers and timing gear.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.0 Litre Long Engine

GEMS' type (1) **ERR5012STRG**
Exchange.
Suitable for Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc ('95 on).

Non 'GEMS' type (1) **ERR5012STRNG**
Exchange.
*Suitable for all **Non** Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc (to '95).*

IDENTIFICATION: 'GEMS' Efi uses a crank sensor pick-up on rear of engine block (1995 on).
SPECIFICATION: Exchange. Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear. Crank spacer STC1893SPACER is required for non-serpentine timing covers.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.6 Litre Long Engine

GEMS' type (1) **ERR5013STRG**
Exchange.
Suitable for Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc ('95 on).

Non 'GEMS' type (1) **ERR5013STRNG**
Exchange.
*Suitable for all **Non** Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc (to '95).*

IDENTIFICATION: 'GEMS' Efi uses a crank sensor pick-up on rear of engine block (1995 on).
SPECIFICATION: Exchange. Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear. Crank spacer STC1893SPACER is required for non-serpentine timing covers.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

Description | Qty Req | Part No.

V8 Engines - Performance 'Long' Units

The following listings replace those on page 8 in our V8 Engine catalogue.

ALL APPLICATIONS.
Supplied less timing cover, sump, & rocker gear.
Exchange unit must be 'Like for Like'.
Surcharge will only be refunded upon receipt & inspection of suitable old unit.

4.0 Litre Performance Long Engine (1) **RB8004R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.6 Litre Performance Long Engine (1) **RB8005R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.8 Litre Performance Long Engine (1) **RB8006R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

5.2 Litre Performance Long Engine (1) **RB8007R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

V8 Short Engines

Addendum to page 9 in our V8 Engine catalogue.
All other Short Engines remain unchanged.
Note: All Short Engines are exchange.

4.6 Litre Rebuilt Short Engine - High compression (1) **STC1893HCR**
Pre-series 2 (P38A) Range Rover applications (to '95).

4.8 Litre Rebuilt Short Engine (1) **RB7676R**

5.2 Litre Rebuilt Short Engine (1) **RB7682R**

PLEASE NOTE: These units are supplied with a 'Rebuilt' large journal cross bolted block with 'Top Hat' liners. All other parts are new.
Part numbers are suffixed 'R'.

RIMMER BROS

Triumph House, Sleaford Road, Bracebridge Heath, Lincoln LN4 2NA.
Tel: 01522 568000. Fax: 01522 567600. E-mail: sales@rimmerbros.co.uk www.rimmerbros.co.uk

DESCRIPTION QTY REQ. PART No.

V8 Engines - Standard Long & Full Units

New 'long' engine;
*See **Engine Definitions**.*
New long engines are available in 4.0 litre and 4.6 litre capacities. They comprise a new, cross-bolted, large-bearing block assembly, fitted with new cylinder heads and standard camshaft & timing gear.
Note: Crank spacer STC1893SPACER is required for non-serpentine timing covers,

4.0 litre	(1)	**ERR5012ST**
4.6 litre	(1)	**ERR5013ST**

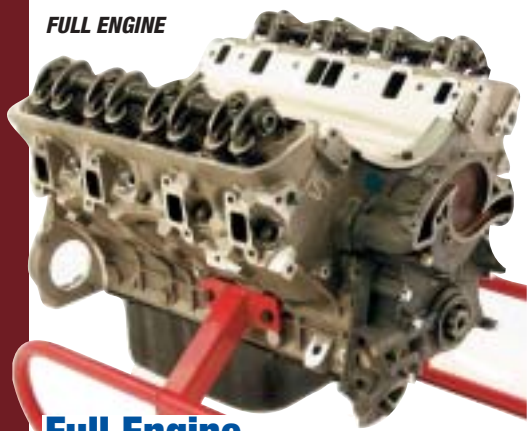
New 'full' engine;
*See **Engine Definitions** and **Notes - Timing Covers.***
Please state if serpentine timing cover is required (extra cost).
New full engines are available in 3.5 litre, 4.0 litre and 4.6 litre capacities. Specification is the same as new long engines (3.5 litre blocks are not cross-bolted), with the addition of new timing cover/oil pump assembly, new sump and new rocker gear.

Saloon/sports		
3.5 litre	(1)	**RB7119**
4.0 litre	(1)	**RB7481**
4.6 litre	(1)	**RB7649**
4x4		
3.5 litre	(1)	**RA1227**
4.0 litre	(1)	**RA1228**
4.6 litre	(1)	**RA1229**

Recon 'full' engine;
*See **Engine Definitions** and **Notes - Timing Covers.***
Please state if serpentine timing cover is required (extra cost).
Recon full engines are available in 3.5 litre, 3.9 litre and 4.6 litre capacities. They comprise a reconditioned block (re-linered for 3.9), crankshaft & con rods with new pistons, or new, cross-bolted short engine assembly (4.6 litre); new camshaft & followers, new timing gear and reconditioned cylinder heads with new valves, guides & springs. They are also fitted with new rocker shafts & rocker arms, reconditioned timing cover (inc. new oil pump gears, pressure switch & relief valve) and sump.

Saloon/sports		
3.5 litre	(1)	**RB7119R**
3.9 litre	(1)	**RB7481R**
4.6 litre	(1)	**RB7649R**
4x4		
3.5 litre	(1)	**RA1227R**
3.9 litre	(1)	**RA1228R**
4.6 litre	(1)	**RA1229R**

*Note: all engines are sold on an exchange basis - please refer to the **Price Guide**. The old unit must be a suitable type - please verify with our Sales Department if you intend to upgrade and install a different engine to that fitted.*
All full engines, including 4.6 litre, are suitable as direct replacements for any Rover V8 engine. However, modifications to the fuel system (including ECU if fitted) may be required when replacing a 3.5 or 3.9 litre engine with a larger capacity unit.
*All **Standard** engines are compatible with unleaded petrol/lpg and are bench run.*
For manual transmission vehicles, we recommend fitting a new clutch while the engine is being replaced.



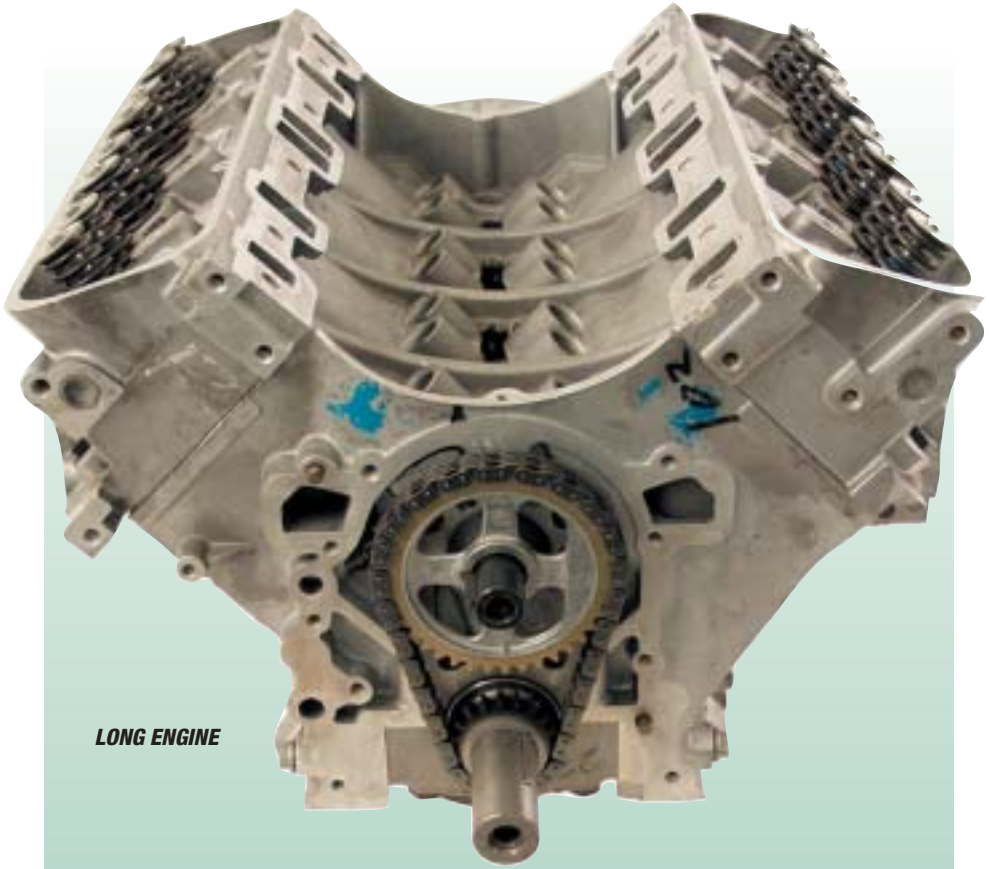
FULL ENGINE

Full Engine Installation Kits

Full engine installation kit;
Includes oil, oil filter, gaskets etc.

Saloon/sports	(1)	**RB7490**
4x4	(1)	**RA1236**
Bolt kit - engine to gearbox	(1)	**RB7130**

Kit includes engine to bellhousing bolts & washers.
Suitable for most vehicles.



LONG ENGINE

IMPORTANT NOTES - FULL & LONG ENGINES

Please note the following important points regarding engine assembly:

Long Engine Build-up.
These engines are supplied less rocker gear, pushrods, sumps & timing covers. It is absolutely essential that these items are checked, cleaned and correctly assembled prior to running your engine.
Check for wear on the underside of rocker shafts, on either side of the pedestals.
Check for wear on the valve tips of rocker arms.
Check pushrods for straightness and equal length.
Clean the sump and oil pick-up pipe.
Clean the timing cover and check the oil pump housing for wear and damage.
Replace all seals and gaskets.
If in any doubt, always replace with new components.

Long & Full Engines - Ancillary Components.
If you are re-fitting ancillary components - water pump, alternator, distributor, carburettors or fuel injection - check that they are suitable for re-using. We recommend having carburettors serviced and fuel injectors cleaned/replaced before re-fitting.

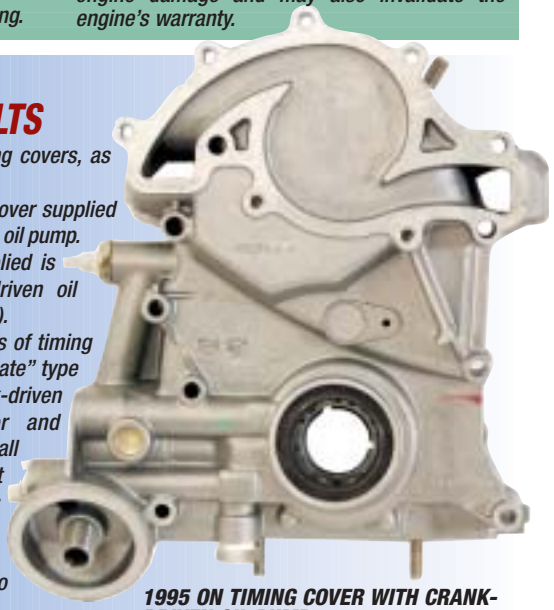
The cooling system - including the radiator and heater - should be flushed through with clean water and the hoses checked before re-using.
The correct ratio (minimum 33%) of antifreeze must be maintained at all times.
Oil coolers should be flushed of old engine oil.
Engine & gearbox mountings should be checked and renewed as necessary.
The clutch operating system should be checked for wear.
Rocker covers should be cleaned internally.

All engines - oil pump priming.
*All engines **not** fitted with crank-driven oil pumps should have their oil pumps primed before initial start-up. Please consult a workshop manual for this procedure.*

Failure to observe these points may lead to engine damage and may also invalidate the engine's warranty.

NOTES - TIMING COVERS & SERPENTINE DRIVE BELTS

Full engines are supplied with fitted timing covers, as follows:
*For **'Saloon/sports'** engines, the timing cover supplied is the Rover SD1 type, with distributor-driven oil pump.*
*For **'4x4'** engines, the timing cover supplied is the Land Rover type, with distributor-driven oil pump (as fitted to Range Rover up to 1994).*
*For 3.9 litre engines and above, both types of timing cover can be exchanged for the "intermediate" type timing cover - which incorporates a crank-driven oil pump, provision for a distributor and serpentine ancillary drive belt - for a small extra charge. If required, please request this when ordering your engine (ancillaries fitted to pre '95 vehicles may not be compatible with serpentine timing covers - please contact our **Sales Department** to verify this).*



1995 ON TIMING COVER WITH CRANK-DRIVEN OIL PUMP

V8 ENGINE UPDATE

REVISED ENGINE SPECIFICATION AND LISTINGS
LONG AND FULL ENGINES

March 2005

APPLICABLE TO THE FOLLOWING CATALOGUES:-

LONG ENGINE

This update sheet lists the revised range of engine units that we now supply and is an addendum to our V8 Engine Catalogue (edition 2.2), Range Rover Catalogue (edition 2.2), Discovery Catalogue (edition 2.0), Defender Catalogue (edition 2.0), and our Rover SD1 Catalogue (edition 2.2).

The engine listings for both full and long engines along with their part numbers have changed. The following listings substitute both Standard and Performance units. There is also minor revision to Short Engines.

Due to on-going old core shortages and availability of Full Engines suitable for reconditioning, we now only supply 'Long Engines' for immediate delivery. Long Engines are supplied less timing cover, sump and rocker gear so you will need to re-use your existing units *(It is important that your timing cover is suitably inspected, overhauled or replaced as necessary. Additionally, the Rocker gear should be stripped, cleaned and checked for wear - all components are available at low cost - refer to catalogue).*

We will be pleased to recondition customer's own units (to 'full' engine specification) on request and can quote to do so on an individual basis.

The range of long engines listed is much simplified since they are now suitable for all applications both saloon car and 4x4 vehicle. Please note that for 1995 on applications: Range Rover Series 2 (P38A), Discovery, TVR and Morgan, the 'GEMS' type engine is required which has a crank sensor pick-up (for the ignition timing) at the rear of the block casting and is fitted with a camshaft with no provision for the distributor drive making it unsuitable for earlier applications.

Description | Qty Req | Part No.

V8 Engines - Standard 'Long' Units

The following listings replace those on page 7 in our V8 Engine catalogue.

ALL APPLICATIONS.
Supplied less timing cover, sump, & rocker gear.
Exchange unit must be 'Like for Like'.
Surcharge will only be refunded upon receipt & inspection of suitable old unit.

3.5 Litre Long Engine (1) **RB8000R**
Exchange.
Includes recon block, small journal crank (short keyway), 3/3 cylinder heads, cam, followers and timing gear.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

3.9 Litre Long Engine (1) **RB8001R**
Exchange.
Includes recon/relinered block (not cross bolted), small journal crank (long keyway), 3/4 cylinder heads, cam, followers and timing gear.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.0 Litre Long Engine

GEMS' type (1) **ERR5012STRG**
Exchange.
Suitable for Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc ('95 on).

Non 'GEMS' type (1) **ERR5012STRNG**
Exchange.
*Suitable for all **Non** Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc (to '95).*

IDENTIFICATION: 'GEMS' Efi uses a crank sensor pick-up on rear of engine block (1995 on).
SPECIFICATION: Exchange. Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear. Crank spacer STC1893SPACER is required for non-serpentine timing covers.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.6 Litre Long Engine

GEMS' type (1) **ERR5013STRG**
Exchange.
Suitable for Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc ('95 on).

Non 'GEMS' type (1) **ERR5013STRNG**
Exchange.
*Suitable for all **Non** Series 2 (P38A) Range Rover/Discovery/TVR/Morgan etc (to '95).*

IDENTIFICATION: 'GEMS' Efi uses a crank sensor pick-up on rear of engine block (1995 on).
SPECIFICATION: Exchange. Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear. Crank spacer STC1893SPACER is required for non-serpentine timing covers.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

Description | Qty Req | Part No.

V8 Engines - Performance 'Long' Units

The following listings replace those on page 8 in our V8 Engine catalogue.

ALL APPLICATIONS.
Supplied less timing cover, sump, & rocker gear.
Exchange unit must be 'Like for Like'.
Surcharge will only be refunded upon receipt & inspection of suitable old unit.

4.0 Litre Performance Long Engine (1) **RB8004R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.6 Litre Performance Long Engine (1) **RB8005R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

4.8 Litre Performance Long Engine (1) **RB8006R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

5.2 Litre Performance Long Engine (1) **RB8007R**
Exchange.
Please specify if 'GEMS' or Non 'GEMS' block required and intended vehicle application.
Rebuilt large journal cross bolted block with 'Top Hat' liners, large journal crank, cylinder heads, cam, followers and timing gear.
Crank spacer STC1893SPACER is required for non-serpentine timing covers.
Note: all units neutrally balanced. Crank pulley & flywheel can also be balanced at extra cost.

Installation Kit (1) **RB8003**
Includes oil, filter, gaskets etc.

V8 Short Engines

Addendum to page 9 in our V8 Engine catalogue.
All other Short Engines remain unchanged.
Note: All Short Engines are exchange.

4.6 Litre Rebuilt Short Engine - High compression (1) **STC1893HCR**
Pre-series 2 (P38A) Range Rover applications (to '95).

4.8 Litre Rebuilt Short Engine (1) **RB7676R**

5.2 Litre Rebuilt Short Engine (1) **RB7682R**

PLEASE NOTE: These units are supplied with a 'Rebuilt' large journal cross bolted block with 'Top Hat' liners. All other parts are new.
Part numbers are suffixed 'R'.

RIMMER BROS

Triumph House, Sleaford Road, Bracebridge Heath, Lincoln LN4 2NA.
Tel: 01522 568000. Fax: 01522 567600. E-mail: sales@rimmerbros.co.uk www.rimmerbros.co.uk

DESCRIPTION QTY REQ. PART No.

V8 Engines - Performance Full Units

Performance *engines are available in 4.0, 4.6, 4.8 & 5.2 litre capacities, giving a broad range of power and torque outputs to suit every budget. They are built to an extremely high specification, which guarantees maximum power and long life. Please note: specifications can be altered to suit your individual requirements - from ultra-big valve cylinder heads and solid-lifter camshafts to full turn-key Performance engines - phone us to discuss your needs.*

Performance Engine Basic Specifications

All Performance engines are built around a cross-bolted, large-journal block; all feature a Performance camshaft (the type depends on the intended application) and double roller timing chain sets. Finally, Performance engines are all fitted with fully ported and polished, big valve cylinder heads, to Stage 3 specification or above (See ***Performance Cylinder Heads*** *for details).*

NOTES - ENGINE BALANCING

All Performance engines are dynamically balanced (ie their rotating components are balanced individually and not as one assembly). The benefit of balancing in this way is that individual components can be replaced, if need be, without upsetting the balance of the whole engine. However, the benefits of balancing the engine are lost if any of the associated rotating parts are not also balanced; therefore, we strongly recommend that your crankshaft pulley and flywheel (manual transmission vehicles) are neutrally balanced before being fitted to your engine.

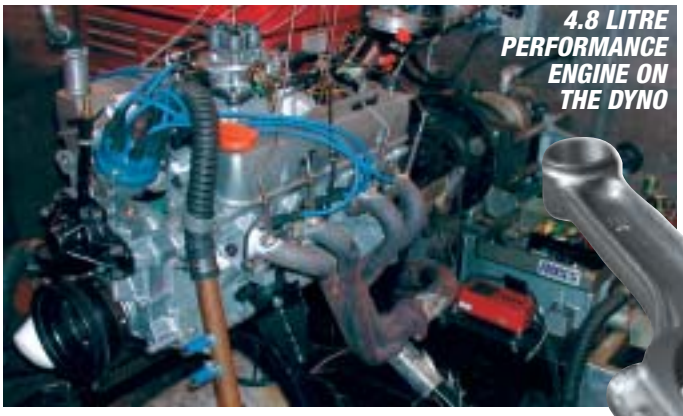
As there are numerous variations of crankshaft pulley and flywheel, the easiest way to make sure you have the correct, balanced components for your needs is to send us your original crank pulley and flywheel for balancing at the time of placing your engine order. These items will then be balanced (at extra cost) and returned to you with your engine.

Performance 'full' engine;
See our ***Power Outputs*** *table, right.*
See also ***Notes - Timing Covers*** *page 7.*
Please state if serpentine timing cover is required (extra cost).

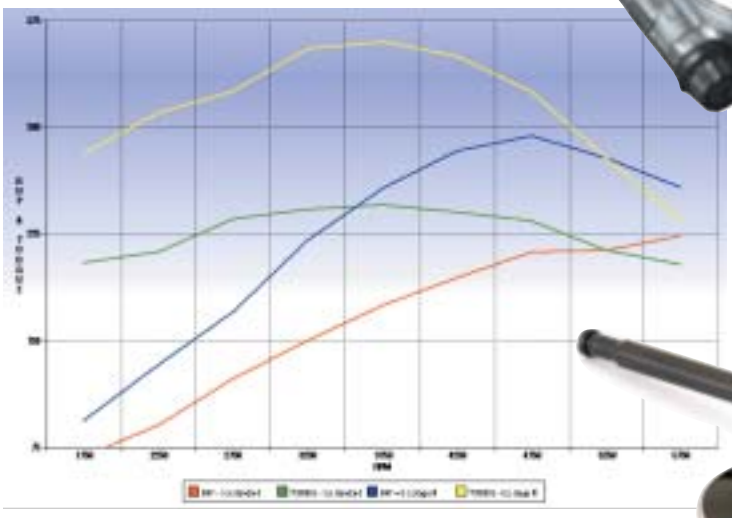
Saloon/sports		
4.0 litre	(1)	**RB7483R**
4.6 litre	(1)	**RB7651R**
4.8 litre	(1)	**RB7675R**
5.2 litre	(1)	**RB7681**
4x4		
4.0 litre	(1)	**RA1230R**
4.6 litre	(1)	**RA1231R**
4.8 litre	(1)	**RA1232R**
5.2 litre	(1)	**RA1339**

Note: all engines are sold on an exchange basis - please refer to the ***Price Guide****. The old unit must be a suitable type - please verify with our Sales Department.*
All full engines, including 5.2 litre, are suitable as direct replacements for any Rover V8 engine. However, modifications to the fuel system (including ECU if fitted) may be required when replacing a 3.5 or 3.9 litre engine with a larger capacity unit.
All ***Performance*** *engines are compatible with unleaded petrol and lpg.*
For manual transmission vehicles, we recommend fitting a new clutch while the engine is being replaced.

DESCRIPTION QTY REQ. PART No.

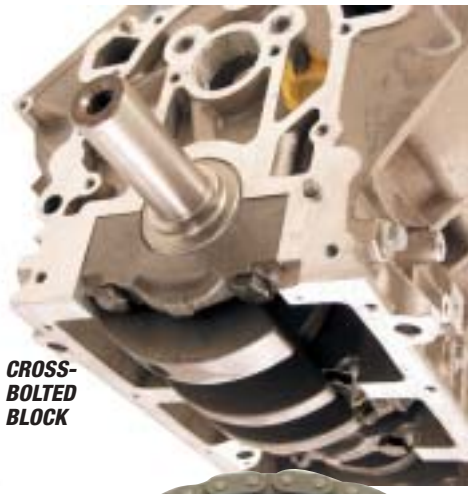


4.8 LITRE PERFORMANCE ENGINE ON THE DYNO



FORGED PISTON & H-BEAM CON RODS

BIG VALVES



CROSS-BOLTED BLOCK

VERNIER TIMING CHAIN SET

DESCRIPTION QTY REQ. PART No.

Power Outputs

The table below is a guide to typical power & torque outputs of our range of V8 Full engines. Please note that these figures are intended only as an indication of the performance potential of each engine. In reality, power figures may vary considerably depending on final application; choice of induction system, exhaust and intended RPM range all have a significant effect on final power output.
To achieve the required power, it may be necessary to modify the fuel system - particularly on fuel injection engines. See ***Fuel*** *section for details, or speak to our* ***Sales Department*** *for advice.*
Each Performance Full engine is supplied with a dyno test sheet, giving actual power figures obtained on the dyno. All Full engines are bench run.

Standard Engines	PEAK POWER	PEAK TORQUE
3.5 litre	165 bhp	190 lb/ft
3.9 litre	200 bhp	240 lb/ft
4.6 litre	220 bhp	290 lb/ft
Performance Engines		
4.0 litre	250 bhp	260 lb/ft
4.6 litre	260 bhp	300 lb/ft
4.8 litre	290 bhp	330 lb/ft
5.2 litre	310 bhp	350 lb/ft

Full Engine Installation Kits

Full engine installation kit;
Includes oil, oil filter, gaskets etc.

Saloon/sports	(1)	**RB7490**
4x4	(1)	**RA1236**
Bolt kit - engine to gearbox	(1)	**RB7130**

Kit includes engine to bellhousing bolts & washers. Suitable for most vehicles.

DESCRIPTION QTY REQ. PART No.

V8 Short Engines

Short engines are sold on an exchange basis (except certain new short engines). The old unit must be a suitable type (1980 onwards) otherwise a surcharge will apply.

3.5 litre - new short engine
Comprises new block/crank/bearings/pistons/rods (assembled). Less cam & followers.
low compression (8.13:1) (1) **ETC7714**
high compression (9.35:1) (1) **RB7121**

3.5 litre - recon short engine (exchange)
Comprises recon block, rebored with new pistons/cam bearings/reground crank & new bearings (assembled). Less cam & followers.
low compression (8.13:1) (1) **ETC7714R**
high compression (9.35:1) (1) **RB7121R**

3.9 litre - new short engine (1) **RB7487**
Comprises new block/crank/bearings/pistons/rods (assembled). Less cam & followers.

3.9 litre - recon short engine (1) **RB7487R**
Comprises recon block, relinered with new pistons/rings/cam bearings/reground crank & new bearings (assembled). Less cam & followers.

3.9 litre - uprated short engine (1) **RB7487UR**
Comprises new, large journal block, cross-bolted & ARP mains studs. Crank/rods & pocketed pistons. Lightened & balanced assembly. Less cam & followers.

4.2 litre - short engine (1) **ERR4171**
Comprises block/crank/bearings/pistons/rods (assembled). Less cam & followers.

4.0 litre - new short engine
Series 2 Range Rover application.
NB. Unsuitable for use with pre '95 heads as low compression ratio results.
Large journal, cross-bolted type.
Comprises new block/crank/bearings/pistons/rods (assembled). Less cam & followers.
low compression* (8.13:1) (1) **STC1890**
high compression* (9.35:1) (1) **STC1891**
**Please see Note regarding "Compression Ratios - Cylinder Heads & Short Engines", right.*

4.6 litre - new short engine
Series 2 Range Rover application.
NB. Unsuitable for use with pre '95 heads as low compression ratio results.
Large journal, cross-bolted type.
Comprises new block/crank/bearings/pistons/rods (assembled). Less cam & followers.
When using this short engine to replace earlier type (3.5 or 3.9) engines, a crank spacer - part no. STC1893SPACER - may be required. Please enquire for details.
Sump pan may also require relieving to allow swing clearance for front web of crank.
low compression* (8.13:1) (1) **STC1892**
high compression* (9.35:1) (1) **STC1893**
**Please see Note "Compression Ratios - Cylinder Heads & Short Engines", right.*

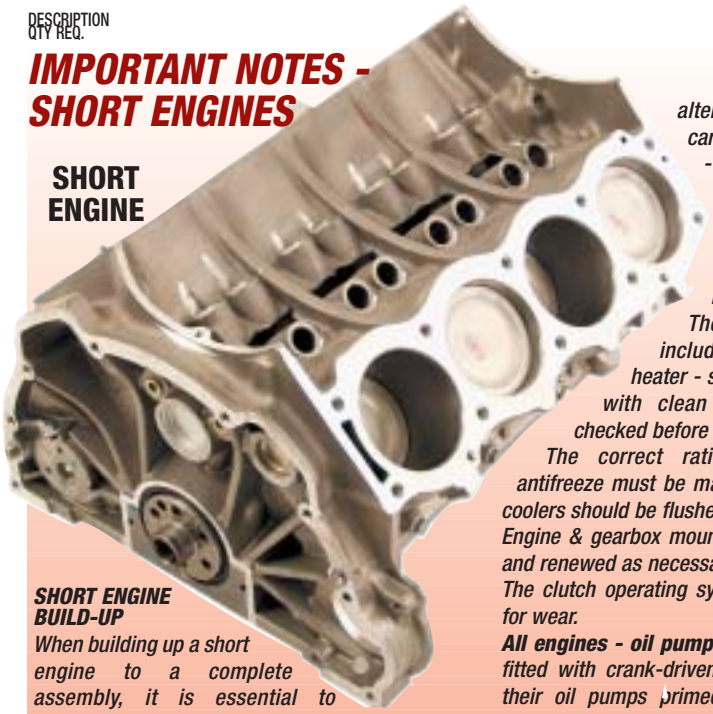
4.6 litre - new short engine - high compression
Pre-Series 2 Range Rover applications.
Suitable for use with pre-Series 2 Range Rover cylinder heads (see Notes "Compression Ratios, Cylinder Heads & Short Engines", right).
Large journal, cross-bolted type.
Comprises new block/crank/bearings/pistons/rods (assembled). Less cam & followers.
When using this short engine to replace earlier type (3.5 or 3.9) engines, a crank spacer - part no. STC1893SPACER - may be required. Please enquire for details.
Sump pan may also require relieving to allow swing clearance for front web of crank.
high compression* (1) **STC1893HC**
**Please see Note regarding "Compression Ratios, Cylinder Heads & Short Engines".*

4.8 litre - new short engine (1) **RB7676**
Comprises large journal, cross-bolted block & long stroke (86mm) crank. ARP mains studs, new pistons & rings. Less cam & followers.
When using this short engine to replace earlier type (3.5 or 3.9) engines, a crank spacer - part no. STC1893SPACER - may be required. Please enquire for details.
Sump pan may also require relieving to allow swing clearance for front web of crank.

5.2 litre - new short engine (1) **RB7682**
Comprises large journal, cross-bolted block, fitted with special 96mm bore liners, long stroke (90mm) cross-drilled crank, steel rods & new pistons (90mm stroke). Lightened & balanced assembly. Less cam & followers.
When using this short engine to replace earlier type (3.5 or 3.9) engines, a crank spacer - part no. STC1893SPACER - may be required. Please enquire for details.
Sump pan may also require relieving to allow swing clear ance for front web of crank.

DESCRIPTION QTY REQ.

IMPORTANT NOTES - SHORT ENGINES



SHORT ENGINE BUILD-UP
When building up a short engine to a complete assembly, it is essential to thoroughly examine every part you intend to re-use. We recommend that you pay special attention to the camshaft, followers, pushrods & rocker gear, checking carefully for signs of wear; re-using worn parts is false economy and you risk contaminating your new engine with abrasive particles.
The following parts MUST be meticulously cleaned prior to fitting:
- *sump & oil pick-up pipe*
- *timing cover & oil pump assembly*
- *cylinder heads*
- *rocker covers*

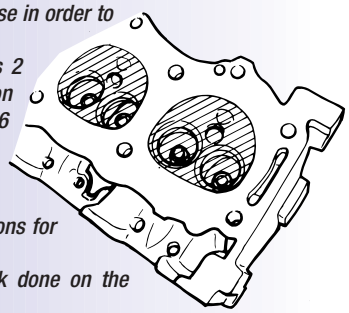
Failure to observe these points may lead to engine damage and may invalidate the engine's warranty.

***Short Engines - Ancillary Components.** If you are re-fitting ancillary components - water pump, alternator, distributor, carburettors or fuel injection - check that they are suitable for re-using. We recommend having carburettors serviced and fuel injectors cleaned/replaced before re-fitting.*
The cooling system - including the radiator and heater - should be flushed through with clean water and the hoses checked before re-using.
The correct ratio (minimum 33%) of antifreeze must be maintained at all times. Oil coolers should be flushed of old engine oil.
Engine & gearbox mountings should be checked and renewed as necessary.
The clutch operating system should be checked for wear.
***All engines - oil pump priming**. All engines not fitted with crank-driven oil pumps should have their oil pumps primed before initial start-up. Please consult a workshop manual for this procedure.*

TIMING COVERS
If the timing cover you intend to fit to your short engine incorporates a crank-driven oil pump, please inform the Sales Department at the time of ordering (3.5 & 3.9 litre Standard Short Engines only).
*Uprated 3.9 litre Short engines, as well as all Short Engines of 4.0 litres and above, are suitable for timing covers which incorporate crank-driven oil pumps. If fitting the earlier type of timing cover - with camshaft-driven oil pump - to a short engine of 4.0 litres or above, please also request crank spacer, part no. **STC1893SPACER**, which will ensure the crankshaft pulley is securely fitted.*
If in any doubt, a member of our Sales Department will be pleased to help you.

COMPRESSION RATIOS - CYLINDER HEADS & SHORT ENGINES

There are various different Rover V8 cylinder heads available, with different combustion chamber sizes, giving a variety of compression ratios when fitted to a short engine. Therefore, you will need to know the combustion chamber size of the cylinder heads that you intend to use in order to be able to calculate the engine's compression ratio.
As a general rule, cylinder heads up to the introduction of Series 2 Range Rover (1994) have approximately 34-36cc combustion chambers. From the introduction of Series 2 Range Rover (4.0 & 4.6 litre engines), they have approximately 28cc combustion chambers (If in doubt, cylinder heads fitted to 4.0 & 4.6 litre engines have only two rows of cylinder head bolts; earlier engines have three rows).
Refer to the table below of Short Engine & Cylinder Head Applications for more detailed information.
This information does not take into account any machining work done on the cylinder heads in the past.
In certain circumstances, it may be cheaper to purchase a pair of reconditioned cylinder heads than to try to match a pair of unknown heads to a Short Engine. Alternatively, it may be worth considering a Full Engine, which is supplied complete with fitted cylinder heads.



COMBUSTION CHAMBERS

SHORT ENGINE & CYLINDER HEAD APPLICATIONS

SHORT ENGINE	ENGINE TYPE	SWEPT VOL/CYL	CC @ TDC	HEADS REQUIRED	HEAD GASKETS
ETC7714/R	3.5 STD 8.13cr	441.51	25	34-36cc	Std
RB7121/R	3.5 STD 9.35cr	441.51	15	34-36cc	Std
RB7487/R	3.9 STD 9.35cr	494	23	34-36cc	Std
RB7487UR	3.9 STD 9.35cr	494	23	34-36cc	Std
ERR4171/R	4.2 8.94cr	534.81	29	34-36cc	Std
STC1890	4.0 STD 8.13cr	494	33	28cc	Comp
STC1891	4.0 STD 9.35cr	494	23	28cc	Comp
STC1892	4.6 STD 8.13cr	569.62	44	28cc	Comp
STC1893	4.6 STD 9.35cr	569.62	31	28cc	Comp
STC1893HC	4.6 HI COMP	569.62	29	34-36cc	Std

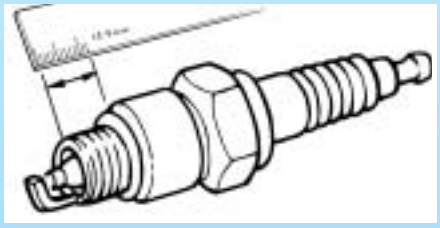
NOTES - CYLINDER HEAD IDENTIFICATION

See also: 'Compression Ratios - Cylinder Heads & Short Engines' page 9.

There are various types of cylinder heads available for the Rover V8, with only subtle differences between them. Not all are suitable for every application, so care must be taken when ordering replacement heads for your vehicle. Please note that reconditioned cylinder heads are only sold on an exchange basis (in pairs) and that we require similar type cylinder heads in return, otherwise a surcharge will apply.

Early Cylinder Heads

Early cylinder heads - as fitted to Rover P5B, P6, MGB V8 and early Range Rover - are fitted with small (38mm inlet, 33mm exhaust) valves and may not be suitable for use with unleaded fuel. These heads can be identified most easily by removing one of the spark plugs and measuring the length of the threaded section of the plug. If it measures 12.5mm, the cylinder head is an early type and is ***not suitable for exchange.*** *If it measures 19mm, the cylinder head is post-1976 (SD1 or later).*

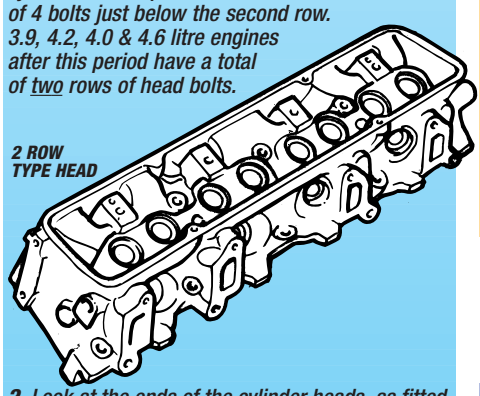


Later Cylinder Heads

Identify later cylinder heads as follows:

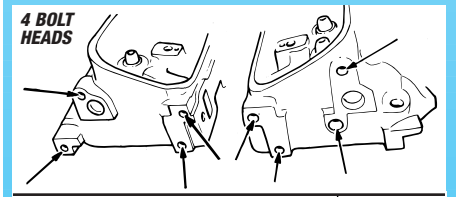
1. *Count the rows of cylinder head bolts. All cylinder heads have a row of head bolts inside the rocker covers; they also have a second row of 5 head bolts just below the spark plugs. Finally, cylinder heads up to around 1994 have a third row of 4 bolts just below the second row.*

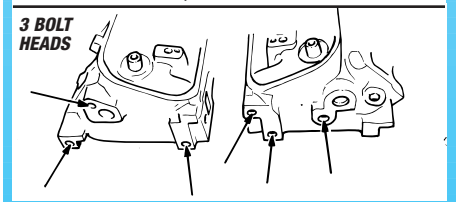
3.9, 4.2, 4.0 & 4.6 litre engines after this period have a total of two rows of head bolts.



2. *Look at the ends of the cylinder heads, as fitted to the engine. There are tapped holes in the ends of each cylinder head, to which the ancillary component brackets are bolted. The number of holes determines which type you have, as follows:*

3/3 bolt (3 bolt holes in each head)
3/4 bolt (3 bolt holes in one head, 4 in the other)
4/4 bolt (4 bolt holes in each head)





It is important that the cylinder heads you order are similar to the ones you have removed, otherwise your ancillary components may not fit.

STANDARD CYLINDER HEADS

V8 Standard Cylinder Heads

PLEASE REFER TO NOTES - CYLINDER HEAD IDENTIFICATION. See also* *'V8 Performance Cylinder Heads'.***

Standard Cylinder heads (pair) - reconditioned;
Exchange - all engines.
Complete with new valves, valve guides, springs & valve stem oil seals. Less rocker gear.
Reconditioned cylinder heads are sold only in matching pairs, with the actual combustion chamber size marked on them.

with 3 rows of head bolts
Pre-'95 applications. 34-36cc combustion chambers.

3/3 end bolt type	(pr)	**RB7095RA**
3/4 end bolt type	(pr)	**RB7095RB**
4/4 end bolt type	(pr)	**RB7095RC**
with 2 rows of head bolts	(pr)	**RB7095RD**

'95-on applications. 28cc combustion chambers. All 4/4 end bolt.

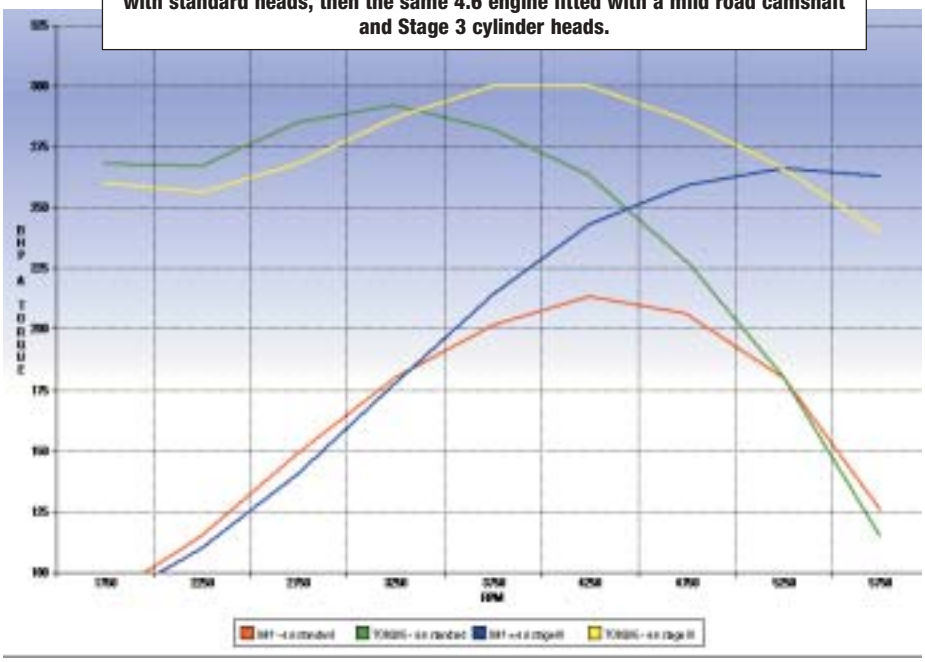
Standard cylinder heads are sold on an exchange basis: the old units must be serviceable and of a suitable type otherwise a surcharge will apply. If preferred, we can recondition your existing cylinder heads. Please note that early type (pre 1976) heads are not suitable as exchange units - please refer to 'Notes Cylinder Heads Identification'.

Cylinder heads - new
Due to the numerous variations of cylinder heads and the complexity of part number supersessions, it would be too complicated to list a full range of new cylinder heads in this catalogue. However, if you require ***new*** *cylinder heads, please contact our Sales Department for price & availability.*

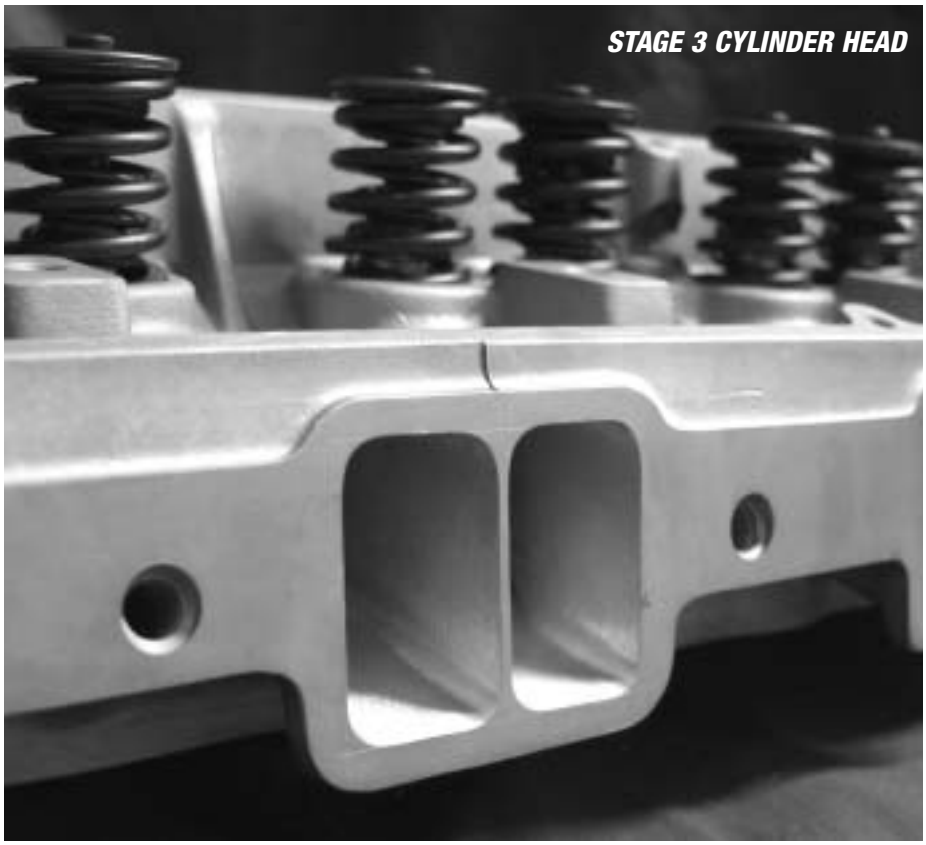
CYLINDER HEAD SPECIFICATION

All our cylinder heads - both Standard and Performance types - are based on late-type (19mm spark plug) head castings. All are compatible with unleaded fuel and LPG and are suitable for carb or efi applications.

Dyno graph showing the power & torque of a 4.6 litre engine fitted with standard heads, then the same 4.6 engine fitted with a mild road camshaft and Stage 3 cylinder heads.



DESCRIPTION QTY REQ. PART No.



V8 Performance Cylinder Heads

We offer three stages of modified Performance cylinder head, designed to suit different requirements and budgets.

Stage 1 - *polished and lightly ported cylinder heads featuring bulleted guides and standard size valves.*
Suitable for standard and mildly tuned 3.5 to 4.6 litre engines.

Stage 3 - *fully polished & ported, gas-flowed cylinder heads, featuring bulleted & shortened guides and fitted with Big Valves (41.45mm inlet, 36.5mm exhaust).*
Together with the right camshaft and fuel system, these heads offer a substantial power and torque increase, and are suitable for Performance engines up to 5.2 litres. See Comparison Chart, previous page.

Stage 4 - *Ultra Big Valve heads. Fully polished & ported as Stage 3, but featuring 43.11mm inlet and 38.1mm exhaust valves.*
These cylinder heads are suitable for serious Performance applications, in engines of 4.6 litres and above, and require suitably modified fuel systems.

DESCRIPTION QTY REQ. PART No.

Performance cylinder heads (pair);
Please refer to 'Notes - Cylinder Head Identification'.
Exchange - all engines.
Complete with new valves, valve guides, springs & valve stem oil seals. Less rocker gear.
Performance cylinder heads are sold only in matching pairs, with the actual combustion chamber size marked on them.

Stage 1
with 3 rows of head bolts
Pre - '95 applications. 34-36cc combustion chambers.
3/3 end bolt type (1) **RB7467R S1A**
3/4 end bolt type (1) **RB7467R S1B**
4/4 end bolt type (1) **RB7467R S1C**
with 2 rows of head bolts (1) **RB7467R S1D**
'95 on applications. 28cc combustion chambers.
4/4 end bolt type.

Stage 3
with 3 rows of head bolts
Pre - '95 applications. 34-36cc combustion chambers.
3/3 end bolt type (1) **RB7467R S3A**
3/4 end bolt type (1) **RB7467R S3B**
4/4 end bolt type (1) **RB7467R S3C**
with 2 rows of head bolts (1) **RB7467R S3D**
'95 on applications. 28cc combustion chambers.
4/4 end bolt type.

Stage 4
with 3 rows of head bolts
Pre - '95 applications. 34-36cc combustion chambers.
3/3 end bolt type (1) **RB7467R S4A**
3/4 end bolt type (1) **RB7467R S4B**
4/4 end bolt type (1) **RB7467R S4C**
with 2 rows of head bolts (1) **RB7467R S4D**
'95 on applications. 28cc combustion chambers.
4/4 end bolt type.

Performance cylinder heads are sold on an exchange basis: the old units must be serviceable and of a suitable type otherwise a surcharge will apply. If preferred, we can modify your existing cylinder heads. Please note that early type (pre 1976) heads are not suitable as exchange units - please refer to 'Notes Cylinder Heads Identification'.

SHORT ENGINE & CYLINDER HEAD APPLICATIONS

SHORT ENGINE	ENGINE TYPE	SWEPT VOL/CYL	CC @ TDC	HEADS REQUIRED	HEAD GASKETS
ETC7714/R	3.5 STD 8.13cr	441.51	25	34-36cc	Std
RB7121/R	3.5 STD 9.35cr	441.51	15	34-36cc	Std
RB7487/R	3.9 STD 9.35cr	494	23	34-36cc	Std
RB7487UR	3.9 STD 9.35cr	494	23	34-36cc	Std
ERR4171/R	4.2 8.94cr	534.81	29	34-36cc	Std
STC1890	4.0 STD 8.13cr	494	33	28cc	Comp
STC1891	4.0 STD 9.35cr	494	23	28cc	Comp
STC1892	4.6 STD 8.13cr	569.62	44	28cc	Comp
STC1893	4.6 STD 9.35cr	569.62	31	28cc	Comp
STC1893HC	4.6 HI COMP	569.62	29	34-36cc	Std

DESCRIPTION QTY REQ. PART No.

V8 Head Gaskets

Head gasket set - V8;
3.5 litre (88.9mm bore)
tin head gaskets
to 1976 (pre SD1) (1) **GEG165**
1976 on (1) **GUG1066HS**
composite head gaskets* (1) **GUG1066HSC**
3.9/4.2 litre (94mm bore)
3 rows of cylinder head bolts.
tin head gaskets (1) **RB7447**
composite head gaskets* (1) **RB7447C**
3.9/4.2/4.0/4.6 litre (94mm bore) (1) **RA1233**
2 rows of cylinder head bolts.
Composite head gaskets.
5.2 litre (96mm bore) (1) **RB7684**
Composite head gaskets.*

Head gasket only- V8;
3.5 litre (88.9mm bore)
tin gasket (2) **GEG340**
composite gasket* (2) **GEG340C**
3.9/4.2 litre
3 rows of cylinder head bolts.
tin gasket (2) **RB7448**
composite gasket* (2) **RB7448C**
3.9/4.2/4.0 & 4.6 litre
2 rows of cylinder head bolts.
tin gasket (2) **ETC7819**
composite gasket* (2) **ERR7217**
5.2 litre (96mm bore) (2) **RB7685**
Composite gasket.*

**Composite head gaskets are thicker than standard tin gaskets and will therefore lower the engine's compression ratio. Ideal for correcting compression ratio when heads/ block faces have been skimmed. (Not applicable 1995 on).*

Approximate gasket thicknesses are as follows:
Standard (tin) gaskets 0.5mm
Composite gaskets 1.2mm

Typical effect on compression ratio:
Standard (tin) gaskets 3cc
Composite gaskets 10cc

V8 Cylinder Head Bolts

All parts listed are suitable for saloon, sports & 4x4 applications unless otherwise stated.

Bolt - cylinder head;
all engines up to 1995 *(except late 3.9, 4.0 & 4.6). (See note below).*
long (7/16" UNC x 3.9") (6) **602193A**
medium (7/16" UNC x 2.7") (14) **602192A**
Order 13 if your engine has a dipstick retainer clamp on the head bolt adjacent to the dipstick.
tapped bolt (7/16" x 2.7") (1) **602450A**
For dipstick retainer, if fitted.
double-ended bolt (1) **602200**
Fitted to some Range Rovers.
short (7/16" x 2 1/4") (8) **602191A**

1995 onwards *(late 3.9, 4.0 & 4.6).*
Note: These bolts can be identified by their flanged head. They do not need a separate washer and can be used on earlier engines. However, they are not re-useable and must be replaced once removed.
long (96mm) (6) **ERR2944**
medium (66mm) (14) **ERR2943**
Note: the outer row of short bolts, or "outrigger" bolts, has not been used since the introduction of the Series 2 Range Rover.

Washer - cylinder head bolts (28) **602098A**

Cylinder head stud kit (1) **RB7680**
Engine set of ARP cylinder head studs, washers and nuts to replace original bolts. Studs improve cylinder head sealing & prevent damage to block threads.

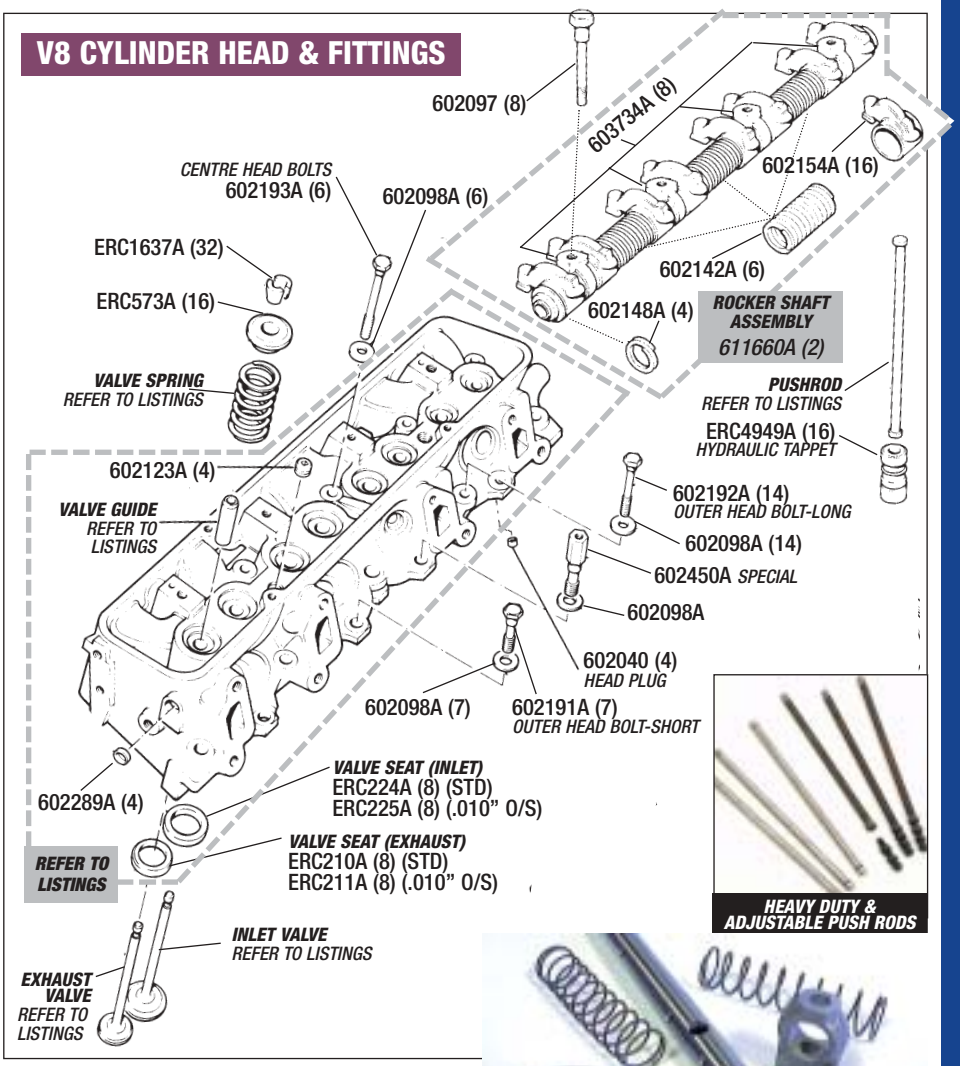
V8 Valves, Guides & Springs

All parts listed are suitable for saloon, sport & 4x4 applications unless otherwise stated.

Various different valves have been used since the Rover V8's introduction; most having the standard "Rover SD1" head diameter: inlet - 40mm, exhaust - 34mm. However, early engines (pre 1976) were fitted with smaller diameter valves - 38mm inlet, 33mm exhaust - which are less efficient. In order to benefit from the larger valve sizes, it would be more practical to fit a pair of later cylinder heads than to attempt to fit the larger valves to early heads.
Vitesse specification valves are of standard SD1 head-diameter, with waisted stems just behind the valve head.
The largest valves that can be fitted to the existing valve seats (later heads only), without the need for extensive machining, are our Big Valves (Inlet - 41.4 mm, exhaust - 35.5 mm, with waisted stems). These valves are particularly suited to large capacity engines. (Note: some machining is required to the valve guide and seat).
Finally, the latest factory valves, as fitted to 3.9 & 4.2 engines since 1993, as well as the Series 2 Range Rover (4.0 & 4.6 engines), feature the same head diameter as SD1-type valves.
Note: all parts supplied are suitable for unleaded applications.

DESCRIPTION	QTY REQ.	PART No.
Inlet valve;		
carburettor engines		
early engines (pre 1976) *Head diameter: 38mm.*	(8)	**602166**
1976 on *Head diameter: 40mm.*	(8)	**614088**
efi engines - 3.5, 3.9 & 4.2 litre; *Head diameter: 40mm.*		
SD1	(8)	**ERC9088**
Range Rover		
up to eng nos: *35D06576A, 36D14149A, 37D00751A & 38D23045A*	(8)	**ERC9088**
from above eng nos. on	(8)	**ERR1780**
Series 2 Range Rover	(8)	**ERR1780**
'big valve' *Head diameter: 41.4mm. With waisted stem. Machining required to valve guide and seat.*	(8)	**RB7460**
Exhaust valve;		
carburettor engines		
early engines (pre 1976) *Head diameter: 33mm.*	(8)	**602165**
1976 on *Head diameter: 34mm.*	(8)	**614089**
efi engines *Head diameter: 34mm.*		
SD1	(8)	**ERC9089**
Range Rover		
3.5 litre	(8)	**614089**
3.9 & 4.2 litre	(8)	**ERR7338**
Series 2 Range Rover	(8)	**ERR7338**
'big valve' *Head diameter: 35.5mm. With waisted stem. Machining required to valve guide and seat.*	(8)	**RB7461**
Valve seat insert - inlet;		
early engines *Pre-1976.*		
standard size	(8)	**602052**
oversize + 0.010"	(8)	**602223**
all other engines - 1976 on *Including Series 2 Range Rover.*		
standard size	(8)	**ERC224A**
oversize + 0.010"	(8)	**ERC225A**
Valve seat insert - exhaust;		
early engines *Pre-1976.*		
standard size only	(8)	**614639**
all other 3.5 litre engines - 1976 on		
standard	(8)	**ERC210A**
oversize + 0.010"	(8)	**ERC211A**
3.9, 4.2 litre & Series 2 Range Rover		
standard	(8)	**ETC8596A**
oversize + 0.010"	(8)	**ERC211A**
Valve guide - standard; *For use with standard cam.*		
all engines up to 1994 *Plain-topped; oil seals on inlet only.*	(16)	**603554**
late 3.9, 4.2, 4.0 & 4.6 ('94 on) *Stepped top, for use with neoprene seals (ERR1782) and matching valves.*	(16)	**ERR3648**
Valve guide - performance; *Shortened & bulleted, for use with performance cam. Suitable for all valves.*		
car set (inlet/exhaust)	(1)	**RB7453**
individual		
inlet	(8)	**RB7463**
exhaust	(8)	**RB7464**

V8 CYLINDER HEAD & FITTINGS



HEAVY DUTY & ADJUSTABLE PUSH RODS

Valve stem oil seal;		
all engines to 1994 (inlet only) *"Tap washer" type, slips over valve stem.*	(8)	**ERC7865A**
1993 onwards (inlet & exhaust) *Neoprene type - not suitable for earlier engines (pre '94): requires stepped valve guide (ERR3648).*	(16)	**ERR1782**
Valve spring - standard;		
double - early engines (up to 1976)		
inner	(16)	**602241A**
outer	(16)	**602240A**
single - 1976 on	(16)	**UKC8137**
Valve spring - uprated - engine set;		
single *Suitable for all engines with mild road camshaft. Uses standard retaining caps (ERC573).*	(1)	**RB7454**
double *(see Note below) Suitable for all engines with fast road or road/rally camshaft. Special retaining caps required (ERC573S).*	(1)	**RB7455**
Note: machining may be required to spring platform when fitting double valve springs to engines previously fitted with singles.		
Retaining cap - valve springs;		
early engines *Fitted with double valve springs.*	(16)	**90602451A**
single valve springs	(16)	**ERC573A**
uprated double valve springs	(16)	**ERC573S**
Split cotter - all models	(32)	**ERC1637A**

WHAT IS LIFTER PRELOAD?

"Lifter preload" refers to the position of the pushrod seat in the lifter (cam follower) when the engine has been assembled and the lifter is positioned on the heel of the cam. Lifter preload must be checked whenever a non-standard component which alters the distance between the rocker arm and the lifter - such as a high lift camshaft or performance cylinder head - has been fitted. Incorrect lifter preload will cause poor running, premature wear or, at worst, engine failure.
Check the lifter preload as follows:
With the lifters empty of oil, assemble the rocker shaft & pushrod components, making sure there is no wear in the rocker shafts, rocker arms & pushrods.
Checking each lifter in turn, positioned on the heel of the cam, measure the gap between the pushrod seat and the bottom of the circlip groove. There must be a clearance of .020" minimum and .060" maximum at this position.
If the clearance is greater than .060", use pedestal shims (603734SH) to decrease. Remember to use equal thickness shims under each pedestal of a shaft to avoid distortion or breakage.


V8 ROCKER GEAR

V8 Rocker Gear

The following parts are suitable for all engines unless otherwise stated.

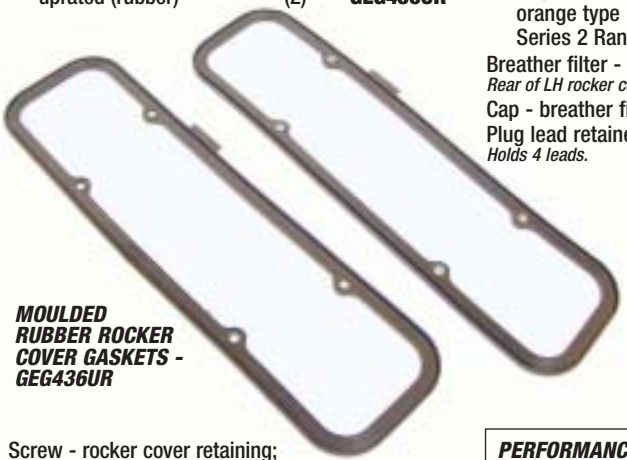
Rocker shaft assembly *Assembled, ready to fit.*	(2)	**611660A**
Rocker build kit *Includes parts ready for assembly.*	(2)	**611660K**
Rocker shaft only	(2)	**606661A**
Pedestal - rocker shaft	(8)	**603734A**
Pedestal shims *Includes three sets of shims of different thickness. Use to set "lifter preload" when fitting a new cam with higher lift than standard. See also adjustable push rods, below.*	(1)	**603734SH**
Rocker arm;		
original spec (alloy)		
right hand	(8)	**602153**
left hand	(8)	**602154**
universal *Alternative steel arm - non handed.*	(16)	**602154ALT**
Spacer spring - rocker shaft	(6)	**602142A**
End spring - rocker shaft *Wavy washer.*	(4)	**602148A**
End washer - rocker shaft	(4)	**602186A**
Split pin - rocker shaft	(4)	**PC34**
Push rod;		
standard	(16)	**603378**
heavy duty *Larger diameter shaft. Cylinder head guide holes may need enlarging accordingly.*	(16)	**603378HD**
adjustable (engine set) *Set of pushrods, adjustable for length at the rocker end, allowing the lifter preload to be precisely set without shims.*	(1)	**603378ADJ**

POWDER COATED ROCKER COVERS

V8 Rocker Covers

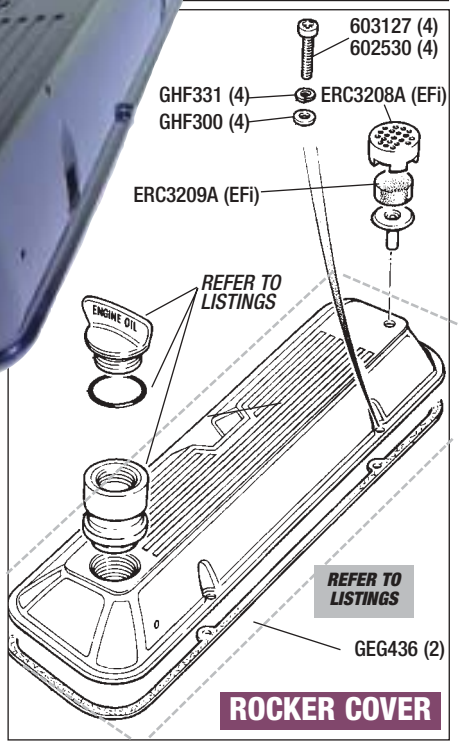
Rocker covers - single;

	QTY REQ.	PART No.
SD1/TR8		
grey painted		
rh	(1)	**ERC262**
lh	(1)	**ERC263**
unpainted		
rh	(1)	**ERC2990**
lh	(1)	**ERC3932**
Range Rover		
early models - curved top		
rh	(1)	**RTC2350**
lh	(1)	**ETC8604**
1986 onwards		
curved top		
rh	(1)	**ETC8681**
lh	(1)	**ERR7356**
flat top		
rh	(1)	**ETC8680**
lh	(1)	**ETC8679**
1992 onwards		
rh	(1)	**ERR7363**
lh	(1)	**ERR7360**
Series 2 Range Rover		
rh	(1)	**ERR7367**
lh	(1)	**LDR000200**
Rocker covers - pairs;		
unpainted	(1)	**RB7431**
powder coated		
black	(1)	**RB7431PCB**
red	(1)	**RB7431PCR**
Gasket - rocker cover;		
standard	(2)	**GEG436**
uprated (rubber)	(2)	**GEG436UR**



MOULDED RUBBER ROCKER COVER GASKETS - GEG436UR

Screw - rocker cover retaining;		
all models except Series 2 Range Rover.		
long	(4)	**603127**
short	(4)	**602530**
Series 2 Range Rover (8mm spline head)		
long	(4)	**ERR7371**
short	(4)	**ERR4818**
Spring washer - rocker screws *Not Series 2 Range Rover.*	(8)	**GHF331**
Flat washer - rocker screws *Not Series 2 Range Rover.*	(8)	**GHF300**
Rocker cover 'T'-Bolts - chrome *American style rocker cover hold down bolts, supplied in sets of 4 (2 sets req'd).*	(2)	**RB7440**
Breather/flame trap; *Right hand rocker cover (flat top EFi), where fitted.*		
original	(1)	**RB7432**
short type - 1/2 original size	(1)	**RB7432LOW**
powder coated		
black	(1)	**RB7432PCB**
red	(1)	**RB7432PCR**
chrome	(1)	**RB7432C**



Breather grommet (pair)	(1)	**RB7432ZG**
'O' ring/seal-flame trap	(1)	**564258**
Oil filler neck;		
threaded type (where fitted)	(1)	**ERC2989**
screw-on type *Retained by screws. Range Rover only.*	(1)	**ERC1208**
Series 2 Range Rover type	(1)	**ERR7335**
Gasket - filler neck;		
screw-on type	(1)	**612819**
Series 2 Range Rover type	(1)	**564258**
Oil filler cap;		
orange type	(1)	**625038A**
pressed steel type	(1)	**598231**
Series 2 Range Rover type	(1)	**ERR5218**
'O' ring/seal - filler cap;		
orange type	(1)	**564258**
Series 2 Range Rover	(1)	**ERR5219**
Breather filter - efi models *Rear of LH rocker cover.*	(1)	**ERC3209A**
Cap - breather filter (efi)	(1)	**ERC3208A**
Plug lead retainer (where fitted) *Holds 4 leads.*	(2)	**603672**

V8 Camshaft

*We stock a full range of **Standard** camshafts, which represent good value for money.*
*In addition, we offer a choice of **Performance** camshafts - available either as complete kits or on their own - which are designed to improve torque and horsepower when fitted to standard or uprated engines.*
*Our **Mild Road** camshaft gives a noticeable increase in low-rev torque, with smooth idle characteristics and good fuel economy.*
The Mild Road is a hydraulic camshaft, available on its own or as part of a kit, including followers, single valve springs and fitting instructions.
***Fast Road** camshafts are available separately as a hydraulic type only, or in complete kits as hydraulic or solid camshafts. All Fast Road camshafts are suitable for engines right up to 5.2 litres. They are particularly effective when used as part of a complete Performance package with our Stage 1, 3 or 4 cylinder heads, uprated fuel systems and Sports Exhausts.*
***Fast Road Hydraulic** is a hydraulic camshaft which boosts top-end power whilst retaining low-end torque and good fuel economy.*
***Fast Road Solid** is a solid-lifter camshaft available only as a complete kit, which includes lifters, adjustable timing chain set, adjustable pushrods, all necessary gaskets and full instructions. The Fast Road Solid camshaft is designed for serious performance applications, where maximum top-end power is required, whilst still being suitable for the road.*

All parts listed are suitable for Saloon/Sports and 4x4 applications unless otherwise stated.

DESCRIPTION	QTY REQ.	PART No.
Camshaft only - standard; *See also Camshaft Kits.*		
saloon/sports applications *Carb & efi.*	(1)	**ERC2003A**
***Note:** some later Rover Vitesses, notably twin plenum models, were fitted with alternative camshafts, double valve springs, larger diameter rocker shafts and adjustable rocker gear. These parts are now generally unavailable but may be replaced using parts listed below.*		
Range Rover - 1970 to 1986		
low compression engines *Compression ratios: 8.13, 8.25, 8.5:1.*	(1)	**ERC2003A**
high compression engines *Compression ratio: 9.35:1.*	(1)	**ETC6849**
Range Rover - 1986 onwards		
carburettor engines		
- low compression *8.13:1.*	(1)	**ERC2003A**
- high compression *9.35:1.*	(1)	**ETC6849**
efi engines		
- 3.5 litre	(1)	**ETC6099**
- 3.9 litre	(1)	**ERR5924**
- 4.2 litre	(1)	**ERR5924**
Series 2 Range Rover		
4.0 litre	(1)	**ERR3720**
4.6 litre	(1)	**ERR4946**
Camshaft only - Performance; *See also Camshaft Kits.*		
Mild Road *Straight swap for standard cam. No machining required. Use also anti pump-up followers ERC4949HD and single springs RB7454.*	(1)	**RB7444**
Fast Road *Machining required to valve guides and spring platforms. see Camshaft Kits if fitting without modified heads.*	(1)	**RB7445**
Installation kit - camshaft *Less cam. Includes: standard timing chain, timing cover gasket & oil seal, inlet manifold gasket & seals and 2 rocker cover gaskets. Suitability: all engines except Series 2 Range Rover.*	(1)	**RB7488**

PERFORMANCE SOLID LIFTER CAMSHAFT KIT - RB7442S

CAMSHAFT KITS;

Standard

Suitable for all engines except Series 2 Range Rover.

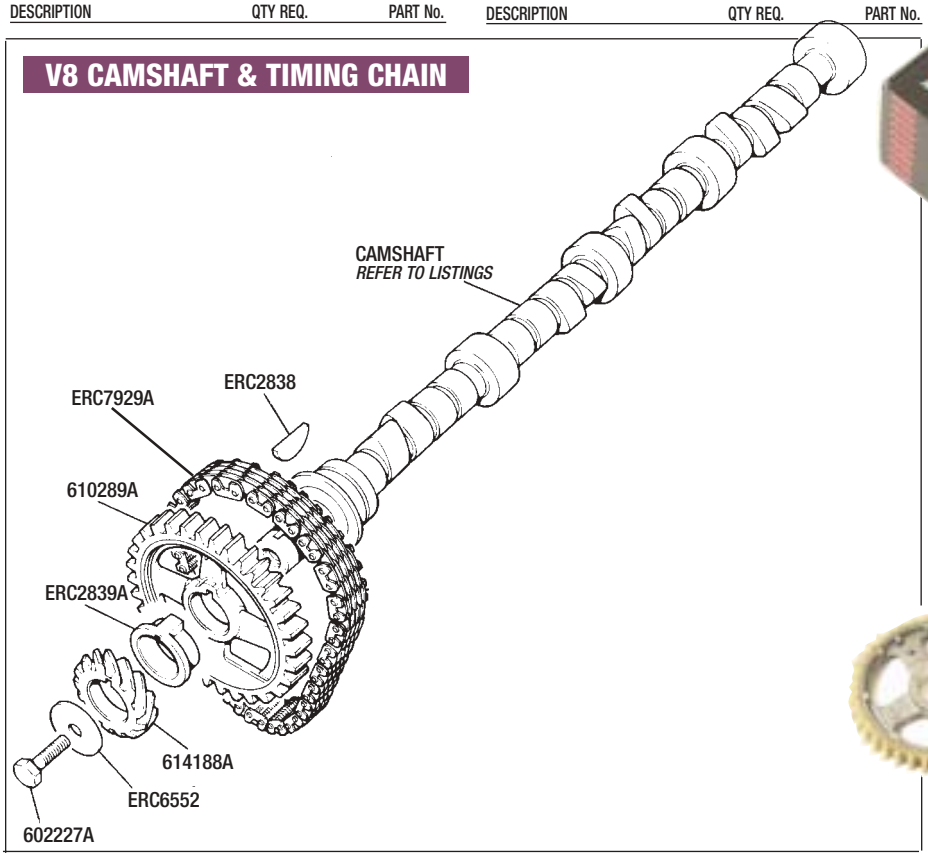
kit 1 *Includes ERC2003A cam & 16 standard followers.*	(1)	**RB7125**
kit 2 *Includes ERC2003A cam, 16 standard followers, timing chain, timing cover gasket & oil seal, 2 x rocker cover gaskets, inlet manifold gasket & 2 x inlet manifold seals.*	(1)	**RB7489**

Performance

We offer two Performance cam kits:- a hydraulic cam kit and a solid lifter cam kit. Both kits are complete and a simple job for the competent DIY mechanic and both offer a worthwhile performance gain, either on their own or with our Performance cylinder heads.
Suitable for all engines except Series 2 Range Rover.

Fast Road Hydraulic *Kit includes special grind hydraulic cam, 16 performance followers, adjustable timing chain set, all necessary gaskets & full instructions.*	(1)	**RB7442HYD**
Fast Road Solid *Kit includes special grind solid cam, 16 solid lifters, adjustable timing chain set, adjustable pushrods, all necessary gaskets and full instructions.*	(1)	**RB7442SOLID**

V8 CAMSHAFT & TIMING CHAIN

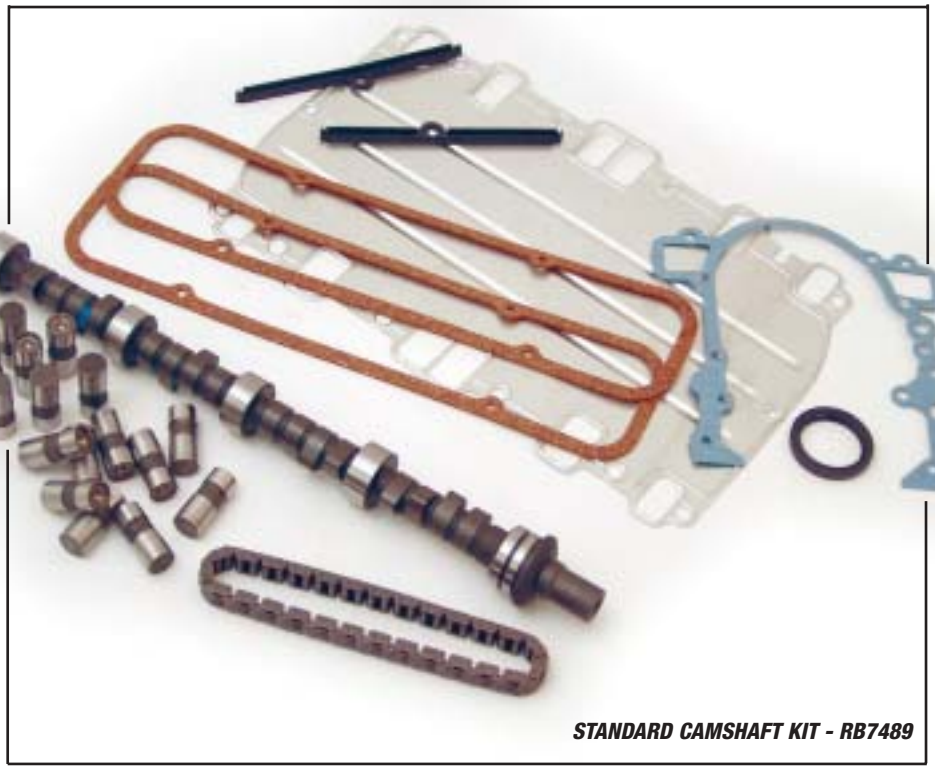


ADJUSTABLE TIMING CHAIN KIT

STANDARD CHAIN & SPROCKETS

V8 Camshaft Components

Gasket - inlet manifold - all engines;		
tin	(1)	**ERC3990**
composite	(1)	**ERR7306**
End seal - manifold gasket		
for tin gasket	(2)	**AJM645**
for composite gasket	(2)	**ERR7283**
Clamp - end seal	(2)	**602076**
Screw - end seal clamp	(2)	**602236**
Cam follower - hydraulic;		
standard		
each	(16)	**ERC4949**
set of 16	(1)	**ERC4949K**
heavy duty		
Designed to resist "pumping up", extending maximum revs.		
each	(16)	**ERC4949HD**
set of 16	(1)	**ERC4949HDK**
Cam lube	(1)	**RX1358**
Essential when installing a new cam & followers.		
Timing disc (Protractor)	(1)	**RX1359**
Pedestal shims	(1)	**603734SH**
Includes three sets of shims of different thickness. Use to set "lifter preload" (see Info panel) when fitting non-standard components eg cams with higher lift than standard.		
Cam bearing set (engine block)	(1)	**RTC5918**
Woodruff key - camshaft;		
early engines	(1)	**90602025**
Pre-1976.		
all other engines	(1)	**ERC2838**
Thrust bolt - camshaft	(1)	**602227UR**
Replaces the standard (imperial thread) camshaft retaining bolt. Abutting the inside of the timing cover, this Teflon-topped bolt prevents excessive camshaft endfloat.		



STANDARD CAMSHAFT KIT - RB7489

V8 Timing Chain

All parts listed are suitable for saloon, sports and 4x4 applications unless otherwise stated.

Timing chain - all engines;		
standard	(1)	**ERC7929A**
adjustable - kit	(1)	**RB7449**
Includes vernier camshaft sprocket, crank sprocket and double roller chain. Also includes timing protractor and Allen key. Fully adjustable cam sprocket allows extremely accurate cam timing whilst eliminating stretch common in original parts. Instructions included.		
Replacement chain - double roller	(1)	**RB7450**
Camshaft sprocket - standard chain;		
all engines up to Series 2 Range Rover type		
standard (nylon teeth)	(1)	**610289A**
vernier type (steel teeth)	(1)	**610289V**
Series 2 Range Rover type only	(1)	**ERR5086**
Crankshaft sprocket - all engines	(1)	**90602372A**
Spacer - camshaft;		
mechanical fuel pump engines	(1)	**602149**
all other engines	(1)	**ERC2839A**
Not Series 2 Range Rover.		
Distributor drive gear - camshaft;		
early engines	(1)	**602159**
Pre-1976.		
all other engines	(1)	**614188A**
Not Series 2 Range Rover.		
Washer - camshaft	(1)	**ERC6552**
All engines except Series 2 Range Rover.		
Bolt - camshaft;		
All engines except Series 2 Range Rover.		
7/16" UNF x 1 1/8"		
standard	(1)	**602227A**
thrust - uprated	(1)	**602227UR**
Prevents excess cam endfloat.		
M12 x 30mm	(1)	**ERC5749**
Alternative - metric.		
Flanged bolt - camshaft (M10 X 30)	(1)	**FS110301L**
Series 2 Range Rover.		
Thrust plate - camshaft	(1)	**ERR2609**
Series 2 Range Rover.		
Cam retaining collar	(1)	**ERR5926**
Series 2 Range Rover.		
Screw - thrust plate	(2)	**SH505061**
Woodruff key - camshaft;		
early engines	(1)	**90602025A**
Pre-1976.		
all other engines	(1)	**ERC2838**

V8 ENGINE REBUILD KIT
3.5 OR 3.9 LITRE

ALSO CONVERT YOUR ENGINE FROM 3.5 LITRE TO 3.9 LITRE USING OUR PISTONS AND LINERS!

FOR THE DIY ENTHUSIAST!

These kits include everything you are likely to need for a 3.5 litre engine rebuild or conversion to 3.9 litres. We assume you'll have the block rebored (in the case of the 3.9, re-sleeved using the liners supplied) and any other machining work done as required.

Please note that your crankshaft is required in exchange. For export customers, the crank can be removed from the kit, a price adjustment made, allowing you to have the re-grinding done locally.

We can also offer kits using performance components. Please enquire.

REBUILD KIT	3.5 LITRE	3.9 LITRE
PART NUMBER	RB2028/3.5	RB2028/3.9

Kit Contents:-

- Crankshaft - reground *(exchange)*
- Bearing shells to suit
- Piston set including rings and pins:
  - 3.5 litre (+ 0.020") (9.75:1)
  - 3.9 litre (standard) (9.35:1)
- Piston liner set *(3.9 litre only)*
- Oil Filter
- Sump gasket set inc oil seals
- Timing chain, crank sprocket, cam sprocket
- Camshaft and 16 followers
- Valves - Engine set (16)
- Valve guides (16)
- Valve stem oil seal (inlet) (8)
- Valve springs (16)
- Rocker shaft (2)
- Rocker arms (16)
- Head gasket set
- Core plug engine set

V8 ENGINE COMPONENTS

V8 Cylinder Block Components

All parts listed are suitable for saloon, sports and 4x4 applications unless otherwise stated.

Cylinder block - bare;
Suitable for all applications. Bare cylinder blocks are supplied with main bearing caps, cam bearings, core plugs and cylinder liners but less crankshaft, pistons etc.
- 3.5 litre (1) **ERC6934**
- 3.9 & 4.2 litre (1) **ERR7350**
- 4.0 & 4.6 litre (1) **ERR7349**
  Series 2 Range Rover type.

Cylinder liner set - 3.9 litre (1) **RB7486**
Set of 8 liners for converting 3.5 engines to 3.9 litre bore. Also suitable for replacing the liners in an existing 3.9 litre (or larger capacity) engine.

Liner & piston set - 3.9 litre (1) **RB2029**
As above, but kit includes standard size 9.35:1 compression pistons and rings for 3.9 conversions.

Head gasket set - V8;
- 3.5 litre (88.9mm bore)
  - tin head gaskets
    - to 1976 (pre SD1) (1) **GEG165**
    - 1976 on (1) **GUG1066HS**
  - composite head gaskets* (1) **GUG1066HSC**
- 3.9/4.2 litre (94mm bore)
  3 rows of cylinder head bolts.
  - tin head gaskets (1) **RB7447**
  - composite head gaskets* (1) **RB7447C**
- 3.9/4.2/4.0/4.6 litre (94mm bore) (1) **RA1233**
  2 rows of cylinder head bolts. Composite head gaskets.
- 5.2 litre (96mm bore) (1) **RB7684**
  Composite head gaskets.*

Head gasket only- V8;
- 3.5 litre (88.9mm bore)
  - tin gasket (2) **GEG340**
  - composite gasket* (2) **GEG340C**
- 3.9/4.2 litre
  3 rows of cylinder head bolts.
  - tin gasket (2) **RB7448**
  - composite gasket* (2) **RB7448C**
- 3.9/4.2/4.0 & 4.6 litre
  2 rows of cylinder head bolts.
  - tin gasket (2) **ETC7819**
  - composite gasket* (2) **ERR7217**
- 5.2 litre (96mm bore) (2) **RB7685**
  Composite gasket.*

**Composite head gaskets are thicker than standard tin gaskets and will therefore lower the engine's compression ratio. Ideal for correcting compression ratio when heads/block faces have been skimmed. (Not applicable 1995 on).*
Approximate gasket thicknesses are as follows:
Standard (tin) gaskets 0.5mm
Composite gaskets 1.2mm
Typical effect on compression ratio:
Standard (tin) gaskets 3cc
Composite gaskets 10cc

Sump gasket set (inc. seals);
- all engines up to 1991 (1) **GUG1538CS**
- all engines 1992 onwards (1) **STC1639**

Sump gasket only *(All engines)* (1) **AJM539**

Seal - rear main bearing cap (2) **611089A**
Cruciform seal.

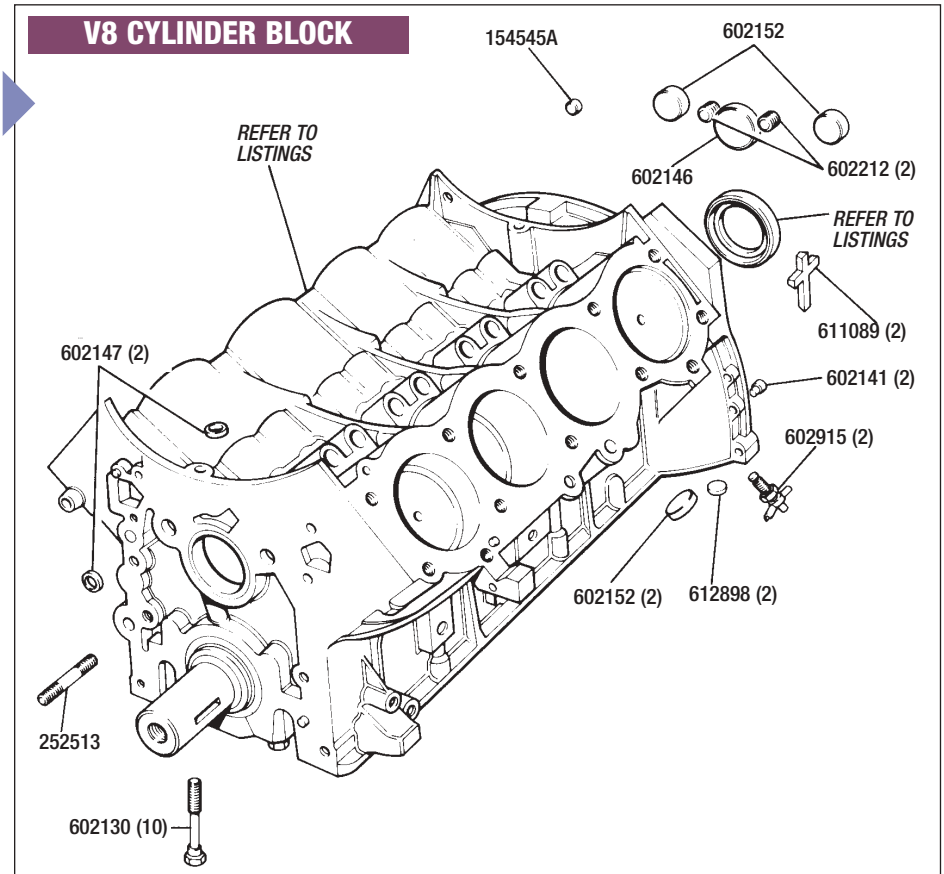
Crankshaft oil seal - rear;
- early (rope type) (1) **613855**
  Very early engines only.
- all other engines (1) **ERR2640**

Timing cover oil seal - front;
- saloon/sports (1) **ERC7987A**
- 4x4
  - early type (1) **602178**
    Press-fit seal with no retainer.
  - all other models (1) **ERR6490**
    With Screw-on retainer.

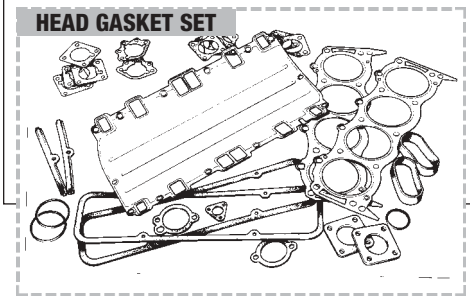
Core plug set - all engines (1) **RB7105**

Cam bearing set;
- all engines except 4.0 & 4.6 (1) **RTC5918**
- 4.0 & 4.6 models (1) **STC1961**
  Series 2 Range Rover type engines.

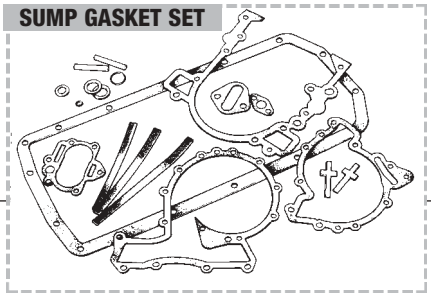
V8 CYLINDER BLOCK



HEAD GASKET SET



SUMP GASKET SET



Dowel - bellhousing flange (2) **602141**
Drain tap - block (2) **602915**
Drain plug (2) **129077**
Alternative to tap.
Core plug (2) **612898**
Lower bellhousing flange.
Bolt - main bearing cap (10) **602130**
All engines.
Stud kit - main bearing cap (1) **RB7456**
(Engine set) Used instead of standard main bearing bolts, studs provide superior clamping for main bearing caps, preventing them from working loose.
Cross-bolt - main bearing cap (9) **FB110137**
4.0 & 4.6 cross-bolted engines.
Hex-screw - main bearing cap (1) **SS110555**
4.0 & 4.6 cross-bolted engines.
Oil seal - for FB110137 (9) **ERR3330**
Oil seal - for SS110555 (1) **ERR3331**
Stud - front of block (1) **252513**
Not 4.0 & 4.6 litre engines.
Plug - front of block (4) **602147**
Breather pipe - crankcase (1) **603143**
Early engines.
Core plug - rear of block (1) **154545**
Later models - replaces breather.
Core plug - side & rear of block (8) **602152**
Core plug - camshaft rear (1) **602146**
Threaded plug;
- all engines except 4.0 & 4.6 (2) **602212**
- 4.0 & 4.6 engines (2) **ERR4314**

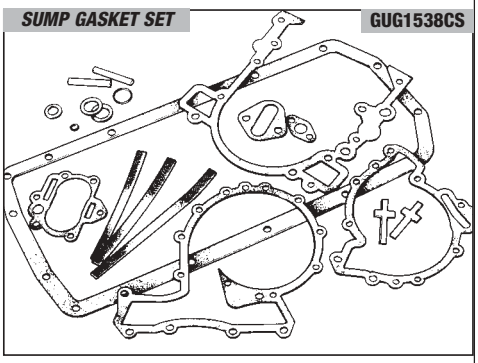
Crank sensor housing (1) **ERR3693**
4.0 & 4.6 engines.

V8 Sump Pan & Oil Pick-up Pipe

Standard *sumps are available in Saloon/Sports and 4x4 types.* ***Performance*** *sumps are available for Saloon/Sports applications. Based on the Rover SD1-type sump, these are specially designed, enlarged sumps, with extra baffles to prevent oil starvation during high-speed cornering.*
We also supply (to special order) a modified sump designed specifically for Westfield type sports cars. This sump incorporates special baffles to prevent oil starvation during track-day use, and is available in standard and extra ground clearance versions.

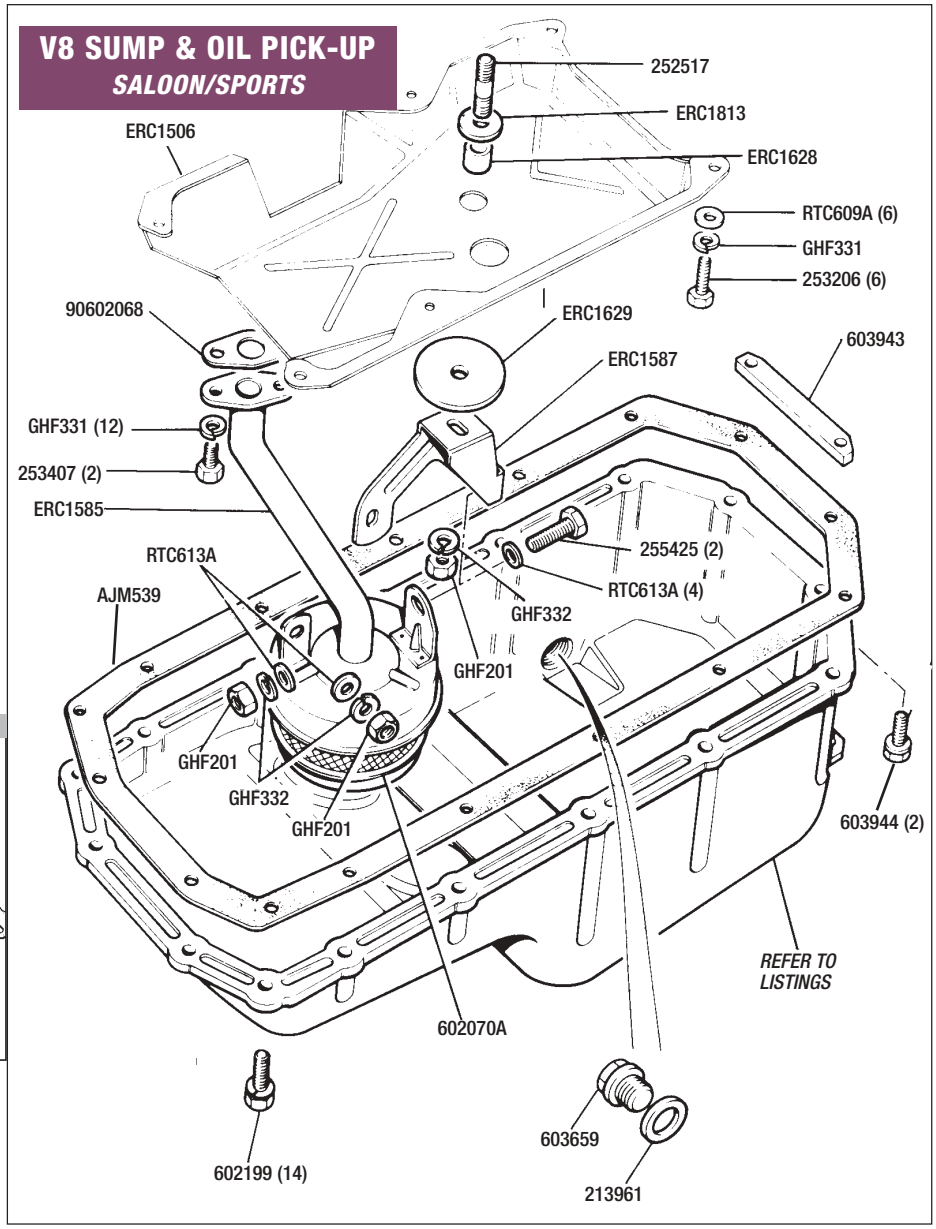
DESCRIPTION	QTY REQ.	PART No.
Sump pan - standard;		
Saloon/Sports		
SD1/TR8-type sump.		
without oil level sensor	(1)	**ERC2776**
with oil level sensor	(1)	**ERC8544**
4x4		
Land Rover/Range Rover sump.		
except Series2 Range Rover	(1)	**ERR4633**
Series 2 Range Rover	(1)	**ERR5220**
Sump pan - Performance;		
Performance sumps are exchange.		
Saloon/Sports applications	(1)	**ERC2776PERF**
Westfield type applications		
standard clearance	(1)	**RQ1001**
extra ground clearance	(1)	**RQ1001LOW**
Oil level sensor - saloon sump	(1)	**DRC8005**

SUMP GASKET SET **GUG1538CS**



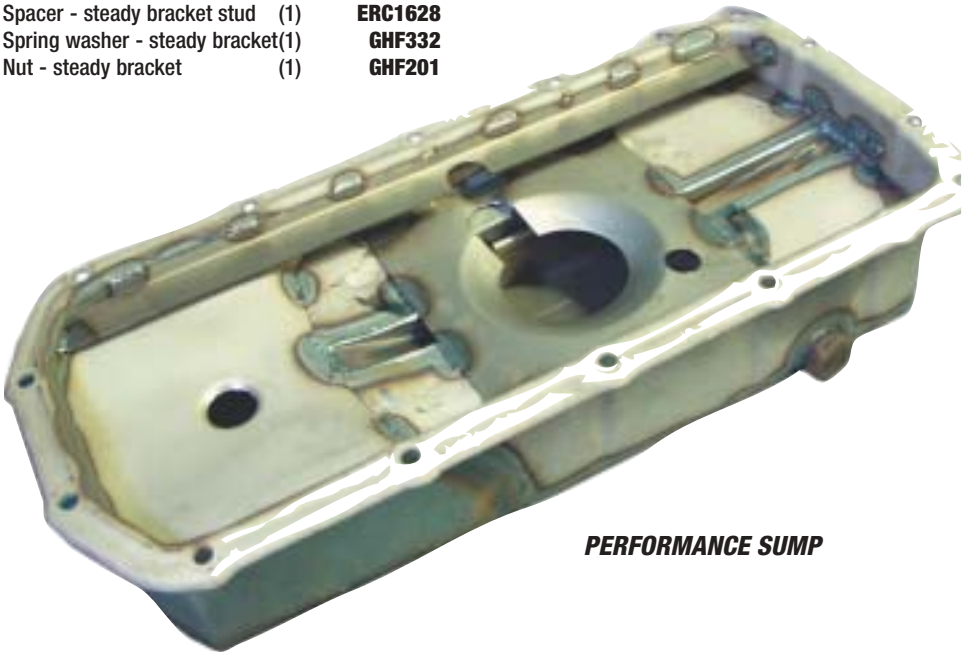
Sump gasket set (inc. seals);		
all engines up to 1991	(1)	**GUG1538CS**
all engines 1992 onwards	(1)	**STC1639**
Sump gasket only	(1)	**AJM539**
All engines.		
Sump bolt/washer;		
saloon/sports		
medium	(14)	**SH505051**
long	(2)	**603944**
4x4	(16)	**SH505051**
Reinforcing strip - rear of sump	(1)	**603943**
Saloon/sports only.		
Drain plug - sump;		
all *(except Series 2 Range Rover)*	(1)	**603659**
Series 2 Range Rover	(1)	**UAM2957**
Washer - sump drain plug;		
all *(except Series 2 Range Rover)*	(1)	**213961**
Series 2 Range Rover	(1)	**UAM2857**
Oil pick-up strainer;		
saloon/sports	(1)	**ERC1585**
4x4		
all *(except Series 2 Range Rover)*	(1)	**ERR3677**
Series 2 Range Rover	(1)	**ERR4795**
Oil screen - pick-up pipe	(1)	**602070A**
All engines.		
Gasket - pick-up strainer	(1)	**90602068**
All engines except Series 2 Range Rover.		
O-ring - pick-up strainer	(1)	**ERR4795**
Series 2 Range Rover engines.		
Spacer - pick-up strainer	(1)	**ERR4793**
Series 2 Range Rover engines.		
Setscrew - strainer to block;		
all *(except Series 2 Range Rover)*	(2)	**253407**
Series 2 Range Rover engines	(2)	**FS106167**
Spring washer - setscrew	(2)	**GHF331**
All engines except Series 2 Range Rover.		
Nut - strainer	(2)	**NH605041**
Series 2 Range Rover engines.		
Baffle plate - removable	(1)	**ERC1506**
Saloon/sports sump only.		
Screw - baffle plate	(6)	**253206**

V8 SUMP & OIL PICK-UP
SALOON/SPORTS



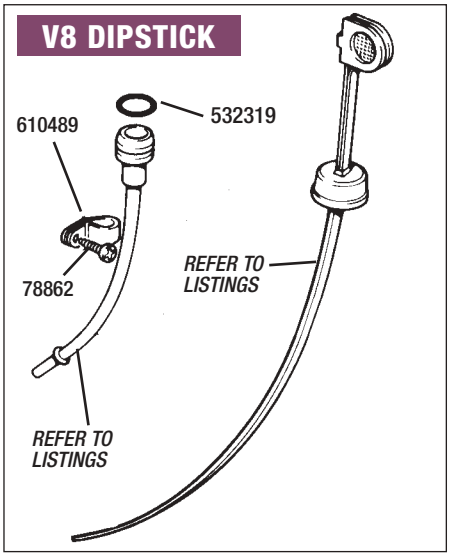
DESCRIPTION	QTY REQ.	PART No.
Spring washer - baffle plate	(6)	**GHF331**
Flat washer - baffle plate	(6)	**RTC609**
Steady bracket - pick-up pipe	(1)	**ERC1587**
Saloon/sports only.		
Large washer - steady bracket	(1)	**ERC1629**
Saloon/sports only.		
Stud - steady bracket	(1)	**252517**
Small washer - steady bracket stud	(1)	**ERC1813**
Spacer - steady bracket stud	(1)	**ERC1628**
Spring washer - steady bracket	(1)	**GHF332**
Nut - steady bracket	(1)	**GHF201**

DESCRIPTION	QTY REQ.	PART No.
Setscrew*	(2)	**255425**
Flat washer*	(2)	**RTC613A**
Spring washer*	(2)	**GHF332**
Nut*	(2)	**GHF201**
**Pick-up pipe to steady bracket.*		



PERFORMANCE SUMP

V8 DIPSTICK



V8 Dipstick

The length of the dipstick tube varies considerably depending on application: SD1 saloons have a long dipstick tube and Range Rovers a much shorter one. To get an accurate oil level reading, therefore, the dipstick & tube must match the engine.

DESCRIPTION	QTY REQ.	PART No.
Dipstick;		
SD1 saloon	(1)	**ERR1922**
TR8 (original)	(1)	**614293**
Range Rover		
all models 1970 - 1985	(1)	**603173**
1986 *(up to Series 2 Range Rover)*	(1)	**ERR1922**
Series 2 Range Rover	(1)	**ERR4905**
Dipstick tube;		
SD1 saloon	(1)	**ERC6437A**
TR8 (original)	(1)	**ERC2690**
Range Rover		
all models 1970 - 1985	(1)	**ERC2571**
1986 *(up to Series 2 Range Rover)*	(1)	**ERR4556**
Series 2 Range Rover	(1)	**ERR4550**
O-ring - dipstick tube		
saloon/sports	(1)	**532319**
Range Rover *Except Series 2 Range Rover.*	(1)	**602545**
Retaining clip - dipstick tube	(1)	**610489**
Screws to rocker cover. Suitable for all engines.		
Clamp - dipstick tube	(1)	**602449**
Screws to adjacent cylinder head bolt. Suitable for all engines where fitted.		

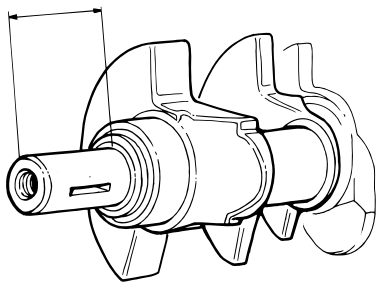
V8 Crankshaft

All parts listed are suitable for Saloon/sports and 4x4 applications unless otherwise stated.
Note: Around mid 1994, Land Rover introduced a crankshaft-driven oil pump - built into the timing cover - for certain 3.9 litre and larger engines.These engines required a crankshaft with a longer 'nose' than previous engines. For this reason, crankshafts are available with two different nose lengths, as follows:
*All 3.5 litre engines, plus factory 3.9 & 4.2 litre engines up to around mid-1994 (exact engine numbers listed below), are fitted with **short-nose** (70.6mm) cranks. These engines have camshaft-driven oil pumps and separate drivebelts for ancillary components.*
*3.9 & 4.2 litre engines from around mid-1994 (engine numbers listed below) onwards are fitted with **long-nose** (90.3mm) cranks. These engines have crank-driven oil pumps and a single, 'serpentine' drivebelt for the ancillary components.*

Please check your engine number before ordering. The exchange unit must be a similar type, otherwise a surcharge will apply.

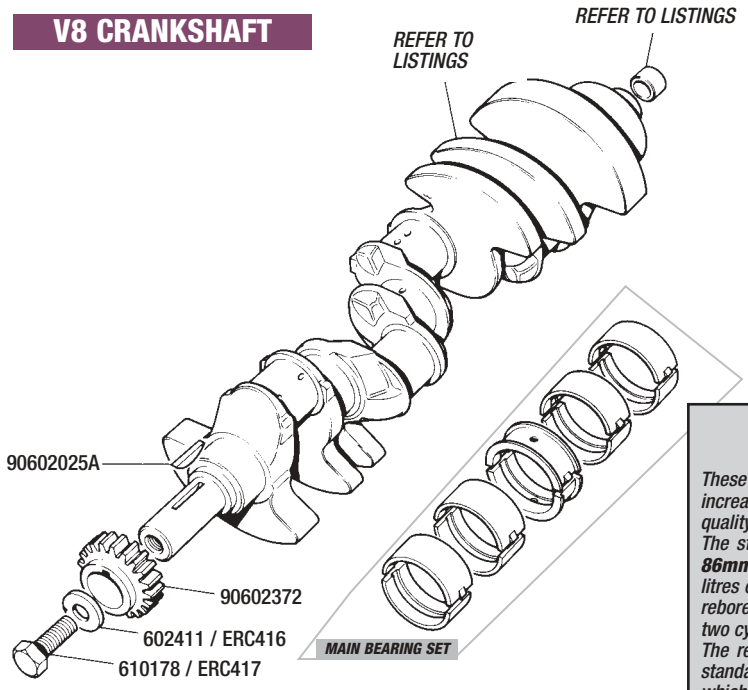
DESCRIPTION	QTY REQ.	PART No.
Crankshaft; *Reconditioned units are exchange.*		
3.5 litre (short nose)		
new, less bearings	(1)	**612989**
reground, inc. bearings	(1)	**612989R**
3.9 litre		
short nose *Factory 3.9 engines up to engine nos: 35D08966, 36D25523, 37D01931 & 38D27330.*		
new, less bearings	(1)	**612989**
reground, inc. bearings	(1)	**612989R**
long nose *Factory engines, above engine nos onwards.*		
new, less bearings	(1)	**ERR4060**
reground, inc. bearings	(1)	**ERR4060R**
4.2 litre *New, less bearings.*		
up to eng.no.40D09581 *Short nose.*	(1)	**ERR3037**
eng.no.40D09582 on *Long nose.*	(1)	**ERR4152**
4.3 & 4.8 litre stroker kits; *See 'Stroker Kits' panel.* *Includes new 86mm stroke crankshaft, con rods, pistons/rings & bearings.Not suitable for 4.0 or 4.6 litre blocks.*		
4.3 litre kit	(1)	**RB7678**
4.8 litre kit	(1)	**RB7677**
Series 2 Range Rover engines *New, less bearings.*		
4.0 litre	(1)	**ERR5090**
4.6 litre	(1)	**ERR5091**

LENGTH OF CRANK NOSE



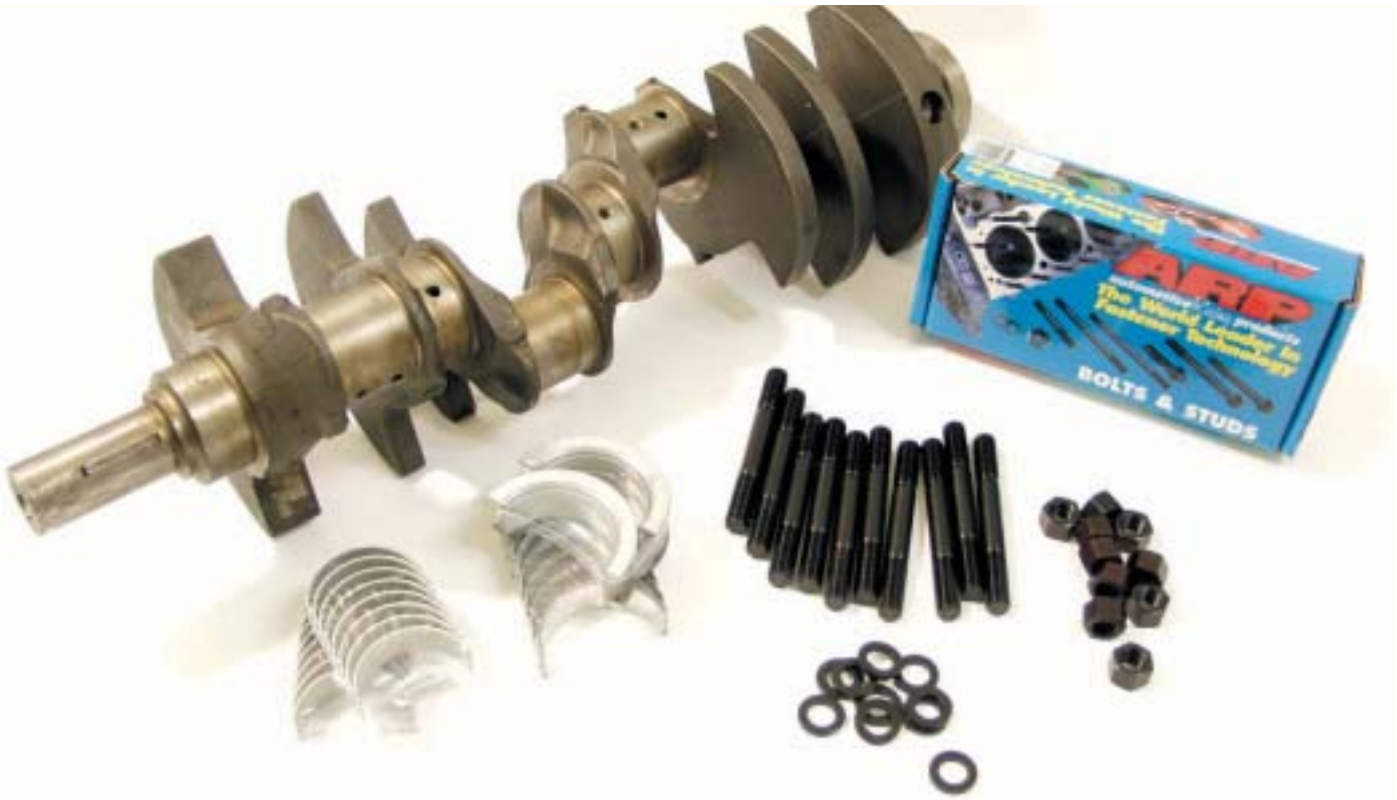
DESCRIPTION	QTY REQ.	PART No.
Main bearing set; all engines except Series 2 Range Rover.		
standard size	(1)	**RTC1718**
oversize + 0.010"	(1)	**RTC1718.010**
oversize + 0.020"	(1)	**RTC1718.020**
oversize + 0.030"	(1)	**RTC1718.030**
oversize + 0.040"	(1)	**RTC1718.040**
oversize + 0.060"	(1)	**RTC1718.060**
Series 2 Range Rover engines *4.0 & 4.6 Litre.* *Note: The latest bearing sets feature thrust plates **only** on the upper half of centre bearing.*	(1)	**STC1425**
Main bearing set - heavy duty; all engines except Series 2 Range Rover.		
standard size	(1)	**RB7452**
oversize + 0.010	(1)	**RB7452.010**
oversize + 0.020	(1)	**RB7452.020**
Bolt - main bearing cap *All models.*	(10)	**602130A**
Stud kit - main bearing cap *(Engine set) Used instead of standard main bearing bolts, these ARP studs provide superior clamping for main bearing caps, preventing them from working loose. Recommended for Performance Engines.*	(1)	**RB7456**
Cross-bolt - main bearing cap *3.9, 4.0 & 4.6 litre cross-bolted engines.*	(9)	**FB110137**
Hex-screw - main bearing cap *3.9, 4.0 & 4.6 litre cross-bolted engines.*	(1)	**SS110555**
Oil seal;		
for FB110137	(9)	**ERR3330**
for SS110555	(1)	**ERR3331**
Crankshaft oil seal (rear);		
rope type (very early engines)	(1)	**613855**
lip type	(1)	**ERR2640**
Timing cover oil seal (front);		
saloon/sports	(1)	**ERC7987A**
4x4		
early type *Press-fit seal with no retainer.*	(1)	**602178**
all other engines *With screw-on retainer.*	(1)	**ERR6490**
Spigot bush - crankshaft;		
saloon/sports		
manual transmission	(1)	**614263**
automatic transmission	(1)	**610196**
4x4 - manual & auto	(1)	**549911**
Woodruff key;		
all 3.5, 3.9 & 4.2 up to 1992	(1)	**90602025A**
3.9 & 4.2 1992 onwards *Also 4.0 & 4.6 Series 2 Range Rover type.*	(1)	**ERR2846**
Crankshaft sprocket - all models	(1)	**90602372**
Bolt - crankshaft pulley;		
starting dog type *Fitted to some 4x4 engines.*	(1)	**610178**
standard bolt	(1)	**ERC417A**
Washer - crankshaft pulley;		
starting dog type	(1)	**602411**
standard bolt type	(1)	**ERC416A**

V8 CRANKSHAFT



'Stroker' Kits

These kits enable you to enlarge the cubic capacity of your existing engine by increasing the stroke, hence the name 'stroker'. The kits comprise a brand new, high quality crankshaft, conrods and pistons (with bearings and piston rings supplied).
*The stroke is increased from the standard 3.5/3.9 engine's 71.1mm to a massive **86mm**, (longer than the standard 4.6 litre stroke of 82mm) giving a capacity of **4.3** litres on a 3.5 engine and **4.8** litres on a 3.9 engine. Both engines require a 20 thou rebore before fitting. Finally, a small amount of grinding is required to the bottom of two cylinder liners (full instructions supplied) to allow clearance for crank rotation.*
The result of the extra stroke is a huge increase in torque, even on an otherwise standard engine. Alternatively, you have the basis of a high performance engine, to which you can add our fully modified, big valve cylinder heads, uprated camshaft and sports exhaust system.



V8 Crankshaft Pulley

CRANKSHAFT PULLEY - SD1 & TR8

Pulley assembly - crankshaft - SD1/TR8 engines;

non air conditioning	(1)	**ERC420**
pulley - water pump*	(1)	**ERC386**
bolt - water pump pulley*	(3)	**ERC45**
reinforcing plate*	(1)	**602587**
pulley - power steering*	(1)	**ERC1168**
nut - power steering pulley*(3)		**NH605041**

**Comprising pulley assembly ERC420.*

with air conditioning	(1)	**ERC6521**
pulley - water pump*	(1)	**ERC387**
bolt - water pump pulley*	(3)	**BH605141**
washer - pulley bolt*	(3)	**RTC613**
pulley - air compressor*	(1)	**ERC389**
reinforcing plate*	(1)	**602587**
pulley - power steering*	(1)	**ERC1168**
nut - power steering pulley*(3)		**NH605041**

**Comprising pulley assembly ERC6521.*

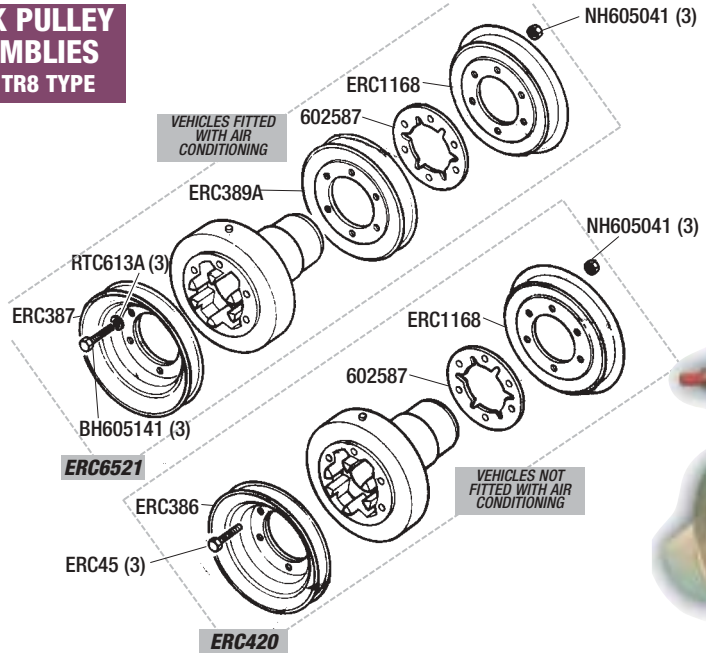
CRANKSHAFT PULLEY COMPONENTS - RANGE ROVER

Pulley - water pump/alternator belt;

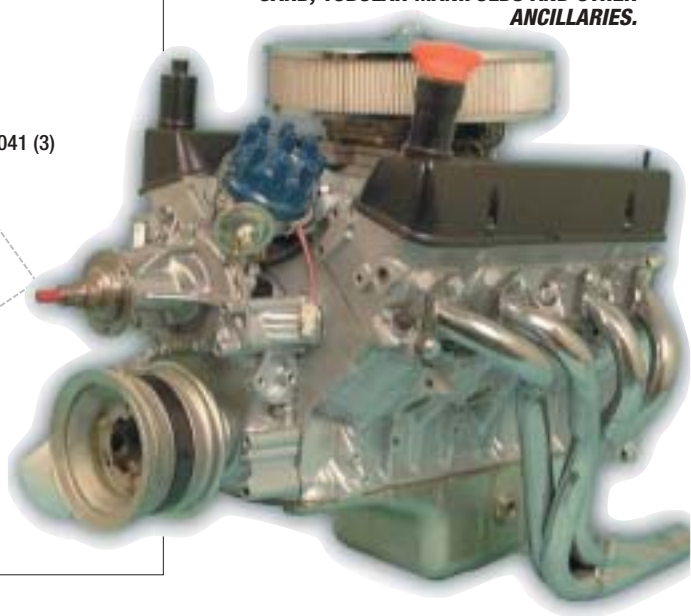
non air con		
non p.a.s. models to 1985	(1)	**611019**
p.a.s. models to 1985	(1)	**ETC4330 &**
Order 1 of each		**ETC4369**
air con models;		
p.a.s. & non p.a.s. to 1985	(1)	**ETC4330 &**
Order 1 of each		**ETC4354**
1986 on, carb & efi	(1)	**ETC5679**
Up to 1992 (VIN JA)		
1993 models up to following engine nos: 35D08967B, 36D25524B, 37D01932B 38D27331B & 40D09582B	(1)	**ERR2799**
above engine nos. onwards	(1)	**ERR4866**
Up to Series 2 Range Rover.		
Series 2 Range Rover (4.0&4.6)	(1)	**LHG100670**

Vibration damper - 3.5 & 3.9;		
all models up to 1992	(1)	**ERC5462**
1992 models up to following engine nos: 35D08967B, 36D25524B, 37D01932B & 38D27331B (3.9 litre)	(1)	**ETC7339**
above engine nos. onwards	(1)	**ERR3442**
Vibration damper - 4.2	(1)	**ERR4594**
Engine no. 40D09582B onwards.		
Pulley - power steering belt	(1)	**ETC4330**
All p.a.s. models except Series 2 Range Rover.		
Balancing rim;		
all models to 1991 (3.5)	(1)	**603301**
models from 1992 on (3.9)	(1)	**ETC7996**
Mud deflector	(1)	**613671**
Reinforcing plate	(1)	**602587**
All models except 4.0 & 4.6.		
Bolt - crankshaft pulley assembly;		
non p.a.s. models	(6)	**GHF104**
p.a.s. & air con models	(6)	**BH605141**
Nut - all models	(6)	**NH605041**

CRANK PULLEY ASSEMBLIES
SD1 & TR8 TYPE



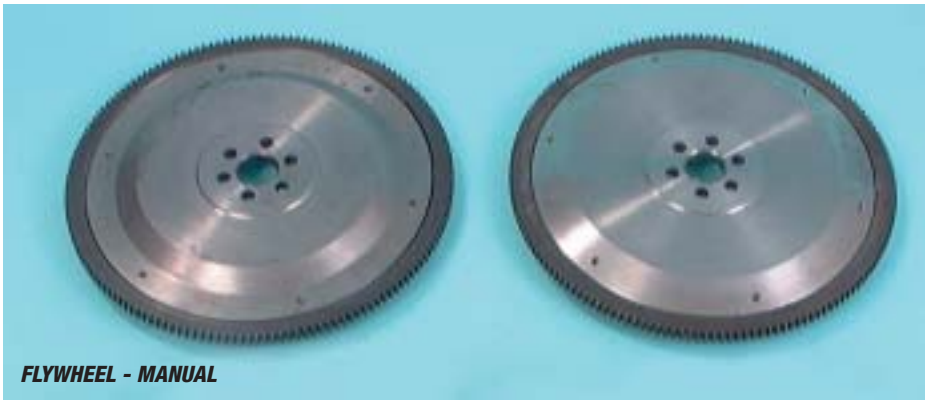
DISPLAY ENGINE FITTED WITH 4-BARREL CARB, TUBULAR MANIFOLDS AND OTHER ANCILLARIES.



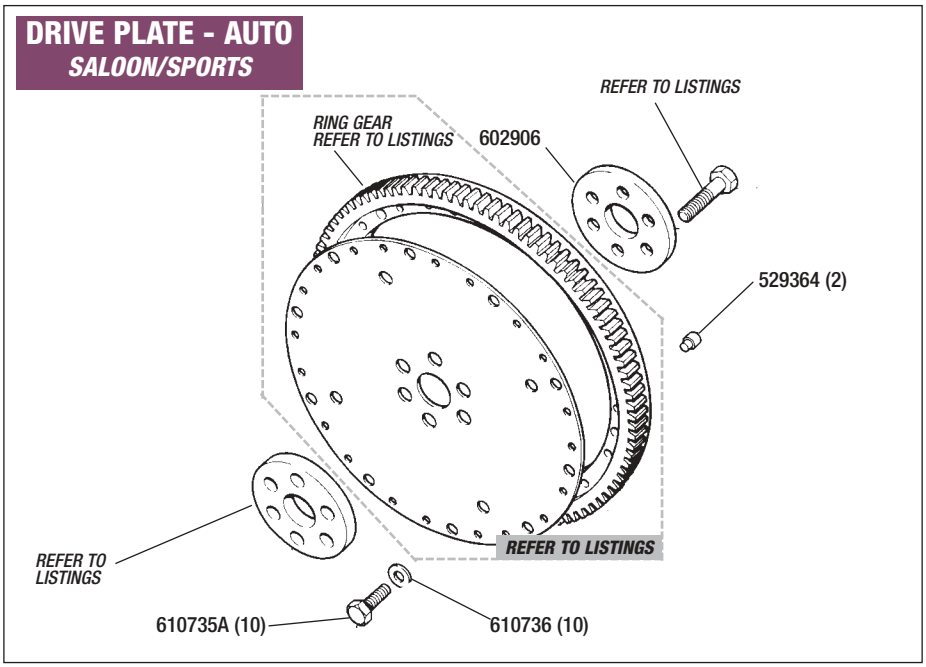
DESCRIPTION	QTY REQ.	PART No.

V8 Drive Belts

Water pump/alternator drive belt - saloon/sports;		
TR8	(1)	**GFB215**
SD1		
carb		
non air-con	(1)	**GFB215**
with air-con	(1)	**GCB51118**
efi	(1)	**GCB51118**
34A engines	(1)	**GCB10838**
Water pump drive belt - Range Rover;		
1970 to 1985 (VIN BA)		
non air con	(1)	**613602**
with air con	(1)	**614670**
1986 onwards (carb & efi)		
up to 1994 (v-belt)	(1)	**611612**
1994 onwards (serpentine belt)		
non air con	(1)	**ERR4461**
with air con	(1)	**ERR4623**
Alternator drive belt - Range Rover;		
carb		
non air con	(1)	**613602**
with air con	(1)	**614794**
efi		
1986 to 1992 (VIN JA)	(1)	**ERR2073**
1993 (VIN KA) onwards	(1)	**ERR2678**
Steering pump drive belt - saloon/sports;		
TR8	(1)	**GFB20864**
SD1		
early engines *With separate pump & reservoir.*	(1)	**GCB20825**
later engines *With combined pump & reservoir.*	(1)	**GFB20864**
Steering pump drive belt - Range Rover;		
1970 to 1994 *With separate belt for p.a.s.*	(1)	**ERC675**
1995 onwards *With serpentine drivebelt.*		
non air con	(1)	**ERR4461**
with air con	(1)	**ERR4623**
Air con compressor drive belt - saloon/sports;		
TR8	(1)	**ERC304**
SD1	(2)	**GFB20768**
Air con compressor drive belt - Range Rover;		
up to 1994 *With separate drivebelt.*	(1)	**611612**
1995 onwards *With serpentine drivebelt.*	(1)	**ERR4623**
Idler pulley belt - Range Rover *Up to Oct 1985.*	(1)	**ERC675**
Air pump drivebelt - detoxed V8 *Range Rover with detoxed carb engine.*	(1)	**RTC3267**



FLYWHEEL - MANUAL



V8 Flywheel & Driveplate

All parts listed are suitable for saloon, sports and 4x4 applications unless otherwise stated.

Flywheel (manual); *Includes ring gear.*		
saloon/sports *Suitable for 9.5"/240mm clutch.*		
standard	(1)	**612368**
lightened	(1)	**612368L**
Range Rover *Suitable for 10.5"/266.5mm clutch.* *Note: will not fit inside standard saloon/sports bellhousing.*		
all Classic models	(1)	**ERR5575**
Series 2 Range Rover	(1)	**ERR5396**
Ring gear - all manual flywheels	(1)	**611323**
Bolt - flywheel to crankshaft;		
saloon/sports	(6)	**255466**
4x4	(6)	**SH607081**
Dowel - clutch locating	(3)	**502116**
Driveplate (automatic);		
saloon/sports		
Borg Warner	(1)	**603341**
GM180	(1)	**RKC5805**
Range Rover		
3-sp *Less ring gear*	(1)	**FRC5005**
4-sp - complete assembly		
1986 to Series 2 Range Rover	(1)	**FRC7851**
Series 2 Range Rover	(1)	**ERR5658**
Bolt - driveplate to crankshaft;		
saloon/sports		
Borg Warner	(6)	**602905**
GM180	(6)	**ULC5091**
Range Rover		
all *(except Series 2 Range Rover)*	(6)	**SS607061**
Series 2 Range Rover	(6)	**SS607120**
Ring gear - all automatic vehicles *Not including Series 2 Range Rover, which is not available separately.*	(1)	**603340**
Bolt - ring gear to driveplate;		
saloon/sports	(10)	**610735**
Range Rover	(10)	**FTC4388**
Washer - ring gear to drive plate *All automatic vehicles.*	(10)	**610736**
Spacer - driveplate to crankshaft (auto);		
saloon/sports	(1)	**602906**
Range Rover		
3-sp	(1)	**FRC5003**
4-sp up to Series 2 Range Rover	(1)	**FTC651**
Spacer - to torque converter - saloon/sports;		
Borg Warner	(1)	**90603295**
GM180	(1)	**TKC7350**
Spigot aligner - Range Rover;		
3-sp	(1)	**FRC5006**
4-sp to Series 2 Range Rover	(1)	**FRC7075**
Series 2 Range Rover	(1)	**FTC4606**
Bolt - spigot aligner - Range Rover;		
3-sp	(4)	**SH110251**
4-sp to Series 2 Range Rover	(4)	**BH110111**
Series 2 Range Rover		
4.0		
up to eng 593A	(4)	**FS110141M**
eng 594A onwards	(4)	**FS110251L**
4.6		
up to eng. 450A	(4)	**FS110141M**
eng 451A onwards	(4)	**FS110251L**
Washer - spigot aligner bolt *All auto Range Rovers except Series 2 Range Rover.*	(4)	**WL110001**
Converter drive plate - auto *4-sp auto Range Rovers, 1986 to Series 2 Range Rover.*	(1)	**FRC7081**
Buttress ring - 4-sp auto Range Rover;		
1986 to Series 2 Range Rover	(1)	**FRC7080**
Series 2 Range Rover	(1)	**FTC1117**
Selective shim - torque converter height; *4-sp auto Range Rover, 1986 to Series 2 Range Rover.*		
1.25mm	(A/R)	**FRC9203**
1.45mm	(A/R)	**FRC9205**
1.65mm	(A/R)	**FRC9207**
1.85mm	(A/R)	**FRC9209**
2.05mm	(A/R)	**FRC9211**
Selective shim - torque converter height; *Series 2 Range Rover only.*		
1.20/1.25	(A/R)	**FTC1680**
1.30/1.35	(A/R)	**FTC1681**
1.40/1.45	(A/R)	**FTC1682**
1.50/1.55	(A/R)	**FTC1683**
1.60/1.65	(A/R)	**FTC1684**
1.70/1.75	(A/R)	**FTC1685**
1.80/1.85	(A/R)	**FTC1686**
1.90/1.95	(A/R)	**FTC1687**
2.00/2.05	(A/R)	**FTC1688**
2.10/2.15	(A/R)	**FTC1689**

DESCRIPTION QTY REQ. PART No.

V8 Pistons

Piston set;
Piston sets comprise 8 pistons complete with rings & gudgeon pins.

3.5 litre

low compression (8.13:1 cr)
See Single Piston section for other low comp pistons.

standard size	(1)	**RB7104**
oversize + 0.020"	(1)	**RB7104.020**
oversize + 0.040"	(1)	**RB7104.040**

standard compression (9.35:1 cr)

standard size	(1)	**RB7246**
oversize + 0.020"	(1)	**RB7246.020**
oversize + 0.040"	(1)	**RB7246.040**

Vitesse compression (9.75:1 cr)

standard size	(1)	**RB7342**
oversize + 0.020"	(1)	**RB7342.020**
oversize + 0.040"	(1)	**RB7342.040**

high compression (10.5:1 cr)

standard size	(1)	**RB7309**
oversize + 0.020"	(1)	**RB7309.020**
oversize + 0.040"	(1)	**RB7309.040**

3.9 litre
Standard size.

low compression (8.13:1 cr)	(1)	**RB7485KLC**
high comp (9.35:1 cr)	(1)	**RB7485KHC**

4.2, 4.0 & 4.6 litre **See Single Pistons**

Single Piston;
Supplied with rings & gudgeon pin.

4.2 litre - 8.94:1 cr	(8)	**STC1191S**

4.0 litre Series 2 Range Rover type
Offset gudgeon type - standard size only.

low comp (8.13:1 cr)	(8)	**ERR5555**
high comp (9.35:1 cr)	(8)	**ERR5553**

4.6 litre Series 2 Range Rover type
Offset gudgeon type - standard size only.

low comp (8.13:1 cr)	(8)	**ERR5556**
high comp (9.35:1 cr)	(8)	**ERR5554**

Cylinder liner set - 3.9 litre (1) **RB7486**
Set of 8 liners for converting 3.5 engines to 3.9 litre bore. Also suitable for replacing the liners in an existing 3.9 litre (or larger capacity) engine.

Piston & liner set - 3.9 litre (1) **RB2029**
*As **RB7486**, but kit also includes standard size 9.35:1 compression pistons and rings, for 3.9 conversions.*

4.3 & 4.8 litre stroker kits;
Includes new 86mm stroke crankshaft, con rods, pistons/rings & bearings. 4.3 kit fits to 3.5 litre engine (20 thou rebore required) for 4.3 litres. 4.8 kit fits 3.9 litre engine (94mm bore) for 4.8 litres.

4.3 litre kit	(1)	**RB7678**
4.8 litre kit	(1)	**RB7677**

NEW 3.9 PISTON & ROD

V8 Piston Rings

Piston rings;
Supplied as engine set.

3.5 litre

8.13, 8.25, 9.35 & 9.75:1 compressions

standard size	(1)	**RB7358**
oversize + 0.020"	(1)	**RB7358.020**
oversize + 0.040"	(1)	**RB7358.040**

10.5:1 compression

standard size	(1)	**RB7421**
oversize + 0.020"	(1)	**RB7421.020**
oversize + 0.040"	(1)	**RB7421.040**

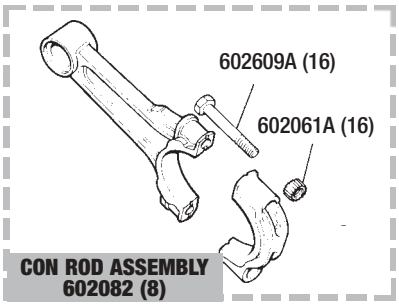
3.9 & 4.2 litre;
High & low compression ratio.

standard size	(1)	**RB7538**
oversize + 0.020"	(1)	**RB7538.020**
4.0 & 4.6 (standard size)	(1)	**STC1427**

High & low comp ratio.

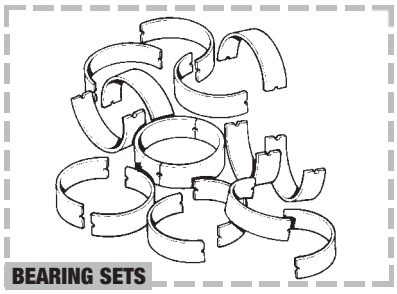
DESCRIPTION QTY REQ. PART No.

3.9 PISTON & LINER SETS



CON ROD ASSEMBLY 602082 (8)

V8 CON ROD & BEARING SETS



BEARING SETS

V8 Con Rod & Bearings

Con rod assembly;

3.5, 3.9 & 4.2 litre;

single

new	(8)	**602082**
reconditioned	(8)	**602082R**
engine set (new)	(1)	**602082K**
4.0 litre - new	(8)	**ERR4837**
4.6 litre - new	(8)	**ERR5145**

Bolt - con rod;

3.5 3.9 & 4.2 litre	(16)	**602609**
4.0 & 4.6 litre	(16)	**ERR1772**

Series 2 Range Rover type.

Nut - con rod (16) **602061A**
Not Series 2 Range Rover.

Big end bolt/nut kit (1) **RB7500**
Engine set of high performance ARP forged chrome moly' steel bolts & nuts. Superior to standard bolts. Not suitable for Series 2 Range Rover.

Bearing set - big end;
All engines except Series 2 Range Rover.

standard size	(1)	**RTC2117**
oversize + 0.010"	(1)	**RTC2117.010**
oversize + 0.020"	(1)	**RTC2117.020**
oversize + 0.030"	(1)	**RTC2117.030**
oversize + 0.040"	(1)	**RTC2117.040**
oversize + 0.060"	(1)	**RTC2117.060**

Bearing set - big end - 4.0 & 4.6 (1) **ERR1773**
Series 2 Range Rover. Standard size.

Heavy duty bearing set - big end;
All engines except Series 2 Range Rover.

standard size	(1)	**RB7451**
oversize + 0.010"	(1)	**RB7451.010**
oversize + 0.020"	(1)	**RB7451.020**
oversize + 0.030"	(1)	**RB7451.030**

DESCRIPTION QTY REQ. PART No.

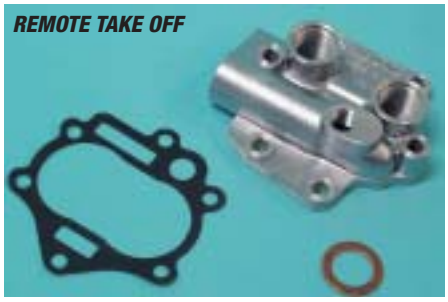
V8 Oil Pump & Filter

Differences Between Oil Pumps

The oil pump of the Rover V8 engine, from its introduction in the 1960s until late 1994, comprises a pair of pump gears which rotate inside a housing in the timing cover. One gear - the idler - is driven by the other, which includes a shaft that is driven off the end of the distributor. The distributor, in turn, is driven by a skew gear on the end of the camshaft.
Pre SD1-era Rover V8 engines (including Rover P5, P6 and early Range Rover) feature a pair of "short" oil pump gears, the driven shaft of which has a slot into which the tooth of the distributor shaft engages.
From 1976 (SD1-era), the oil pump is improved by longer gears, the driven shaft of which is now toothed to engage in a slot in the distributor shaft.
For two reasons, the two types are not interchangeable:
1. the longer gears of a post-1976 engine will not fit into the housing of a pre-76 timing cover.
2. the pre-76 distributor will not engage with the shaft of a later oil pump gear.
However, timing covers are fully interchangeable, which means that an early engine can benefit from the later oil pump arrangement as long as the whole timing cover, complete with distributor, is fitted.
Alternatively, we supply an oil pump uprating kit (RB7480), specifically for pre-76 engines, which features a spacer for the oil pump cover in order to accommodate the longer gears supplied in the kit. The gears also feature the early type of distributor engagement slot.
From late 1994, a redesigned timing cover, incorporating an integral crank-driven oil pump, is fitted to Land Rover V8 engines. This supersedes the earlier, distributor-driven oil pump. However, the later arrangement, while more efficient, is ***not*** *a straight swop for the earlier timing cover, as a longer crankshaft nose is required to drive the oil pump. In addition, ancillaries, such as water pump, alternator and power steering pump would have to be changed.*

Oil filter;
- saloon/sports
  - up to 1976 (pre SD1 type) (1) **GFE145**
  - 1976 onwards (1) **GFE187**
- 4x4
  - early engines (1) **RTC3186**
    Engine nos: 341,355 & 359.
  - all other engines (1) **ERR3340**
    Including Series 2 Range Rover.

Oil pump cover;
- early engines (1) **602485**
  Pre SD1-type engines.
- all other engines (1) **BHM1554**
  Up to late 1994.
  Complete with relief valve & spring, plus oil pressure switch.

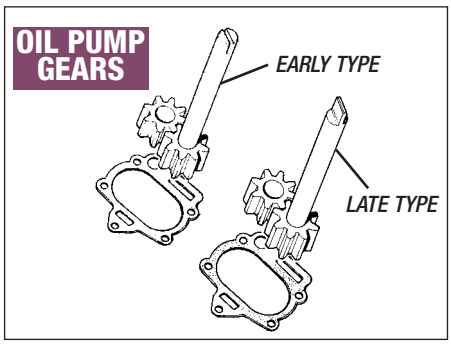


Oil pump cover/remote take-off (1) **RO1105**
Very low profile oil pump cover & relief valve housing for maximum clearance. Use with remote oil filter mounting kit.

Remote oil filter mounting kit (1) **RB7116**
Allows mounting of oil filter away from engine.
Kit includes filter housing, hoses & mountings. Not suitable for Series 2 Range Rover.

COMPONENT & COMMISSION NUMBERS
Where commission and/or component serial numbers are quoted in this parts catalogue (to help identify factory specification changes), they refer to components and/or parts when the vehicle was new, and not subsequent replacements.

DESCRIPTION QTY REQ. PART No.



Oil pump repair kit (1) **RTC2044**
Suitable for all engines with separate oil pump (pre-1994). Includes pressure relief valve, spring & gasket.

Uprated pressure relief valve spring (1) **RB7457**
For all separate oil pump models (pre-1994). Increases oil pressure by approx. 10 psi.

Gear with shaft - oil pump;
- early engines (1) **602018**
  Short gear with slotted shaft.
- all other engines (1) **ERC1351A**
  Longer gear with toothed shaft.

Idler gear - oil pump;
- early engines (1) **602017**
  Short gear.
- all other engines (1) **614037**
  Longer gear.

Uprating kit - oil pump (1) **RB7480**
Early models only (pre-SD1).
Kit includes spacer plate and longer gears to uprate early pumps to later specification. Increases pressure and volume.

Gasket - oil pump cover (1) **90602072A**

Bolt - pump mounting;
- 7/8" (3) **602910**
- 1 1/4" (2) **602912**
- 1 9/16" (1) **602913**

Blanking plug - oil pump (1) **151203**
Pressure switch outlet.

Washer (1) **243967**
For blanking plug.

Oil pressure switch;
- TR8 (1) **GPS117**
- SD1
  - 3 prong type (1) **GPS123**
  - single prong type (1) **GPS110**
- Range Rover (1) **STC4104**

Washer *(For pressure switch)* (1) **243967**

Oil pressure transmitter - early vehicles;
- SD1 engines
  - '0 - 100' psi gauge (1) **DRC242**
  - '0 - 60' psi gauge (1) **DRC2479**
- Range Rover
  - early engines (1) **555947**
    Engine nos: 341,355 & 359
  - other engines (where fitted) (1) **DRC2479**

Washer *(Pressure transmitter)* (1) **243967**

Oil temperature transmitter;
Where fitted.
- for 120ºc gauges (1) **560794**
- for 140ºc gauges (1) **623050**
- for 'C - MAX' gauges (1) **PRC2236**

Adaptor - oil temperature transmitter;
- Range Rovers up to 1982 (1) **611514**
- Range Rovers from 1982 on (1) **273166**

Oil pressure gauge kit (1) **RX1351**
Aftermarket capillary type. Includes gauge & fittings.

Oil pressure/water temp gauge kit (1) **RX1351W**
As above, Dual function gauge.

Bracket - oil pressure gauge (1) **RB7050**

Oil pump priming tool;
For efficient priming of the oil pump before initial start-up. Priming tool engages with the oil pump shaft through the distributor aperture in the timing cover (requires removal of distributor). Oil pump can then be primed using an electric/cordless drill. No need for petroleum jelly!
Nb. with the rocker covers removed, a visible oil supply to the rocker gear is confirmation that the system is primed.
- early type oil pump shaft (1) **RX1431E**
  Slotted shaft (see illustration above).
- late type oil pump shaft (1) **RX1431L**
  Toothed shaft (see illustration above).

DESCRIPTION QTY REQ. PART No.

V8 Oil Cooler (Engine)

If high oil temperatures are a problem, for example when towing, the V8 engine will benefit from the fitting of an oil cooler. We recommend fitting a thermostat at the same time, to avoid overcooling.
Note: An oil cooler was incorporated into the Range Rover's coolant radiator with the introduction of the 3.9 litre engine. The Series 2 Range Rover has a separate oil cooler.

UNIVERSAL OIL COOLER

Oil cooler kit;
Includes radiator, hoses and all fittings.
- saloon/sports (1) **RB7260**
- Range Rover (1) **RA1089**
  All models up to 1990.

Thermostat - oil cooler (1) **RS1456**

RANGE ROVER 3.9 OIL COOLER & COMPONENTS

Oil cooler take-off - 3.9 engine;
- up to VIN JA624755 (1992) (1) **ERC8501**
- from VIN KA624756 (1993) (1) **ERR2490**

Adaptor - oil filter (1) **ERC2226**

O-ring (1) **ERR852**

Oil cooler hose;
- early 3.9 engine - up to 1991 (VIN HA)
  - engine to cooler
    - to VIN FA (1) **NTC6289**
    - VIN GA onwards (1) **NTC5972**
  - cooler to engine
    - to VIN FA (1) **NTC5620**
    - VIN GA onwards (1) **ESR137**
- 3.9 & 4.2 - 1992 (VIN JA) onwards;
  - engine to cooler
    - to VIN JA624755 (1) **ESR356**
    - VIN KA ('93) to LA ('94) (1) **ESR1672**
    - VIN MA (1995) onwards (1) **PBP101150**
  - cooler to engine
    - to VIN JA624755 (1) **ESR355**
    - VIN KA ('93) to LA ('94) (1) **ESR1671**
    - VIN MA (1995) onwards (1) **PBP101160**

Adaptor - hose to radiator - all models;
- to VIN JA (1992) (2) **NTC3858**
- from VIN KA (1993) (2) **ESR1262**

Adaptor - pump take-off to hose - all models;
- to VIN JA (1992) (2) **ETC9064**
- from VIN KA (1993) (2) **ESR1239**

Sealing ring - adaptor;
- to VIN LA (1994) (2) **ETC9065**
- VIN MA (1995) onwards (4) **ESR1594L**

Oil cooler - Series 2 Range Rover;
- 4.0 litre (1) **ESR3204**
- 4.6 litre (1) **ESR3205**

Oil cooler hoses - Series 2 Range Rover;
- engine to cooler (1) **ESR4415**
- cooler to engine (1) **ESR2697**

Sealing ring - cooler hoses (4) **ESR2237**

V8 Timing Cover & Fittings

Timing Cover Identification (to 1994)

There are 2 main types of timing cover, fitted up to late 1994:

1. *saloon/sports, as fitted to Rover saloons and Triumph TR8s.*
2. *4x4, as fitted to Range Rovers and Land Rovers.*

The saloon/sports version has a more compact water pump, mounted lower down for improved bonnet clearance. The 4x4 version has a water pump mounted higher up. In addition, the 4x4 timing cover usually has a mud shield to protect the front crank oil seal.

Both types will fit all versions of the engine (providing suitable ancillaries are available) and both types are further categorised as follows:

The timing cover fitted to early vehicles (prior to 1976) incorporates an oil pump gear-housing designed for the early, "short" oil pump gears (refer to Oil Pump).

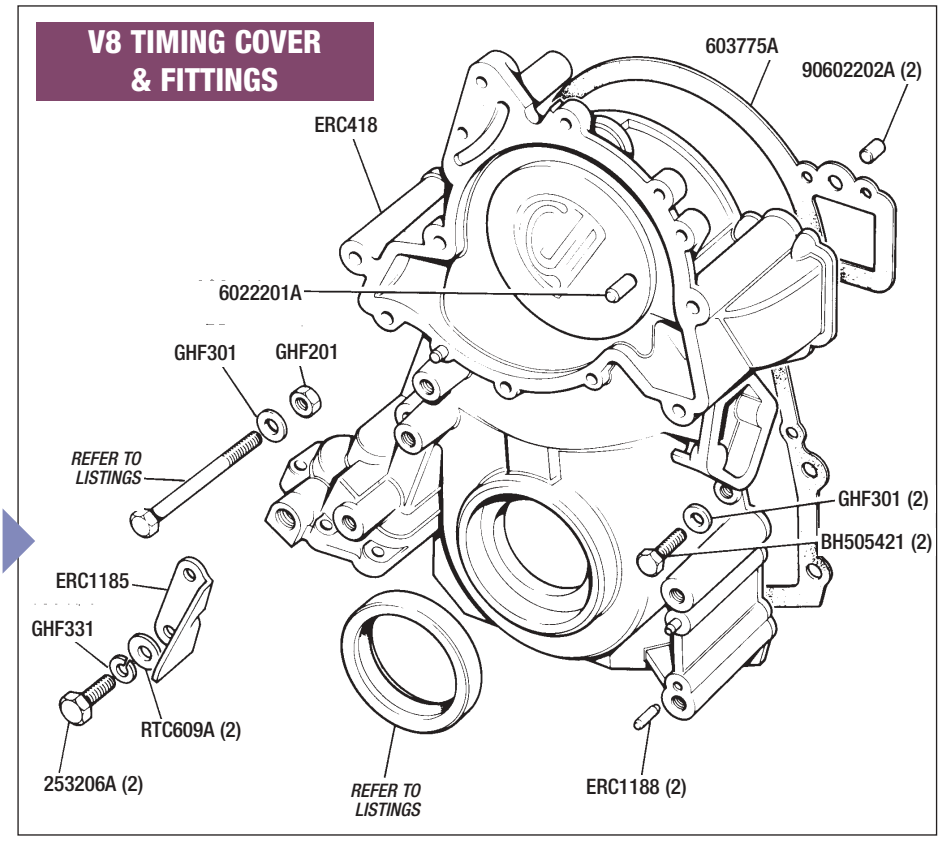
Later timing covers have a deeper gear-housing, accommodating the longer pump gears used from the SD1 (1976) until the introduction of the crank-driven oil pump (late 1994 - see below). Although the two types of timing cover are interchangeable, the oil pump gears and distributor would also need to be changed.

*If, however, uprating the early (pre 1976) oil pump is your intention, purchase Oil Pump Kit **RB7480**, which contains a spacer plate and longer gears, along with the correct distributor drive, designed specifically for the early timing cover. (RB7480 is not suitable for later timing covers, 1976 onwards).*

Timing Cover Identification (1994 on)

The timing cover fitted to the Series 2 Range Rover is of an updated design, unsuitable for earlier models due to the fact that there is no provision for a distributor.

There is, however, an "intermediate" timing cover, fitted to late 3.9 and 4.2 models immediately prior to the introduction of the Series 2 Range Rover, which includes a combination of features from both types, such as the crank-driven oil pump and conventional distributor. Although this timing cover will fit earlier models, it can be considered as unsuitable, as the oil pump drive requires a "long-nose" crank, not fitted to earlier engines.



DESCRIPTION	QTY REQ.	PART No.
Timing cover;		
saloon/sports - 1976 on	(1)	**ERC418**
Deeper oil pump gear housing.		
Range Rover Classic		
short-gear oil pump engines	(1)	**613260**
Engine nos: 341,355,359 & 398, suffix A,B,C,D,E.		
long-gear oil pump engines	(1)	**ETC7385**
Engine nos: 341,355,398, suffix F and all other engines up to 1994.		
3.9 & 4.2 litre (1995 on)	(1)	**ERR3434**
Engine nos: 35D08928B, 36D25155B, 37D02090B, 38D27238B &40D09582B onwards.		
intermediate engines	(1)	**ERR6814**
Crank-driven oil pump & distributor (1994 on).		
Series 2 Range Rover	(1)	**ERR6438**
Gasket - timing cover;		
all engines up to 1994	(1)	**603775A**
Saloon/sports & 4x4.		
3.9 & 4.2 litre (1995 onwards)	(1)	**ERR7280**
Engine nos: 35D08928B, 36D25155B 37D02090B, 38D27238B & 40D09582B onwards.		
Series 2 Range Rover	(1)	**ERR7280**
Timing cover oil seal (front);		
saloon/sports	(1)	**ERC7987A**
4x4		
early type	(1)	**602178**
Press-fit seal with no retainer.		
all other engines	(1)	**ERR6490**
With screw-on mud shield.		
Mud shield - oil seal	(1)	**247766**
Where fitted - 4x4 only.		
Screw - mud shield	(8)	**78782**
4x4 engines.		
Timing pointer;		
saloon/sports	(1)	**ERC1185**
4x4 - all engines	(1)	**ETC7345**
Screw - timing pointer	(2)	**HU755**
Washer - timing pointer screw	(2)	**WM600041**
Bolt - timing cover to block;		
saloon/sports		
5/16" UNC x 3"	(1)	**BH505241**
5/16" UNC x 4 1/4"	(1)	**254035**
5/16" UNC x 1 1/4"	(3)	**SH505101**
Bolt - timing cover to block;		
Range Rover Classic		
up to 1992		
5/16" UNC x 3"	(1)	**BH505241**
5/16"UNC x 4"	(1)	**602388**
5/16" UNC x 1 1/8"	(3)	**SH505091**
1992 onwards *(flanged)*	(5)	**FB505251S**
	(1)	**FB505311S**
	(3)	**FB505381S**
Series 2 Range Rover *(flanged)*	(5)	**FB505171S**
	(4)	**FB505241S**
Nut - timing cover retaining	(1)	**NH605041**
All engines except Series 2 Range Rover.		
Dowel - water pump locating	(2)	**602201**
All engines except Series 2 Range Rover.		
Blanking plate - fuel pump	(1)	**610030**
Early engines fitted with electric fuel pump.		
Gasket - blanking plate	(1)	**602180**
Oil pressure switch	(1)	**STC4104**
Series 2 Range Rover only - fitted to timing cover.		

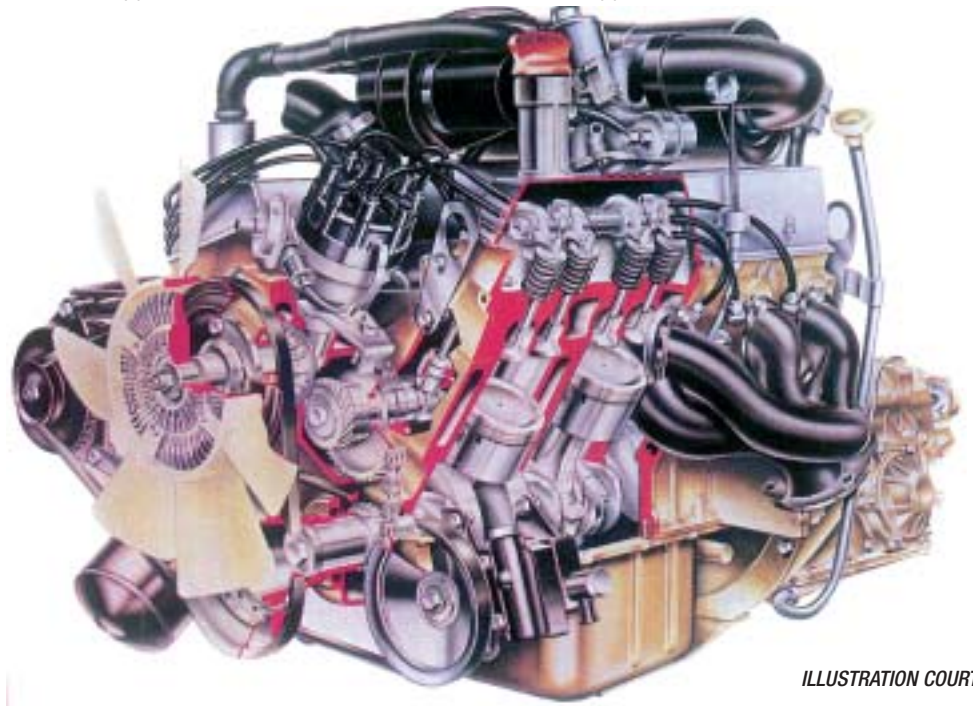


ILLUSTRATION COURTESY OF AUTOCAR

DESCRIPTION QTY REQ. PART No.

Flywheel

All parts listed are suitable for saloon, sports and 4x4 applications unless otherwise stated.

Flywheel (manual) *(Includes ring gear)*;
- saloon/sports *(Suitable for 9.5"/240mm clutch)*
  - standard (1) **612368**
  - lightened (1) **612368L**
- Range Rover *(Suitable for 10.5"/266.5mm clutch)*
  Note: will not fit inside standard saloon/sports bellhousing.
  - all Classic models (1) **ERR5575**
  - Series 2 Range Rover (1) **ERR5396**

Ring gear - all manual flywheels (1) **611323**

Bolt - flywheel to crankshaft;
- saloon/sports (6) **255466**
- 4x4 (6) **SH607081**

Dowel - clutch locating (3) **502116**

Clutch Components

*We supply **Standard** and **Performance** clutch kits for all Rover V8 engine applications. All kits include clutch cover, plate & release bearing.*
***Standard** clutch kits are straight replacements for standard and mildly uprated engine applications.*
***Performance** clutch kits are for serious performance applications - capable of withstanding up to 400lb/ft torque - and bolt to the existing flywheel with no modifications necessary.*
We also supply clutch components separately (Standard only).

Clutch kit - standard;
- saloon/sports - 5-sp gearbox
  Kit includes clutch cover, plate & release bearing.
  - non self-centering* (1) **RB7335**
  - self-centering* (1) **RB7491**

  **Self-centering clutches were introduced in May 1985 for the Rover SD1. The term refers to the light weight, one-piece release bearing/carrier assembly, which improves pedal feel.*
  Self-centering clutches are suitable for fitting to earlier vehicles as a complete kit only.
- Range Rover
  Kit includes clutch cover, plate, release bearing & clip.
  - 4-sp (LT95) (1) **GCK203**
  - 5-sp
    - 3.5 litre (1) **GCK204**
    - 3.9 litre
      - up to 1991 (VIN HA) (1) **GCK775**
      - 1992 (VIN JA) onwards (1) **RA1091**

      3.9 & 4.2 litre engines.

Clutch kit - Performance - uprated;
- Saloon/Sports (1) **RB7491UR**
  9.5"/240mm diameter.
- 4x4 (1) **RA1091UR**
  10.5"/266.5mm diameter.
  Not suitable for 4-sp (LT95).

Clutch cover - standard;
- saloon/sports
  - non self-centering (1) **GCC180**
  - self-centering (1) **GCC90247**
- Range Rover
  - 4-sp (LT95) (1) **576476**
  - 5-sp
    - 3.5 litre (1) **576476**
    - 3.9 litre
      - up to 1991 (VIN HA) (1) **FTC813**
      - 1992 (VIN JA) onwards (1) **FTC2001**

      3.9 & 4.2 litre engines.

Clutch plate - standard;
- saloon/sports (1) **GCP242**
  Suitable for both types of clutch.
- Range Rover
  - 4-sp (LT95) (1) **FRC6631**
  - 5-sp
    - 3.5 litre (1) **FRC6685**
    - 3.9 litre
      - up to 1991 (VIN HA) (1) **FTC814**
      - 1992 (VIN JA) onwards (1) **FTC2002**

      3.9 & 4.2 litre engines.

Release bearing- standard;
- saloon/sports
  - non self-centering (1) **GRB209**
  - self-centering (1) **GRB90247**

    Incorporates carrier.
- Range Rover *(all models)* (1) **FRC9568**

Carrier - release bearing (1) **FRC5368A**
Saloon/sports, non self-centering only.

Retaining clip - release bearing (1) **576203**
Range Rover only, all models.

Alignment tool - clutch (1) **RX1386T**

Clutch Release Mechanism

Release fork - clutch;
- saloon/sports - 5-sp gearbox (1) **LBU1234**
- Range Rover
  - 3.5 litre (1) **576137**
    4-sp & 5-sp.
  - 3.9 litre
    - up to eng no.35D07802A (1) **576137**
    - eng no.35D07803A onwards(1) **FTC2957**

      Approx.1992 up to March 1994.
      (Fitted with LT77S gearbox).
    - March '94 onwards (1) **576137**

      (Fitted with R380 gearbox).

Slipper pad - release fork (2) **159003A**
Saloon/sports applications only.

Pivot pin;
- saloon/sports (1) **UKC13**
- Range Rover
  - 4-sp (1) **594176**
  - 5-sp
    - LT77 & LT77S (1) **FRC2528**

      All models up to March 1994.
    - R380 (1) **FRC2528**

Cap - pivot pin (1) **571161**
All V8 models and diesel models to March 1994.

Retainer clip - pivot (1) **571163**
All models up to March 1994.

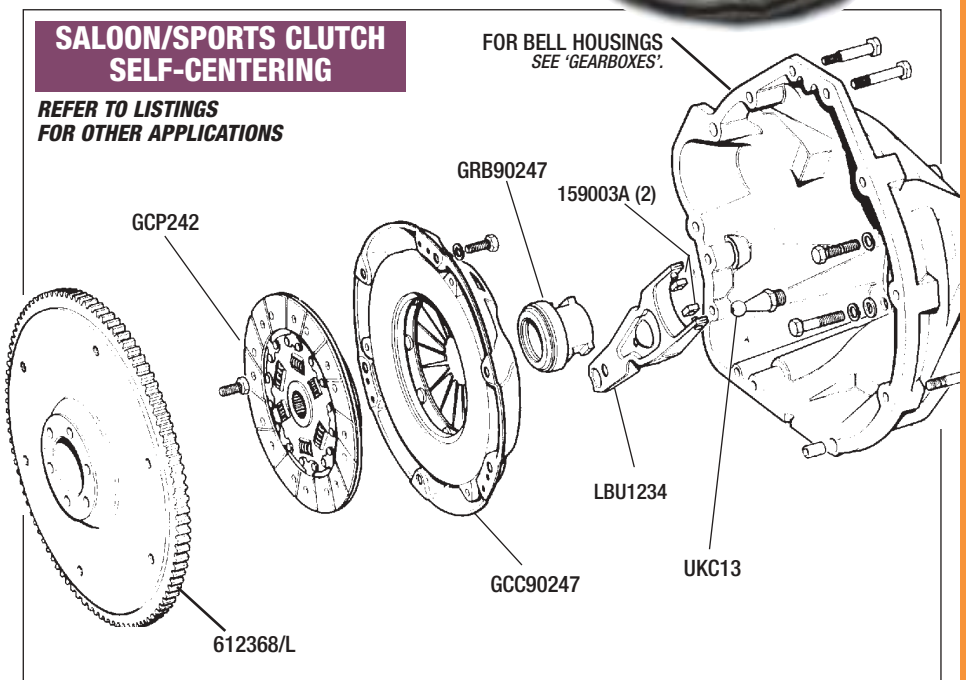
Clutch Fluid

Fluid - clutch & brake;
- Unipart (Dot 3) - 1 litre (A/R) **GBF103**
- silicone fluid
  Replaces conventional clutch and brake fluid.
  Will not harm paintwork if spilt.
  - 0.5 litre (A/R) **RX1327**
  - 1 litre (A/R) **RX1326**

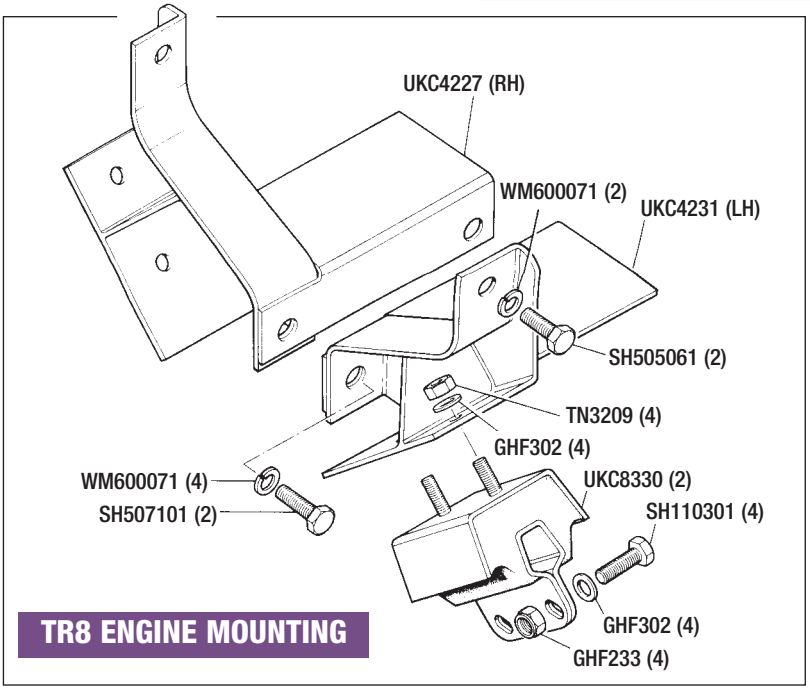
PERFORMANCE CLUTCH KIT (SHOWN FITTED)

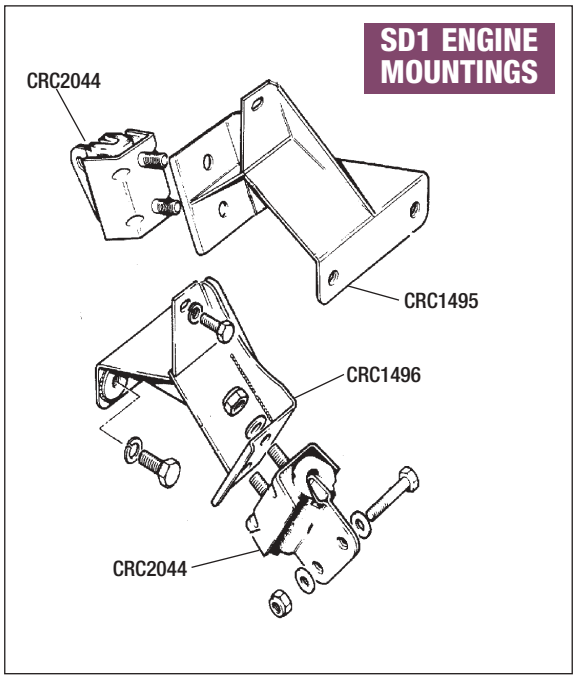
SALOON/SPORTS CLUTCH SELF-CENTERING

REFER TO LISTINGS FOR OTHER APPLICATIONS



DESCRIPTION QTY REQ. PART No. DESCRIPTION QTY REQ. PART No. DESCRIPTION QTY REQ. PART No.





Engine Mountings

Engine mounting rubber - V8;

Rover SD1	(2)	**CRC2044**
Triumph TR8	(2)	**UKC8330**
Range Rover*		
1970 to late 1994 (VIN LA)	(2)	**STC434**
late 1994 (VIN MA) onwards		
rh	(1)	**ANR2803**
lh	(1)	**ANR2804**

**All V8 models from 1970 until mid 1994 are fitted with the same type of engine mountings. From late 1994 (VIN prefix MA), a redesigned front cover (incorporating a crank-driven oil pump) is fitted to V8 models; as a result, the engine mountings have been altered.*
The changes affect the following engine numbers onwards:
3.9 litre - 35D08928B, 36D25155B, 37D02090B & 38D27238B.
4.2 litre - 40D09582B.

Nut - engine mounting;

Rover SD1 (M10)	(4)	**GHF233**
Triumph TR8	(4)	**TN3209**
Range Rover (M12)	(4)	**FX112041L**

Mounting bracket - V8;

Rover SD1		
rh	(1)	**CRC1495**
lh	(1)	**CRC1496**
Triumph TR8		
rh	(1)	**UKC4227**
lh	(1)	**UKC4231**
Range Rover		
rh	(1)	**ANR4697**
lh	(1)	**ANR4696**

Bolt - mounting bracket to engine block;
All engines.

upper	(2)	**SH505061**
lower	(4)	**SH507101**

Spring washer - mounting bolt (6) **WM600071**

Gearbox Mountings

Gearbox mounting;

Rover SD1		
manual gearbox	(2)	**CRC454**
Borg Warner auto	(2)	**CRC454**
GM180 auto	(1)	**TKC1044**
Triumph TR8		
original TR8	(1)	**TKC2642**
TR7 V8	(1)	**TKC1044**
Range Rover		
4sp manual	(2)	**STC434**
5sp manual		
up to 1985 (VIN BA)	(2)	**STC434**
1986 (VIN CA) onwards	(2)	**NTC5890**
3sp auto	(2)	**STC434**
4sp auto		
up to 1994 (VIN LA)	(2)	**NTC5890**
1995 (VIN MA) onwards	(2)	**ANR2805**

Rubber buffer - Rover SD1 (1) **CRC581**
Centre of rear mounting bracket, manual & Borg Warner auto.

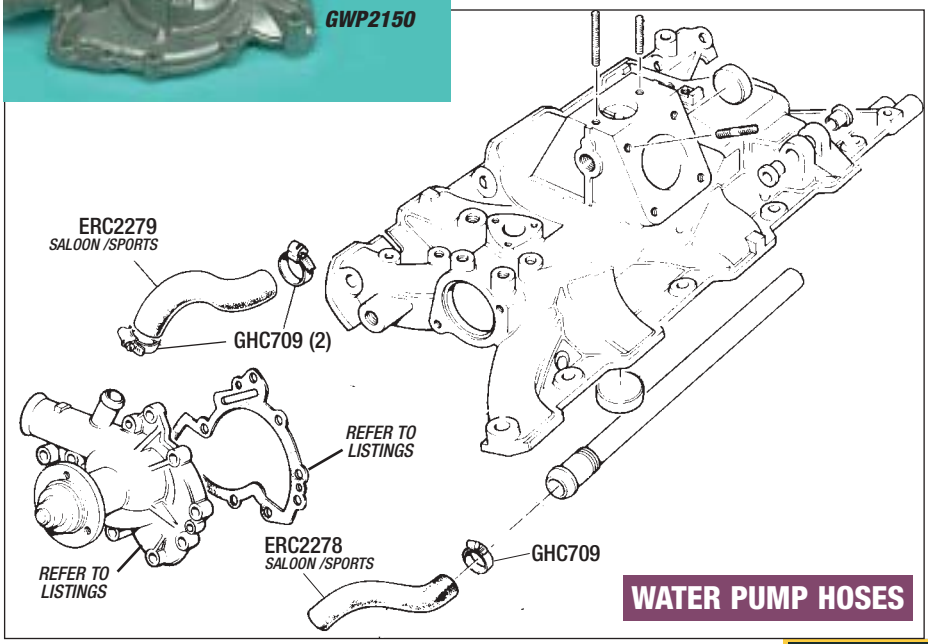
RANGE ROVER ENGINE & GEARBOX MOUNTS

DESCRIPTION QTY REQ. PART No.

Water Pump - V8

Water pump - saloon/sports;
- Rover P6 3500 (1) **GWP310**
  Very short nose water pump, suitable for confined spaces. Should be used with matching pulley & crank pulley.
- Rover SD1
  - all engines 1976 to 1982 (1) **GWP2150**
  - carb engines 1982 on
    - non air conditioning (1) **GWP2150**
    - with air conditioning (1) **GWP2148**
  - efi engines (1) **GWP2149**
    *Screw-on viscous coupling, with **left hand** thread. (see photo)*
- Triumph TR8
  - original fitment (1) **GWP204**
    With bolt-on type viscous coupling/extension mounting.
  - alternative fitment (1) **GWP2148**
    *Similar to SD1 efi pump (GWP2149) except slightly longer. Screw-on viscous coupling with **left hand** thread.*

Water pump - Range Rover;
- 1970 to Oct 1985;
  - non air conditioning
    - early vehicles - standard (1) **STC1611**
      With direct driven metal fan.
    - early vehicles - optional (1) **GWP317**
      With viscous driven, 13-blade fan.
    - engine nos: 341,355,359 (1) **GWP316**
      Suffix C,D & E. 7-blade fan on engine side of viscous unit.
    - all other models (1) **STC1610**
      7-blade fan fitted to radiator side of viscous unit.
  - with air conditioning
    - 1970 to 1982 (1) **STC486**
      7-blade fan fitted to engine side of viscous unit.
    - 1982 to 1986 (1) **STC482**
      7-blade fan fitted to radiator side of viscous unit.
- 1986 onwards;
  Efi & carb vehicles, with & without air con.
  Note: vehicles from VIN MA650327 (1994) onwards are fitted with a redesigned front cover, incorporating a crank-driven oil pump.
  - up to VIN MA650326 (1994) (1) **STC483**
  - VIN MA650327 (1994) on (1) **STC4378**

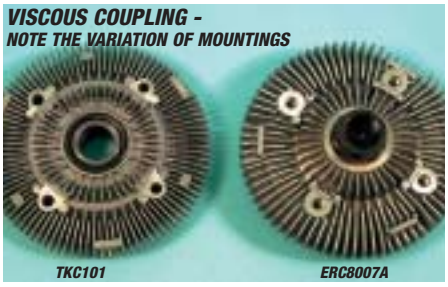


DESCRIPTION QTY REQ. PART No.

Water Pump Fittings

Gasket - V8 water pump;
- saloon/sports engines (1) **610756**
  Suitable for all Rover saloons & Triumph TR8.
- Range Rover
  - up to VIN MA650326 (1994) (1) **ERR2428**
  - VIN MA650327 (1994) on (1) **ERR4077**

Pulley - water pump;
- Rover P6 3500 (1) **602582**
- Rover SD1
  - 1976 to 1982 (1) **ERC474**
  - 1982 onwards (1) **ERC5792**
- Triumph TR8
  - original (1) **ERC3166**
  - alternative (1) **ERC5792**
    For use with GWP2149 alternative pump.



Viscous coupling;
- Rover SD1
  - all engines 1976 to 1982 (1) **TKC101**
  - carb engines 1982 on
    - non air conditioning (1) **TKC101**
    - with air conditioning (1) **ERC8660**
  - efi engines (1) **ERC8007A**
    With or without air conditioning. Screw-on type (left hand thread).
- Triumph TR8 (original) (1) **ERC94**
- Range Rover
  - carb engines
    - early vehicles (13-blade fan)(1) **603930**
    - engine nos: 341,355 &359 (1) **ERC1468**
      Suffixes A,B,C,D &E.
      7-blade fan fitting to engine side of viscous unit.
    - all other carb models (1) **ERC2849**
      Fan fits to radiator side of viscous unit.
  - efi engines
    - with 7-blade fan (1) **ERC2849**
    - with 11-blade fan (1 **ETC1260**
      Alternative for warmer climates.

Hose - water pump to engine;
- saloon/sports
  - water pump to heater pipe (1) **ERC2279**
  - thermostat bypass pipe (1) **ERC2278**
- Range Rover
  - carb vehicles (1) **ERC2320**
  - efi vehicles
    - 3.5 engines (1) **ERC2319**
    - 3.9 engines
      - heater supply (1) **ETC6889**
        From inlet manifold.
      - heater return (1) **ETC6890**
        To water pump.

DESCRIPTION QTY REQ. PART No.

Hose clips for above hoses (2) **GHC709**

Thermostat;
Suitable for all engines.
- 74° (1) **ETC4761**
- 82° (1) **GTS104**
- 88° (1) **GTS106**

Gasket - thermostat housing;
- Rover P6 type (1) **GTG116**
  With thermostat bypass in housing.
- SD1/TR8 (1) **GTG125**
- Range Rover
  - early engines (1) **610387**
    Pre 1976.
  - all other engines (1) **ERR2429**

Thermostat housing;
- saloon/sports
  - standard type (1) **RB7211**
    Aluminium.
  - P6 type
    With integral bypass pipe. Suitable for Offenhauser/Edelbrock manifolds.
    - steel (1) **RB7322**
    - chrome plated (1) **RB7436**
- Range Rover (1) **ETC6135**
  Late type. Incorporates air con fan switch (switch not included).

Switch - air con fans (1) **PRC3505**
Late Range Rover thermostat housing.

Pressure cap - expansion tank;
- saloon/sports (15psi) (1) **GRC110**
- Range Rover
  - all engines 1970 to 1990 (1) **PCD100150**
    To VIN GA.
  - 1990 to 1994 (VIN LA) (1) **PRC7925**
    Combined pressure cap & low coolant sensor.
  - 1995 (VIN MA) onwards (1) **NTC7161**
    15 psi.

Temperature Transmitter

Temperature sender unit - coolant;
Located at front of inlet manifold - all engines.
- carb models
  - air con (1) **PRC6317**
  - non air con (1) **GTR108**
- efi models
  - 3.5 litre -
    - air con (1) **PRC6317**
    - non air con (1) **GTR108**
  - 3.9 litre (1) **PRC7918**
    With & without air-con.

Washer - temperature sender unit (1) **90568054**

Antifreeze

It is recommended that a minimum 50% antifreeze mix is maintained all year round on aluminium engines, as a corrosion inhibitor.

Antifreeze:
- 1 litre (A/R) **GAC2018**
- 5 litre (A/R) **GAC2019**

Kenlowe Fans

Electric fan kits complete with everything needed to replace engine-driven & viscous fans. Kits include fan, mountings, wiring and full instructions.

Kenlowe electric fan kit;
- saloon/sports applications
  - standard duty 12" fan (1) **RB7065**
  - heavy duty 14.5" fan (1) **RS1537**
- 4x4 applications
  - without air conditioning (1) **RA1094**
  - with air conditioning (1) **RA1095**

Temperature sensor - kenlowe (1) **KLM1416**
Replacement sensor. Fits inside top radiator hose.

DESCRIPTION QTY REQ. PART No.

Carb Identification

In order to select the correct parts, this section will help to identify the type of carbs fitted to your engine. It is for identification purposes only.

Carb Identification - Stromberg CD175 & SU HIF.
Both makes of carburettor have a silver tag - stamped with an identification number - which is attached to the carb by one of the dashpot retaining screws.
(Note; both rh & lh carbs have the same number but with an r or l suffix as appropriate). However, if the tag is missing, the engine number will help you to identify the carburettors, providing they have not been replaced by a previous owner. (For detailed information & specification of engine numbers, please refer to the 'V8 ENGINE' section on Page 6).

ROVER SD1

*All Rover SD1 3500 saloons from 1976 to 1981 were equipped with a pair of SU HIF6 carburettors with a manual choke. The tag number on these carbs is **FZX1316R** (right hand carb) or **FZX1316L** (left hand).*
From 1982 until 1985, SD1 3500 carb engines were fitted with Stromberg CD175 carbs, incorporating a FASD (Fully Automatic Starting Device) on the side of the left hand carb. Easily identified by its blue plastic cover, the FASD is essentially a cold-start enrichment device.
Stromberg carbs have a stubby dashpot, compared to the SU's taller version.
*Finally, from 1985, the SUHIF6 was again fitted to some 3500 models. However, these were not the same carbs as the earlier ones, being considerably more complex in their cold-start enrichment operation. The tag numbers for these carbs are **FZX1456R** & **L**.*

TR8

Original carb TR8s are fitted with a pair of Stromberg 175CDSET carbs, with an automatic choke.

RANGE ROVER

Two makes of carburettor are fitted to Range Rovers as standard equipment: the Zenith Stromberg CD175 - used exclusively from 1970 to 1986 - and the SU HIF, which was fitted for a short period (alongside the Stromberg) from 1986 until carbs were replaced by fuel injection.
The most obvious visual difference between the two types of carb is the dashpot; Strombergs having a stubby dashpot with the 'Zenith' name cast into it, while the SUs have a much taller dashpot without any markings.

ENGINE NUMBER	TAG NUMBER

Stromberg CD175

Vehicles from 1970 to 1986;

non-detoxed engines -
*Please refer to the beginning of the **V8 Engine** section for information on 'Detoxed' or 'Non-detoxed'.*

355 suffix C, D & E	3712
355 suffix F	
3550000F to 35542952F	3881
35542953F onwards	3915
13D & 18D	3915

detoxed engines -
*Please refer to the beginning of the **V8 Engine** section for information on 'Detoxed' or 'Non-detoxed'.*

341 & 359 -	
suffix A & B	3318
suffix C & D	3677
suffix E	3887
suffix F	3854
34183127F, 20D & 21D	3999
398	3881
11D,15D,16D, 17D & 19D	4104

Vehicles from 1986 onwards;

non-detoxed engines -
*Please refer to the beginning of the **V8 Engine** section for information on 'Detoxed' or 'Non-detoxed'.*

28D & 29D	4185

detoxed engines -
*Please refer to the beginning of the **V8 Engine** section for information on 'Detoxed' or 'Non-detoxed'.*

26D & 27D	4187
30D	4186

SU HIF

Vehicles from 1986 onwards;

non-detoxed engines
*Please refer to the beginning of the **V8 Engine** section or information on 'Detoxed' or 'Non-detoxed'.*

28D & 29D	FZX2006

detoxed engines
*Please refer to the beginning of the **V8 Engine** section for information on 'Detoxed' or 'Non-detoxed'.*

26D, 27D & 30D	FZX2005

DESCRIPTION QTY REQ. PART No.

INTRODUCTION

Carbs

Though various other carbs have been used from time to time, by far the most common carburettors to be found supplying fuel to the Rover V8 are Zenith Stromberg CD175s and SUHIFs.
Chosen for their combination of economy, low emissions and simplicity of operation (plus, of course, availability in large quantities), they are an excellent choice. Nevertheless, the SUHIF6 with manual choke, as fitted to SD1 3500 saloons from 1976 to 1981, is probably the most popular, due to the fact that it can be "tuned" to suit other engine upgrades.

Efi (Electronic Fuel Injection)

Electronic fuel injection first appeared on production Rover V8 engines as early as 1977, bound for the emissions-sensitive Australian market. Subsequently, it was fitted to TR8s and Rover SD1s sold in North America. However, these early systems were designed specifically to meet emissions requirements; it was the Rover SD1 Vitesse, introduced in 1982, that boasted the first efi system designed to increase power output. Vitesses produced 190bhp from a 3.5 litre engine which was otherwise largely similar to the carburettor version, producing 155bhp.
Three years later, in October 1985, the Range Rover V8 followed suit: efi replaced carbs for Vogue models initially, and for all V8 4-dr models from November 1986.

There are two basic types of efi system fitted to the Rover V8. Similar in operation, they both use solenoid injectors - one per cylinder - operating directly into the inlet ports. They both respond to information from sensors relating to temperature, throttle position and engine speed, but neither has any control over ignition. The differences between the systems are as follows:

The first system - Lucas L-Jetronic - uses an airflow meter, inside which is a hinged flap that measures, by deflection, the flow of air into the engine, thus varying the voltage signal to the ECU.

The second system - Range Rover/Discovery only, introduced to coincide with the 'new' 3.9 litre engine in 1988 but also fitted to some 3.5 litre engines - incorporates a 'hotwire' air metering system, which contains no moving parts. Instead, it employs two sensor wires - one of which is heated - to measure air mass as it passes over the wires and into the engine. A voltage signal is then sent to the ECU proportionate to the voltage required to maintain the temperature of the heated wire as it is cooled by the air flow.

The earlier type, which was fitted to the first 3.5 efi (non cat'-equipped) Range Rovers from 1986, is similar (though not identical) to the system fitted to the Rover SD1 Vitesse, the main difference being the ecu (electronic control unit). The hotwire type, fitted to later Range Rover 3.5, 3.9 & 4.2 vehicles (with or without cat's), despite appearing quite similar, shares few parts with the flap type system.

Twin plenum injection

Twin plenum, or twin-throttle plenum injection, was a variation of the Lucas-L system, produced for a short period in the mid 1980s. It was intended primarily for the Group A racing Vitesses being campaigned by BL Motorsport, but found its way onto a small number of production Rover Vitesses for homologation purposes. In road-car form, it is similar to the single-throttle type in every way except for the plenum chamber and associated air inlet trunking. Of the parts that are different, most are now unavailable.

Holley & Weber 4 barrel carbs

Finally, we supply two 4 barrel carburettor conversion kits for the Rover V8 engine (carb or efi, all engine sizes):

1. The legendary Holley 390cfm carburettor. The kit includes a 390cfm 4 barrel Holley carb, with vacuum secondaries and electric choke, an Offenhauser inlet manifold and choke cable kit, chrome plated pancake filter kit and full instructions.

2. The Weber 4-barrel carb kit. The kit includes a Weber 4 barrel 500cfm carb (bright finished), complete with Edelbrock Performer dual plane inlet manifold, chrome plated pancake air filter kit and all gaskets, cables and instructions for fitting.

Ideal for on or off road, these replacement carbs both represent good value as performance upgrades. Use them on their own or, for maximum benefit, in conjunction with our Performance cylinder heads, uprated camshafts and stainless steel tubular manifolds. They work just as well (or better) with larger capacity engines and are the perfect solution for limited under-bonnet space, as with TR8 conversions.

K&N Filters

We also supply a range of K&N Air Filters for most applications including 4-Barrel pancakes. Refer to separate panel for details.

Inlet Manifold Fittings - V8 (Carbs)

All parts listed are suitable for saloon, sports and 4x4 applications unless otherwise stated.

Inlet manifold - carburettor;		
SD1		
1976 - 1982, SU carbs	(1)	**ERC5484**
1982 on - Stromberg carbs		
all except engs 34A & 36A	(1)	**ERC5950**
engines 34A & 36A	(1)	**ERC9900**
TR8	(1)	**ERC5484**
Range Rover		
Please contact our sales department for price & availability of Range Rover inlet manifolds.		
Bolt - inlet manifold;		
All engines.		
3/8"UNC x 11/2"	(9)	**BH506121**
3/8"UNC x 2"	(3)	**BH506161**
Washer - manifold bolt	(12)	**2204**
Gasket - inlet manifold - all models;		
tin	(1)	**ERC3990**
composite	(1)	**ERR7306**
End seal - manifold gasket		
for tin gasket	(2)	**AJM645**
for composite gasket	(2)	**ERR7283**
Clamp - end seal	(2)	**602076**
Screw - seal clamp	(2)	**602236**
Thermal transmitter	(1)	**545010**
Located behind thermostat (when fitted).		
Gasket - thermal transmitter	(1)	**236022**
Non-return valve - brake servo;		
Not Range Rovers with ABS.		
carb models	(1)	**ADU1402**
efi models	(1)	**RTC5907**
Washer - non-return valve	(1)	**232043**
Heater outlet - rear	(1)	**603440**
Where fitted.		
Gasket - rear heater outlet	(1)	**603441**
Temperature sender unit - coolant;		
Located at front of inlet manifold - all engines.		
carb models		
air con	(1)	**PRC6317**
non air con	(1)	**GTR108**
efi models		
3.5 litre -		
air con	(1)	**PRC6317**
non air con	(1)	**GTR108**
3.9 litre	(1)	**PRC7918**
With & without air-con.		
Washer - temperature sender unit	(1)	**90568054**
Thermostat *(Suitable for all engines)*;		
74°	(1)	**ETC4761**
82°	(1)	**GTS104**
88°	(1)	**GTS106**
Gasket - thermostat;		
Rover P6 type	(1)	**GTG116**
With thermostat bypass in housing.		
SD1/TR8	(1)	**GTG125**
Range Rover		
early engines	(1)	**610387**
Pre 1976.		
all other engines	(1)	**ERR2429**
Thermostat housing;		
saloon/sports		
standard type	(1)	**RB7211**
Aluminium.		
P6 type		
With integral bypass pipe. Suitable for Offenhauser manifold.		
steel	(1)	**RB7322**
chromed	(1)	**RB7436**
Range Rover		
without electric fan switch		
eng nos: 341, 355, 359 only	(1)	**RB7322**
all other models	(1)	**ERC2139**
with integral electric fan switch		
For air con fans. Switch not included.		
air con	(1)	**ETC6135**
non air con	(1)	**ETC4596**
Fan switch - thermostat housing	(1)	**PRC3505**
Range Rover.		
Washer - fan switch	(1)	**C457593**

Carburettors & Carb Components - Rover SD1 & TR8

DESCRIPTION	QTY REQ.	PART No.
Carburettor;		
Where new units are unavailable, we can offer a reconditioning service - please enquire.		
SU HIF6 - SD1		
1976 - 1981		
rh	(1)	**FZX1316R**
lh	(1)	**FZX1316L**
1985 onwards		
rh	(1)	**FZX1456R**
lh	(1)	**FZX1456L**
Stromberg CD175		
SD1 1981 onwards		
rh	(1)	**ERC5991**
lh (with FASD unit)	(1)	**ETC4714**
TR8		
US federal spec		
- rh	(1)	**ERC2105**
- lh	(1)	**ERC2104**
US California spec		
- rh	(1)	**ERC3432**
- lh	(1)	**ERC3433**
Gasket - carb mounting;		
SUs	(4)	**ERR4381**
Strombergs	(4)	**ERR4381**
Insulating block - carbs	(2)	**ERC1102**

Carb components - SU HIF6 - 1976 to 1981		
Piston spring	(2)	**AUD4398**
Metering needle	(2)	**CUD1109**
Needle guide	(2)	**AUD4288**
Throttle spindle	(2)	**WZX1170**
Float needle & seat kit	(2)	**WZX1100**
Float		
rh	(1)	**WZX1509**
lh	(1)	**WZX1510**
Main jet		
rh	(1)	**WZX1453**
lh	(1)	**WZX1452**
Gasket set	(2)	**WZX1505**
Seal kit	(2)	**RTC6072**

Carb components - SU HIF6 - 1985 on		
Piston spring	(2)	**AUD4398**
Metering needle - BFW	(2)	**NZX8069**
Needle guide	(2)	**AUD4288**
Float needle & seat kit	(2)	**WZX1097**
Float	(2)	**WZX1509**
Main jet	(2)	**WZX1453**
Gasket Set	(2)	**WZX1505**
Seal kit	(2)	**RTC6072**

Carb components - Stromberg CD175		
Piston spring	(2)	**516946**
Metering needle (TR8 only);		
USA Federal	(2)	**AAU7220**
USA California	(2)	**AAU7268**
Diaphragm	(2)	**JS499A**
Needle valve	(2)	**BHM1075**
Float & arm assembly	(2)	**605833**
Gasket set	(2)	**RTC1481A**
Service kit	(2)	**AAU7222**
Float	(2)	**WZX1509**
Carb adjusting tool - Stromberg	(1)	**RX1222**

TR8 & SD1 only - not suitable for Land Rover applications.

HELP US TO HELP YOU

If you are not sure which part/part number you require, to ensure you receive the correct component, wherever possible please quote;

MODEL, YEAR, CHASSIS AND/OR ENGINE NUMBER PLUS ANY COMPONENT INFORMATION.

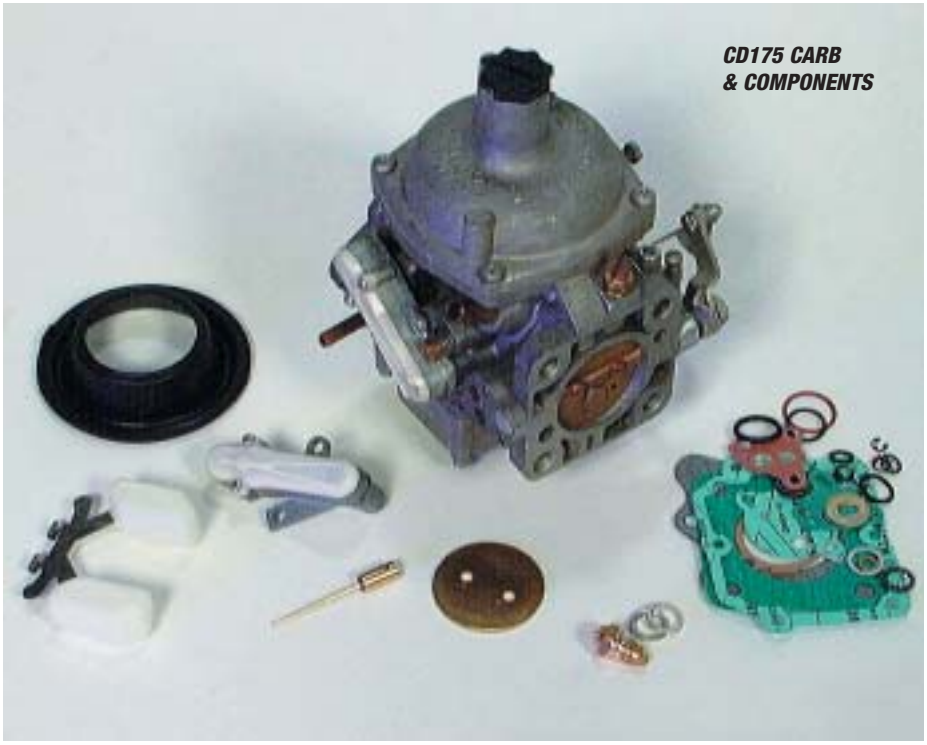
Carburettor Components - Range Rover

DESCRIPTION	QTY REQ.	PART No.
Stromberg CD175 - 1970 to Oct 1985		
Diaphragm - all models	(2)	**JS499A**
Spring - diaphragm	(2)	**606792**
Gasket kit;		
carbs 3712, 3915	(2)	**605857**
all other carbs	(2)	**RTC1481A**
Metering needle - non-detoxed vehicles;		
carbs:		
3712	(2)	**606793**
3881	(2)	**AAU8231**
3915	(2)	**AEU2462**
Metering needle - detoxed vehicles;		
Engine nos: 341, 359 - 8.13:1 CR.		
carbs:		
3318	(2)	**90608276**
3677 (BIDF)	(2)	**AAU1488**
3677 (BIFF)	(2)	**RTC4776**
3887	(2)	**AAU8229**
3854 (BIEJ)	(2)	**AAU8230**
3854 (BIFF)	(2)	**RTC4776**
3999 (BIFC)	(2)	**AEU1850**
4104	(2)	**AEU1851**
Needle valve;		
carbs:		
3712	(2)	**AAU4547**
3881 & 3915	(2)	**RTC1482**
3318	(2)	**AAU4547**
3677	(2)	**AAU4547**
3887 & 3854	(2)	**RTC1482**
3999	(2)	**RTC1482**
4104	(2)	**RTC1482**
Float (all models)	(2)	**605833**
Temperature compensator - detoxed engines;		
carbs:		
3318, 3677, 3887 & 3854	(2)	**90608271**
3999 & 4104	(2)	**AAU7900**
Throttle disc;		
carbs:		
3712, 3881 & 3915	(2)	**605800**
3318	(2)	**597770**
3677, 3887, 3854 & 3999	(2)	**AAU1489**
4104	(2)	**AEU1848**
Damper & oil cap - all models	(2)	**518432**
Cold start assembly;		
carbs:		
3712 & 3915	(1)	**606810**
3318 & 3677	(1)	**608282**
Vacuum switch	(1)	**614361**
Detoxed engines.		
Fuel trap	(1)	**ERC2042L**
Detoxed engines.		

DESCRIPTION	QTY REQ.	PART No.
Stromberg CD175 - 1986 onwards		
Diaphragm	(2)	**JS499A**
Spring - diaphragm	(2)	**606792**
Gasket kit	(2)	**RTC1481**
Service kit	(2)	**AAU2967**
Kit includes: needle valve, diaphragm, float gasket and seals.		
Metering needle;		
carbs:		
4186	(2)	**AEU1851**
4187		
to VIN 162496	(2)	**AEU1851**
VIN 162497onwards	(2)	**RTC4774**
4185	(2)	**AEU1850**
Needle valve	(2)	**RTC1482**
Float	(2)	**605833**
Temperature compensator	(2)	**AAU7900**
Throttle disc	(2)	**AEU1848**
Damper & oil cap	(2)	**518432**
Fuel trap	(2)	**ERC2042L**

SU HIF from 1986		
Engine numbers with a 'C' suffix.		
Seal kit	(2)	**RTC6072**
Gasket kit	(2)	**WZX1505**
Metering needle;		
carbs:		
FZX2005	(2)	**NZX8077**
FZX2006	(2)	**NZX8076**
Jet assembly;		
rh	(1)	**CUD2785**
lh	(1)	**CUD2788**
Needle guide	(2)	**AUD4288**
Float needle & seat kit	(2)	**STC205**
Float;		
rh	(1)	**LZX1600**
lh	(1)	**RTC3566**
Piston spring	(2)	**AUD4398**
Damper & oil cap	(2)	**LZX1505**
Fuel trap	(2)	**ERC2042**

Carb Mountings - Range Rover;		
Stromberg and SU carbs.		
gasket - carb to manifold	(6)	**ERR4381**
insulating block		
carbs - 3712, 3881 & 3915	(2)	**ERC1102A**
all other carbs	(2)	**ERR4383**
gasket - carb to elbow	(2)	**612435**
'O' ring - elbow to cleaner	(2)	**602634**



CD175 CARB & COMPONENTS

DESCRIPTION QTY REQ. PART No. | DESCRIPTION QTY REQ. PART No. | DESCRIPTION QTY REQ. PART No.

HOLLEY - OFFENHAUSER CARB KIT

4 Barrel Carb Conversion Kits

Suitable for all engine sizes.
Complete conversion kits for all V8 engines.
Kits include: 4 barrel carb, inlet manifold, chromed 14" air cleaner (can be substituted with K&N air cleaner at extra cost), thermostat housing and accelerator cable kit.
See also fuel pump section for details of our Facet type electric fuel pump, which may be required in addition to the 4 barrel carb kits, depending on application.

Holley/Offenhauser conversion;
390cfm carb with auto choke

Kit 1 *With 3" deep air cleaner.*	(1)	**RB7262**
Kit 2 *With 2" deep air cleaner for extra bonnet clearance.*	(1)	**RB7262L**

WEBER- EDELBROCK PERFORMER CARB KIT

Weber/Edelbrock Performer conversion;
500cfm carb with manual choke

Kit 1 *With 3" deep air cleaner.*	(1)	**RA1323**
Kit 2 *With 2" deep air cleaner for extra bonnet clearance.*	(1)	**RA1323L**

4 Barrel Carb Components

Carburettor only		
Weber 500	(1)	**RA1335**
Holley 390	(1)	**RB7254**
Jets - 390 carb (pair)	(1)	**RB7254J**
Overhaul kit - Holley 390 carb	(1)	**RB7254H**
Holley Stud/Nut/Washer Set	(1)	**RB7254S**
Gasket *(Carb to manifold) (Holley & Weber)*	(1)	**RB7181**
Inlet manifold - 4 barrel carb *Suitable for Weber & Holley carbs*		
Offenhauser 360° *Dual Plane. Lowest bonnet clearance.*	(1)	**RB7314**
Offenhauser/JWR *(Dual Port)*	(1)	**RA1336**
Edelbrock performer *Dual Plane. High Torque.*	(1)	**RA1337**
Gasket - inlet manifold;		
tin	(1)	**ERC3990**
composite	(1)	**ERR7306**
End seal - manifold gasket		
for tin gasket	(2)	**AJM645**
for composite gasket	(2)	**ERR7283**
Thermostat housing;		
cast iron	(1)	**RB7322**
chromed	(1)	**RB7437**
Gasket - thermostat housing	(1)	**GTG116**
Accelerator cable kit *(Holley/Weber)*	(1)	**RB7278**
Manual choke conversion kit *(Holley)*	(1)	**RB7184**
Auto choke conversion kit *(Weber)*	(1)	**RA1323ACH**
Manual choke cable *(Holley)*	(1)	**RB7290**

PANCAKE AIR CLEANERS FOR HOLLEY OR WEBER CARBS

4 Barrel Air Cleaners

Air cleaner kit; *14" diameter chromed 'pancake' type, complete with filter, suitable for Weber & Holley. See also K&N filter assys.*		
standard - 3" deep	(1)	**RB7438**
'low-rider' - 2" deep *For extra bonnet clearance.*	(1)	**RB7439**
Replacement element - air cleaner;		
standard element		
3" deep	(1)	**RB7438EL**
2" deep	(1)	**RB7439EL**
K&N element		
3" deep	(1)	**RB7438ELK**
2" deep	(1)	**RB7439ELK**
Adaptor - breather pipe *Air cleaner base to flame trap/breather.*	(1)	**RB7654**

K&N 4 Barrel Air Cleaners

See page 32 for other K&N applications.

K&N Holley & Weber 4 barrel carbs
Pancake (14") filter assembly, bolts directly on to carb.
May also be fitted with 'X-stream' filter top (lid).

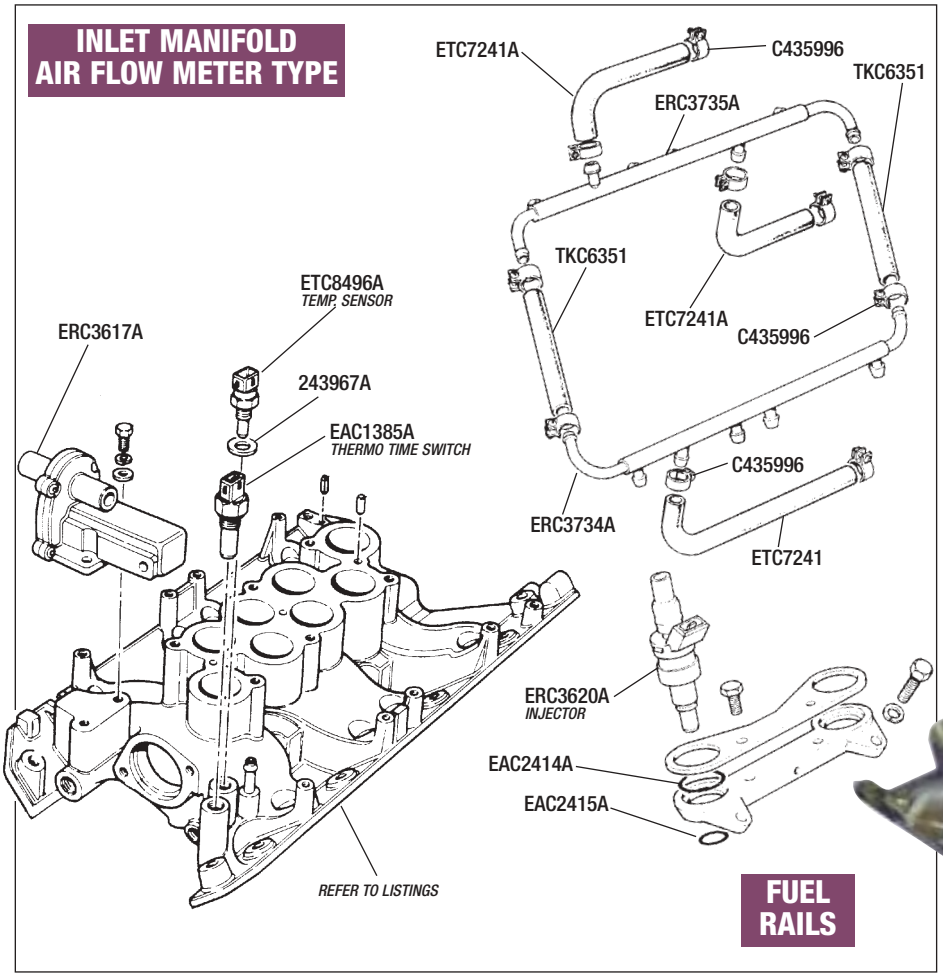
recessed type (assembly) *Sits low on carb for extra bonnet clearance.* *N.B. for use with manual choke only.*	**RA1397**
flat type (assembly) *2¼" deep, fits either manual or automatic choke.*	**RA1398**
'X-stream' air flow (lid only) *For maximum air flow. Replaces standard pancake K&N lid. Available in black, blue, red or polished.* *N.B. K&N filter assembly (recessed or flat type) must be purchased separately.*	**RA1399**

ELECTRONIC FUEL INJECTION

Inlet Manifold Fittings - Airflow Meter efi (3.5 litre)

All parts listed are suitable for Rover SD1 Vitesse, VDP efi and Range Rover/Discovery 3.5 efi unless otherwise stated.

Inlet manifold - 3.5 efi	(1)	**ERC9194**
SD1 Vitesse & VDP efi.		
Please contact our sales department for price & availability of inlet manifolds for Range Rover efi.		
Bolt - inlet manifold *(all engines)*;		
3/8"UNC x 11/2"	(9)	**BH506121**
3/8"UNC x 2"	(3)	**BH506161**
Washer - manifold bolt	(12)	**2204**
Gasket - inlet manifold - all models;		
tin	(1)	**ERC3990**
composite	(1)	**ERR7306**
End seal - manifold gasket		
for tin gasket	(2)	**AJM645**
for composite gasket	(2)	**ERR7283**
Clamp - end seal	(2)	**602076**
Screw - seal clamp	(2)	**602236**
Auxiliary air valve	(1)	**ERC3617A**
Thermotime switch	(1)	**EAC1385**
Temperature sensor	(1)	**ETC8496A**
Next to thermotime switch.		
Sealing washer *(Temp sensor)*	(1)	**243967**
Injector	(8)	**ERC3620A**
O-Ring seal - injector;		
large (upper)	(8)	**EAC2414A**
small (lower)	(8)	**EAC2415A**
Fuel pressure regulator;		
standard		
SD1/TR8/Range Rover	(1)	**ERR268**
adjustable	(1)	**EAC1284UR**
Recommended for performance applications. Increases fuel pressure, according to inlet manifold demand, by a greater ratio than standard item.		
Uprated fuel pump resistor	(1)	**DRC3017HP**
Use in conjunction with adjustable pressure regulator. Enables fuel pump to cope with extra fuel demand.		
Fuel rail;		
right hand	(1)	**ERC3735A**
left hand	(1)	**ERC3734A**
Fuel hose (8cm length)	(2)	**TKC6351**
High pressure efi hose to join fuel rails.		
Fuel hose - cold start injector	(1)	**ETC7241A**
Also suitable for pressure regulator.		
Clamp - efi hoses	(a/r)	**C435996**
Overrun fuel cut-off switch	(1)	**ETC6143**



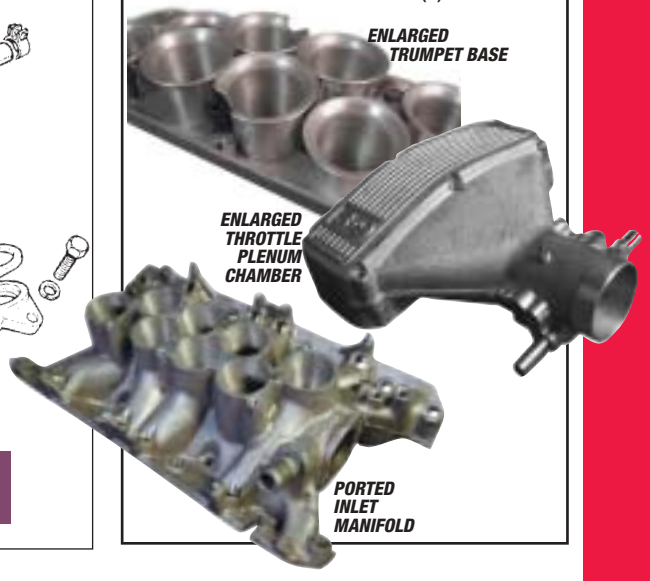
Thermostat

Thermostat;		
Suitable for all engines.		
74°	(1)	**ETC4761**
82°	(1)	**GTS104**
88°	(1)	**GTS106**
Gasket - thermostat;		
SD1/TR8	(1)	**GTG125**
Range Rover	(1)	**ERR2429**
Thermostat housing;		
saloon/sports	(1)	**RB7211**
Aluminium.		
Range Rover		
without electric fan switch		
eng nos: 341, 355, 359 only	(1)	**RB7322**
all other models	(1)	**ERC2139**
with integral electric fan switch		
For air con fans. Switch not included.		
air con	(1)	**ETC6135**
non air con	(1)	**ETC4596**
Fan switch - thermostat housing	(1)	**PRC3505**
Range Rover.		
Washer - fan switch	(1)	**C457593**
Temperature transmitter	(1)	**GTR138**
Non-return valve - brake servo	(1)	**ETC6143**

Efi Upgrade Kit

*For larger capacity (4.6 litre and above) Performance engines using the original fuel injection system, considerable gains in torque and horsepower are attainable by fitting an **Efi Upgrade Kit**. Kits are available for both Flap-type and Hotwire efi systems and comprise a ported and enlarged inlet manifold (inlet tracts opened out to 45mm diameter), trumpet base with enlarged (45mm diameter) intake trumpets and plenum chamber with enlarged (72mm diameter) throttle body. These components help to remove the restriction in air flow, which can strangle your engine's power potential.*
Efi Upgrade Kits are sold on an exchange basis.
See also our Re-mapped & Re-chipped ECUs.

Efi upgrade kit;		
flap-type efi	(1)	**RB7691**
hotwire efi	(1)	**RB7692**



Inlet Manifold Fittings - Hotwire efi (3.5, 3.9 & 4.2)

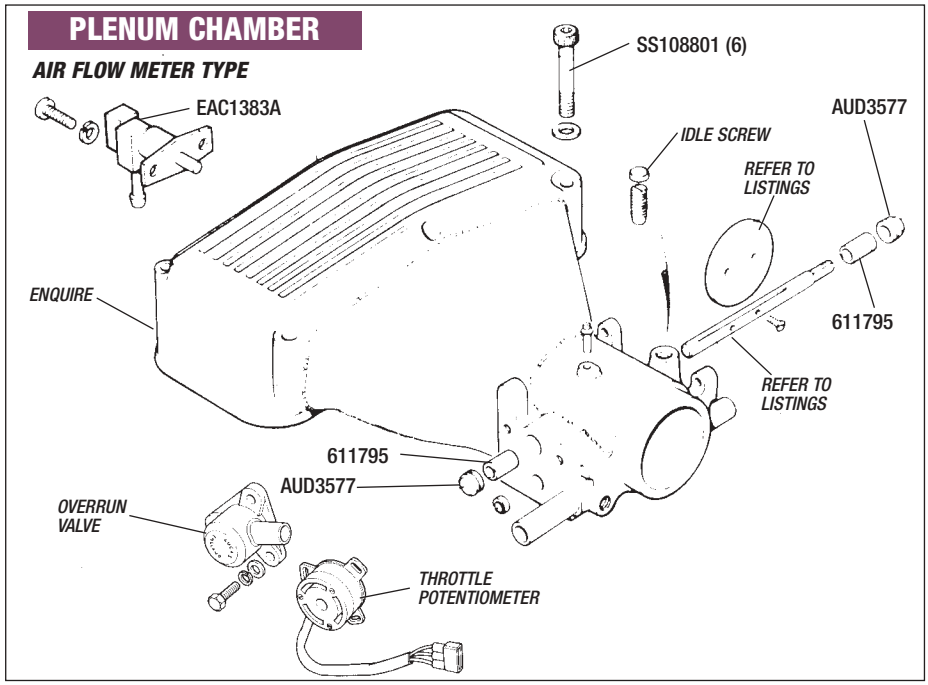
Parts listed are suitable only for Range Rover/Discovery (plus other vehicles - such as TVR etc - fitted with Land Rover engines) equipped with hotwire efi systems, unless otherwise stated. Items not illustrated.

Inlet manifold - 3.9 efi		
Please contact our sales department for price & availability of 3.9 hotwire inlet manifolds.		
Bolt - inlet manifold *(all engines)*;		
3/8"UNC x 1 1/2"	(9)	**BH506121**
3/8"UNC x 2"	(3)	**BH506161**
Washer - manifold bolt	(12)	**2204**
Gasket - inlet manifold - all models;		
tin	(1)	**ERC3990**
composite	(1)	**ERR7306**
End seal - manifold gasket		
for tin gasket	(2)	**AJM645**
for composite gasket	(2)	**ERR7283**
Clamp - end seal	(2)	**602076**
Screw - seal clamp	(2)	**602236**
Temperature sensor	(1)	**ETC8496A**
Sealing washer *(Temp sensor)*	(1)	**243967A**
Injector;		
3.5	(8)	**ETC6264**
3.9 & 4.2	(8)	**ERR722**
O-Ring - injector	(16)	**RTC5679**
Clip - injector	(8)	**ETC6375**
Fuel pressure regulator	(1)	**ETC8494**
3.5, 3.9 & 4.2		
Fuel temperature sensor	(1)	**ETC6661**
Front of fuel rail.		

Plenum Chamber Components / Airflow Meter & Hotwire - efi

Please contact our Sales Department for price & availability of plenum chambers.

DESCRIPTION	QTY REQ.	PART No.
Screw - hex key type; *Plenum Chamber to Ram Housing.*		
single plenum	(6)	**SS108801**
twin plenum		
short	(4)	**SS108801**
long	(2)	**ETC6057A**
Throttle disc;		
SD1		
single plenum	(1)	**ERC9112A**
twin plenum	(2)	**ERC9112A**
Range Rover		
engine nos. 22D & 23D *Low compression.*	(1)	**ETC5772**
all other engine nos	(1)	**ERC9112A**
Throttle spindle;		
SD1		
single plenum	(1)	**ERC9113**
twin plenum		
front	(1)	**ETC6013A**
rear	(1)	**ETC6014A**
Range Rover		
engine nos. 22D & 23D *Low compression.*	(1)	**ETC5771**
all other engines	(1)	**ERC9113**
Bush - throttle spindle *Single plenum only.*	(2)	**611795**
Seal - throttle spindle;		
single plenum	(2)	**AUD3577**
twin plenum	(4)	**AUD3577**
Idle speed screw;		
all engines to July 1987	(1)	**ERC7809**
all engines July 1987 on	(1)	**ST606080**
Throttle potentiometer;		
SD1	(1)	**ETC4483**
Range Rover		
3.5 litre	(1)	**ETC5598**
31D engine nos only *3.5 litre hotwire type.*	(1)	**ETC6443**
3.9 & 4.2 litre	(1)	**ETC8495**
Gasket - potentiometer	(1)	**ERR4944**
Cold start injector *Airflow meter type efi only*	(1)	**EAC1383**
Gasket - cold start injector	(1)	**ERC3795**
Idler control assembly *Range Rover.*	(1)	**ETC6214**
Stepper motor *Range Rover.*	(1)	**ETC6660**
Gasket - stepper motor	(1)	**ERR2926**
Overrun valve	(1)	**ERC9786**
Gasket - overrun valve	(1)	**C44190**
Air-valve solenoid *Air con models*	(1)	**ERC7536A**
Breather Hose *Flame trap to plenum.*	(1)	**ERC9116A**
Hose - extra air valve to plenum *C-shaped hose*	(1)	**ERC9117**
Non return valve - servo	(1)	**RTC5907**
Pneumatic actuator *Cruise control.*	(1)	**ETC7150**



Cables

DESCRIPTION	QTY REQ.	PART No.
Accelerator cable;		
SD1 V8		
1976 - 1980	(1)	**CRC481**
1981 on	(1)	**NAM6865**
TR8	(1)	**UKC6482**
Range Rover V8		
carb - rhd		
4-sp manual	(1)	**566426**
5-sp manual	(1)	**NRC8388**
automatic	(1)	**NTC3083**
carb - lhd		
manual	(1)	**577356**
automatic	(1)	**NTC3084**
efi - to 1989 (VIN FA)		
rhd - all models	(1)	**NTC1054**
lhd - 3.5	(1)	**NTC4842**
- 3.9	(1)	**NTC6723**
efi - 1990 (VIN GA) on		
rhd (3.9 & 4.2)	(1)	**ANR5328**
lhd - 3.5	(1)	**NTC7198**
- 3.9 & 4.2	(1)	**ANR5327**
Holley carb	(1)	**RB7278**
Choke cable;		
SD1 V8 - early models	(1)	**CRC516**
TR8	(1)	**TKC6742**
Range Rover V8		
Stromberg carbs		
rhd	(1)	**NRC9094**
lhd	(1)	**NRC9095**
SU carbs (rhd & lhd)	(1)	**NTC3690**
Holley carb	(1)	**RB7290**

HIGH PERFORMANCE PRESSURE REGULATOR AND PUMP RESISTOR

Electronic Components - efi

ECU - new
Please contact our sales department for availability & price of new ECUs.

ECU - reconditioned/recalibrated/re-chipped;
We can recondition your existing Lucas 4CU (flap-type) or 14CUX (hotwire type) ECU to original specification. Alternatively, our fuel injection expert can recalibrate both types of ecu for more power and economy, on either standard or modified engines. For instance, re-chipping a hotwire ecu can give your 3.9 an extra 20bhp with no other modifications; driveability and cruise economy are similarly improved. Or, if you are considering a large capacity engine for your fuel injected car, a recalibrated ecu will provide the correct fuelling essential for the engine, giving you full power with no loss of fuel economy. Please contact our sales department to discuss your requirements. All ECUs are guaranteed for 1 year.

DESCRIPTION	QTY REQ.	PART No.
Diode pack (relay) *(Red)*	(1)	**DAC1861**
Relay - fuel pump *(Aluminium)*		
non catalyst vehicles	(1)	**AGU1068**
catalyst vehicles	(1)	**AFU2913L**
Tune resistor - hotwire;		
red	(1)	**PRC8005**
yellow	(1)	**PRC8007**
white	(1)	**PRC8009**
green	(1)	**PRC8172**
blue	(1)	**AMR2016**
Airflow meter;		
flap type	(1)	**ERC9127A**
hotwire type	(1)	**ESR1057**
Air intake hose;		
SD1		
air cleaner to a/flow meter *Single & twin plenum.*	(1)	**ERC9197**
a/flow meter to plenum chamber		
single plenum	(1)	**ERC9129**
twin plenum		
- long	(1)	**ETC6009A**
- short	(1)	**ETC6008A**
Range Rover		
air cleaner to a/flow meter *Flap type only.*	(1)	**NRC9996**
a/flow meter to plenum chamber		
flap type	(1)	**NRC9997**
hotwire type -		
- to 1994 (VIN LA)	(1)	**ESR1611L**
- 1995 (VIN MA) onwards	(1)	**ESR1807**
Hose clip;		
air cleaner to a/flow meter *Flap type.*	(2)	**RTC3518**
a/flow meter to chamber *All models.*	(2)	**CN100908**
Y-adaptor - air intake hose *Twin plenum only.*	(1)	**ETC6003A**
Power resistor	(1)	**DAC1211A**

DESCRIPTION QTY REQ. PART No.

Air Filter - Standard

Air filter - carburettor;
- SD1
  - cylindrical air box (2) **GFE1068**
  - oval air box (2) **GFE1117**
- TR8 - original (2) **GFE1124**
- Range Rover
  - all except Australia (2) **605191**
  - Australia only (2) **GFE1124**

Seal - air filter (4) **RTC5888**
Range Rover, except Australia.

Air filter - efi;
- SD1 (1) **GFE1104**
  Except North America.
- TR8/SD1 North America (1) **GFE1093**
- Range Rover
  - to 1994 (VIN LA) (1) **RTC4683**
  - 1995 (VIN MA) onwards (1) **ESR1445**

Air Filter - K&N

For 4-Barrel filter see page 29.
K&N offer superior filtration, an improvement in air flow and many times longer life than standard elements. In addition, they can be cleaned and re-used.
Available for both carburettor and efi petrol models, they replace the original air intake box and paper element and require no alterations to the fuel system on a standard engine (with standard exhaust).
K&N Filters are proven in both competition and off-road environments.

Air filter - K&N
- carb vehicles (2) **RB7296**
  Stromberg & SU.
- efi vehicles -
  - flap type (1) **RA1063**
    Length 170mm, flange ID 73mm
    Clamps to air flow meter.
  - hotwire type (1) **RA1060**
    Length 180mm, flange ID 85mm
    Clamps to air flow meter.

Cleaning fluid (1 litre) (a/r) **RX1346**
For cleaning filter element.

Element oil *(For re-oiling element)*;
- 1 fl oz sachet (a/r) **RX1347**
- 250ml bottle (a/r) **RX1348**
- 400ml aerosol (a/r) **RX1349**

Fuel Pump

Early, non power steering, V8 engines have a mechanical fuel pump bolted to the timing cover and driven by a lobe on the camshaft spacer.

Power steering equipped cars usually have an electric fuel pump (due to the location of the p.a.s. pump where the fuel pump had previously been).

Rover SD1 and TR8 carb vehicles both have in-tank fuel pumps, which deliver approximately 4.5psi pressure (ie. usually sufficient for a Holley or Weber carb but inadequate for efi).

Rover SD1 efi vehicles have a high pressure fuel pump (delivering around 40psi), mounted very close to, but outside, the base of the fuel tank.

Early pas-equipped Range Rovers have an electric pump in the engine bay.

From 1986, the fuel pump for both carb and efi Range Rovers is fitted inside the fuel tank. However, the two types are not interchangeable, as the efi pump is a high pressure type not suitable for carb vehicles.

Up to approximately 1991, the in-tank fuel pump is separate from the fuel level sender. From 1991 onwards, the pump and sender unit are combined.

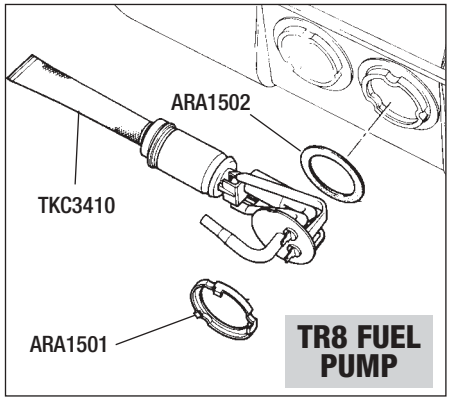
We also stock a Facet electric fuel pump, designed to fit in the engine bay. Suitable as a replacement for any carb vehicle, including Weber or Holley-equipped, it delivers 4-5psi pressure. It is not suitable for efi. See below for listing.

CARB ENGINES

Fuel pump - carb;
- SD1 (1) **DRC195**
  In-tank type.
- TR8 (1) **TKC3410**
  In-tank type.
- Range Rover
  - 1970-1986 - in engine bay
    - mechanical (1) **RTC6724**
    - electric (1) **PRC3901**
      Horizontal or vertical.
  - 1986 on - in tank (1) **PRC7020**

Gasket - mechanical pump (1) **602180A**
Pump to timing cover.

DESCRIPTION QTY REQ. PART No.



Gasket - electric pump;
- for TKC3410 (1) **ARA1502**
- for PRC3901 (1) **90606261**
- for PRC7020 (1) **ESR3278**

Mounting bobbin - fuel pump (2) **NRC7135**
For PRC3901 pump.

Nut - for mounting bobbin (4) **GHF200**

Earthing braid (1) **568244**

Filter - electric pump (1) **90606262**
For PRC3901 pump.

Fuel pump - uprated (carb type) (1) **RB7259**
Facet competition high capacity electric pump (remote mounted).
Complete with unions. Suitable for all carb engines (including Holley/Weber conversions).

Efi ENGINES

Fuel pump - efi;
- SD1 - under-floor
  - standard (1) **AUU1649**
  - performance (1) **AUU1649A**
- Range Rover - in-tank
  - To VIN HA464553 (1991) (1) **PRC8318**
    Separate sender type.
  - VIN HA464554 to KA642682 (1) **PRC9409**
    Combined pump/sender type.
  - VIN KA642683 (1993) onwards (1) **ESR3926**
    Combined pump/sender type.

Gasket - efi fuel pump;
Pump to tank.
- SD1 (1) **ARA1502**
- Range Rover
  - separate pump/sender (1) **ESR3278**
  - combined pump/sender (1) **NTC5859**

Locking ring - pump/sender;
- SD1 (1) **ARA1501**
- Range Rover (1) **NTC5858**

Suppressor - fuel pump (1) **PRC7491**
Range Rover

Fuel pump resistor;
- standard (1) **DRC3017**
- performance (1) **DRC3017HP**
  Use with rising rate fuel pressure regulator.

Fuel Filter

Fuel filter assembly- carb vehicles;
- SD1/TR8 (1) **GFE7004**
- Range Rover
  - to approx' 1986 (1) **90577508**
  - approx' 1986 onwards (1) **NRC9786**

Element & seal - filter (1) **JS660L**
All carb Range Rovers.

Seal - bowl retaining bolt;
All carb Range Rovers.
- outer (1) **606207**
- inner (1) **AEU1147**

Fuel filter - efi vehicles;
- SD1/TR8 (1) **GFE7001**
  Charcoal canister.
- Range Rover
  - to 1990 (VIN GA) (1) **GFE7001**
    Push-on connector type.
  - 1991 (VIN HA) onwards (1) **ESR4065**
    Screw-on connector type.

'O'-ring - pipe to filter (2) **ESR259**
Range Rovers from 1992 onwards.

DESCRIPTION QTY REQ. PART No.

Tubular Manifolds

We manufacture - and keep in stock - a range of stainless steel tubular exhaust manifolds for a variety of vehicles fitted with the Rover V8 engine. If you have a TR8, SD1, Range Rover, Discovery or Land Rover then we stock a comprehensive range of sports systems (including manifolds) also. Please or contact us for a quotation or refer to separate catalogue.

Tubular manifolds - saloon/sports;

Rover SD1 - stainless steel
4 into 1 design. 1.5" primaries, 2" outlet pipes.
rh (1) **RO1116**
lh (1) **RO1113**

Triumph TR8 - stainless steel (1) **RB7030SS**
Pair. 4-2-1 design..

Triumph Stag - stainless steel (1) **RS1042**
Pair. Rover V8 conversion.

Tubular manifolds - 4x4 - stainless steel;

Range Rover
4 into 1 design. Available with or without provision for Lamda sensor.

3.5 models
rh (1) **RA1009RH**
lh (1) **RA1009LH**

3.9 models
rh (1) **RA1071RH**
lh (1) **RA1009LH**

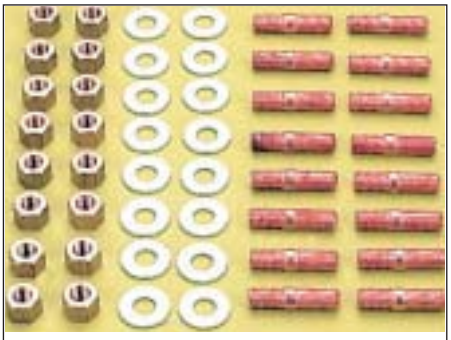
4.2 models
With provision for Lamda sensor.
rh (1) **RA1071RHW**
lh (1) **RA1009LHW**

DESCRIPTION QTY REQ. PART No.

Discovery
All V8 models.
4 into 1 design. Includes provision for Lamda sensor.
rh (1) **LR1109RH**
lh (1) **LR1109LH**

Land Rover 90 & 110
All V8 models.
4 into 1 design.
rh (1) **LR1106RH**
lh (1) **LR1106LH**

Gasket - tubular manifolds (4) **AJM692S**
Twin-port gasket with enlarged ports. Suitable for all models including modified cylinder heads.



Manifold fitting kit (1) **EF1001**
Fitting tubular manifolds to the cylinder heads is made easier by replacing the standard screws with our stud kit. The risk of damaging the threads in the aluminium heads is also lessened.
Kit contains 16 studs, washers and brass nuts.

DESCRIPTION QTY REQ. PART No.

FULL SPORTS SYSTEMS IN STAINLESS STEEL FOR RANGE ROVER, DISCOVERY, LAND ROVER 90/110 V8, ROVER SD1 AND TRIUMPH TR7 V8 - ENQUIRE FOR DETAILS.

EXHAUST INSULATION WRAP

Thermo-Tec Insulating Wrap gives safety with performance.

Tubular manifolds, by design, produce a vast amount of heat in the engine compartment. This increases the possibility of electrical/ignition components not working effectively and promotes a higher risk of fire (if any combustible material comes in to contact with the manifold), not to mention the likelihood of severe burns when working on the engine!

By wrapping your tubular manifold with Thermo-Tec insulating wrap you can overcome all these risk factors. Thermo-Tec keeps the heat within the manifold so the exhaust gases have a much higher velocity, this induces negative pressure (scavenging) which increases air intake flow, resulting in better performance & economy. It also reduces under bonnet exhaust noise.

Technical Notes:
Thermo-Tec heat wrap - which is race & rally proven - comes in rolls 2" wide x 50ft long and moulds to the contours of the manifold. Being a silica based fabric (it does not contain asbestos or carcinogens), it is unaffected by oil or water, withstands temperatures up to 1000 degrees celsius and reduces under bonnet temperatures by up to 70%.

Snap-Strap Retaining Kit
We strongly recommend that you use Snap-Straps to retain the insulation. These are stainless steel straps with a narrow profile (for tight spots) that you cut to length and fasten with snap type heads. Alternatively you can skin your knuckles and use hose clips!

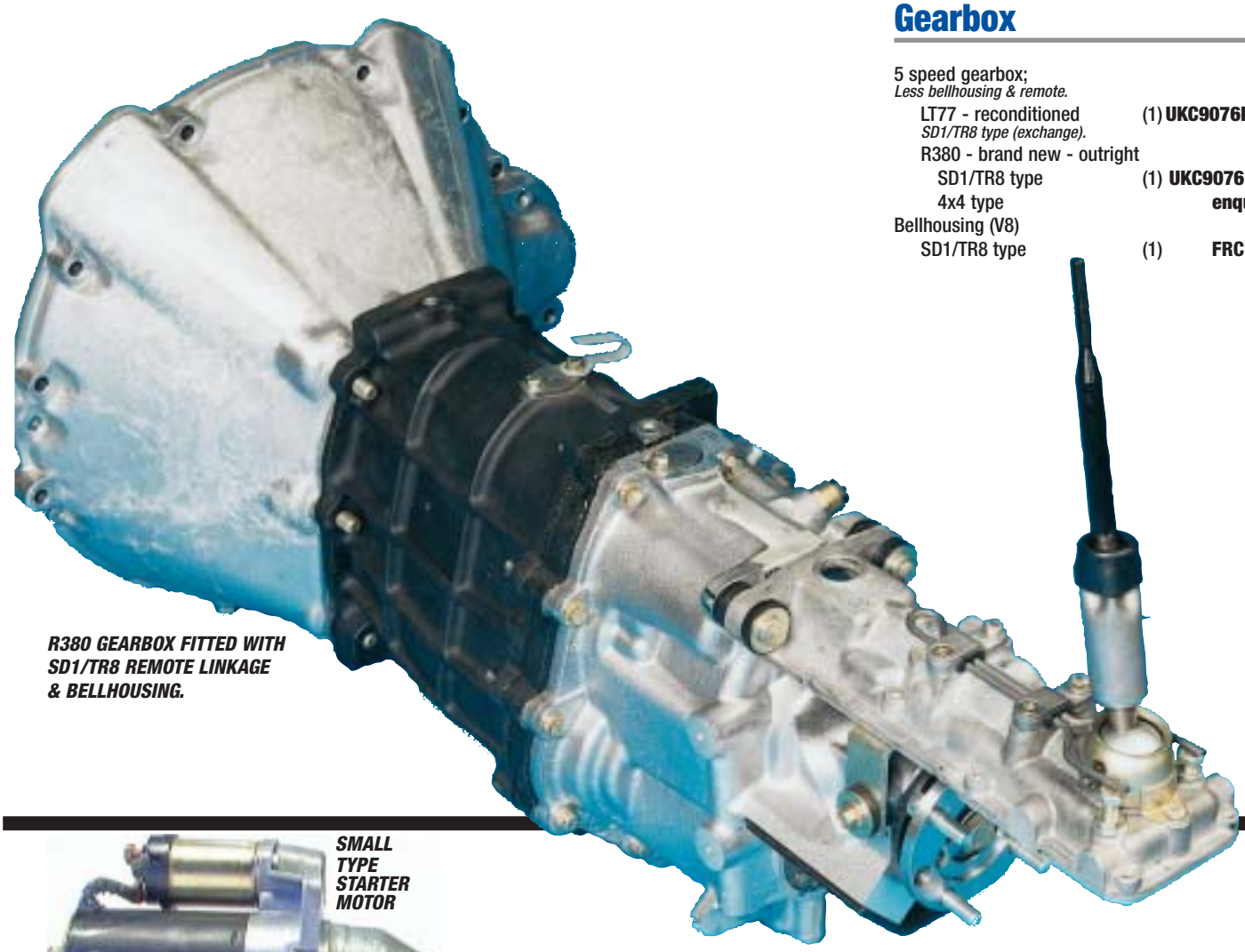
THERMO-TEC INSULATION WRAP - 2"x50' ROLL *(2 Req)* **RX1382**
THERMO-TEC SNAP-STRAP KIT STAINLESS STEEL *(1 Req)* **RX1383**

DESCRIPTION QTY REQ. PART No.

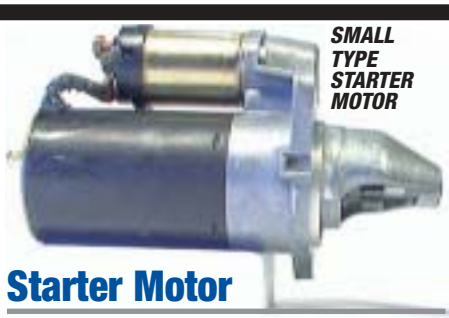
Gearbox

5 speed gearbox;
Less bellhousing & remote.
- LT77 - reconditioned (1) **UKC9076RHD**
  SD1/TR8 type (exchange).
- R380 - brand new - outright
  - SD1/TR8 type (1) **UKC9076FAC**
  - 4x4 type **enquire**

Bellhousing (V8)
- SD1/TR8 type (1) **FRC133**



R380 GEARBOX FITTED WITH SD1/TR8 REMOTE LINKAGE & BELLHOUSING.



SMALL TYPE STARTER MOTOR

Starter Motor

Starter motor (exchange);
See also 'Uprated Starter Motor'
- SD1/P6/MGB V8/TR7 V8 (1) **GXE4442**
  Solenoid underneath
- TR8 *(Solenoid on side)* (1) **DRC1743R**
- Range Rover
  - all 3.5 litre. Also, 3.9 up to engine no. 19508A (9.35:1 cr) & 25791A (8.13:1 cr), and 4.2 up to engine no. 03276A
    - large type - 3M100 (1) **RTC5228**
    - small type - M78R (1) **RTC6061**
  - 3.9 & 4.2 litre above nos. on (1) **NAD101190**

Starter solenoid;
- SD1/P6/TR8 (1) **520473**
- Range Rover
  - 3.5, 3.9 & 4.2 - see starter (1) **RTC5049**
  - 3.9 & 4.2 - see starter (1) **STC1242**

ALTERNATOR

Alternator

Alternator (exchange) *(Alter handing to suit)*
- SD1/TR8
  - standard (55 amp) (1) **GNU2262E**
  - heavy duty (75 amp) (1) **GXE2113**
- Range Rover/Discovery
  Please contact our sales department or refer to catalogues.

HI-TORQUE STARTER MOTOR

UPRATED HI-TORQUE STARTER MOTOR

Fits as direct replacement to all saloon based vehicles (SD1, TR8, TR7 V8, MGB V8 etc). Starts engine regardless of compression or temperature. Up to 200% more cranking power using up to 50% less current.

Uprated hi-torque starter motor (1) **GXE4442UR**
Outright sale, no exchange.

DESCRIPTION QTY REQ. PART No.

Ignition System

There have been as many variations in the distributor fitted to the Rover V8 as there have been changes to the engine.

Nevertheless, all factory-fitted distributors are Lucas items and all, with certain limitations, are interchangeable.

Early versions of the engine - Rover P5, P6 and early Range Rover - were fitted with contact breaker distributors, either single or twin points.

With the introduction of the Rover SD1 saloon, in 1976, came a new electronic ignition distributor, the Lucas 'OPUS' 35DE8. This was a completely self-contained unit, with the exception of a ballast resistor pack mounted away from the distributor.

In 1982, the 35DE8 was replaced by the Lucas 35DM8, an improved design with the ignition module located away from the main distributor (and therefore away from engine heat).

In 1985, an updated version of the DM8 - the DLM8 - was fitted to the Rover SD1. This distributor is similar to the DM8 but has an ignition module attached to the side of the distributor casing.

Other V8 vehicles, such as TR8 and Range Rover, have been fitted with versions of the same distributors, typically featuring different advance characteristics to suit their particular application. As stated above, most distributors are interchangeable, but early (pre-1976) and late (1976 on) units have a different oil pump drive gear:

Early are known as "rigid shaft", with a tooth on the end of the distributor shaft which engages in a slot in the oil pump shaft.

*Late units are known as "flexible shaft", and feature a flexibly mounted skew gear on the end of the distributor shaft, which has a slot that engages with a tooth on the oil pump shaft. (see also **Timing Cover** and **Oil Pump**).*

Most new distributors are sold on an outright basis. Reconditioned units are exchange.

In addition to original Lucas distributors, we stock Lumenition electronic ignition kits, which are suitable for points type or 35DE8 electronic distributors only. We also stock complete replacement distributors by Mallory. Mallory distributors are twin contact breaker units, available in early or late type configurations, and feature adjustable ignition advance facility.

Distributor

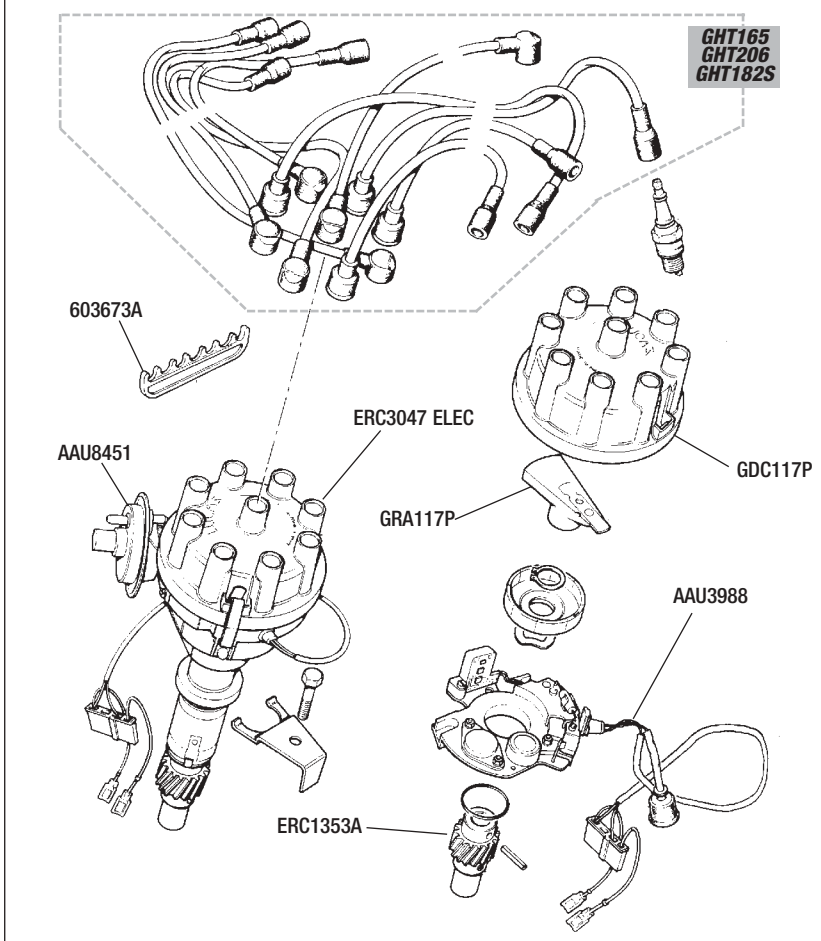
Distributor Identification

Identifying your distributor is fairly straightforward, as there is a code - such as DLM8 - stamped on the unit itself. However, you may need to remove the distributor from the engine in order to see the number.

Distributor - saloon/sport;

Rover P6 (points type)	(1)	**614031**
Rover SD1 (electronic)		
Lucas 35DE8 *(1976-1982)*	(1)	**ERC3047E**
Lucas DM8 *(1982-1985)*		
carb engines	(1)	**ERC8814**
efi engines	(1)	**ERC9122**
Lucas DLM8 *(1985 onwards)*		
carb engines	(1)	**ADU8817**
efi engines	(1)	**ADU8818**
Triumph TR8	(1)	**ERC3047E**

DISTRIBUTOR - V8 35DE8



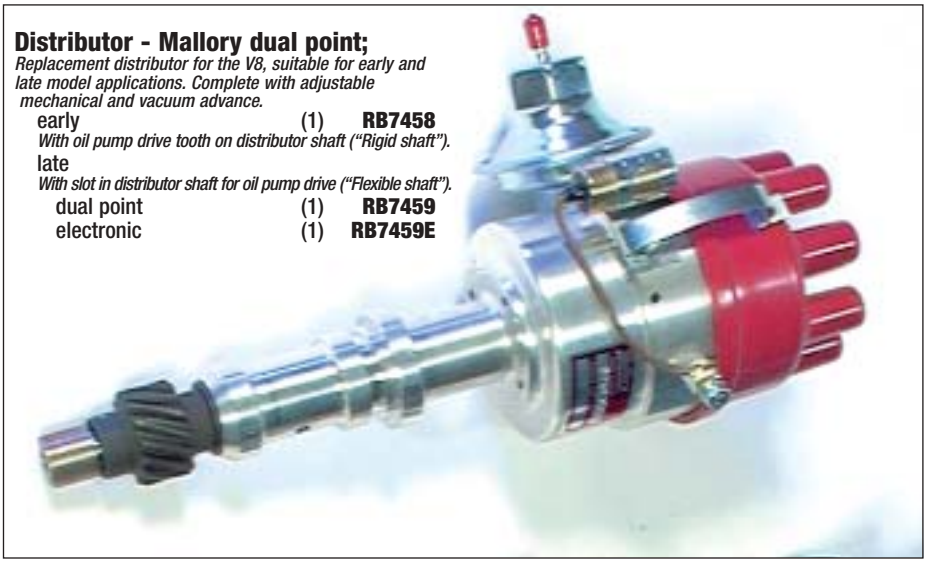
Distributor - Range Rover;

Early vehicles (1970 to June 1981) have Lucas points type distributors. Electronic ignition was introduced in July 1981. From this time, an A-suffix after the engine number denotes points ignition, and a B-suffix, electronic ignition (carb engines only - all efi are electronic ignition).
From 1986, all distributors are electronic - either the Lucas 35DM8, having a separate ignition amplifier mounted underneath the coil, or on later vehicles, the Lucas 35DLM8, which has an amplifier module mounted on the side of the distributor itself
*From 1992 (3.9 & 4.2 litre), distributors have either a 2-pin or a 3-pin amplifier module on the body of the distributo,. The later 3-pin can be used to replace the 2-pin when fitted in conjunction with the appropriate link lead, part no. **STC1212**. The latest 3.9 & 4.2 engines have a remote amplifier again, mounted away from the distributor.*
*Points type distributors can be converted to electronic ignition with Lumenition kit **RB7323***

points type (carb engines);
non-detoxed engines
1970 to Sept 1977 (1) **614179**
Engines 355, suffix A to E (8.5 & 8.25:1 cr).
Oct 1977 to June 1981 (1) **ERC3342**
Engines 355 suff F. Also 13D & 18D suff A (8.13:1)
detoxed engines
Feb 1971 to Sept 1977 (1) **use:614179**
Engines 341, 355, 356, 357, 359, suffix B to E (8.25:1 cr)
Oct 1977 to onwards (1) **ERC7131**
Engines 341, 359, 398 suffix F onwards (8.13:1 cr) Also 11D, 15D, 16D, 17D & 19D, suffix A.
electronic ignition;
carb engines - up to Oct 1985
9.35:1cr engines (1) **ETC4715**
Engines 15D, 16D, 17D & 19D, suffix B.
8.13:1cr engines
- with air rails (1) **ETC5090**
Engines 20D & 21D.
- without air rails (1) **ETC4717**
Engines 13D & 18D, suffix B.
carb engines - 1986 onwards
Lucas 35DM8
- 9.35:1cr, detoxed engines(1) **ETC6122**
Engine nos. 26D & 27D.
- 8.13:1cr, non-detoxed (1) **ETC4717**
Engine nos. 28D & 29D.
- 8.13:1cr, detoxed engines(1) **ETC5090**
Engine no. 30D.
Lucas 35DLM8
- 9.35:1cr, detoxed engines(1) **ETC6952**
Engine nos 26D & 27D.
- 8.13:1 engines (all) (1) **ETC6976**
Engine nos. 28D, 29D & 30D.
efi engines
3.5 litre
- Lucas 35DM8 (1) **ETC5953**
High & low cr, with separate amplifier module.
- Lucas 35DLM8 (1) **ETC6951**
High & low cr, with distrib-mounted amplifier.
3.9 litre - up to 1991
- engine nos. 35D & 36D (1) **ERR744**
Lucas 35DLM8, with integral amplifier module.
- engine nos. 37D & 38D (1) **ETC6268**
Lucas 35DM8, with separate amplifier module.
3.9 litre - 1992 on - 35D & 36D engs
with integral amplifier module
- non-catalyst (1) **ERR4739**
- catalyst-equipped (1) **ERR4738**
with remote amplifier module
- non-catalyst (1) **ERR5208**
- catalyst-equipped (1) **ERR5209**
3.9 litre - 1992 on - 37D & 38D engs
with integral amplifier (1) **ERR4740**
with remote amplifier (1) **ERR5207**
4.2 litre engines
with 2-pin integral amplifier(1) **ERR4113**
with 3-pin integral amplifier(1) **ERR4740**
with remote amplifier (1) **ERR5208**

DESCRIPTION QTY REQ. PART No.

Distributor - Mallory dual point;
Replacement distributor for the V8, suitable for early and late model applications. Complete with adjustable mechanical and vacuum advance.
early (1) **RB7458**
With oil pump drive tooth on distributor shaft ("Rigid shaft").
late
With slot in distributor shaft for oil pump drive ("Flexible shaft").
dual point (1) **RB7459**
electronic (1) **RB7459E**



Ignition Components

Distributor cap;
original type (1) **GDC117P**
Mallory type (1) **RB7469**
Rotor arm;
Rover P6 (1) **GRA112**
Rover SD1/TR8 (1) **GRA117P**
Range Rover
points type
1970 to Sept 1977 (1) **RTC6630**
Oct 1977 onwards (1) **RTC3618**
electronic ignition type (1) **GRA117P**
Mallory (1) **RB7472**
Contact breaker points;
Rover P6 (2) **GCS108**
Range Rover
1970 to Sept 1977 (1) **RTC6623**
Oct 1977 onwards (1) **GCS2117**
Mallory (2) **RB7470**
Condenser;
Rover P6 (1) **GSC111**
Range Rover (1) **RTC3472**
Mallory (1) **RB7471**

Pick-up & baseplate - electronic distributor;
Rover SD1
35DE8 (1) **AAU3988**
35DM8 (1) **AEU1760**
35DLM8 (1) **BAU5106**
Range Rover
carb engines (1) **RTC3198**
efi engines
3.5 litre with 35DM8 (1) **RTC3198**
3.5 litre with 35DLM8 (1) **RTC5090**
3.9 (all) & 4.2 litre (1) **RTC5090**
Vacuum advance unit - distributor;
Rover SD1 (1) **AAU8451**
Range Rover
points type distributors
non-detoxed (1) **UKC1674**
detoxed (1) **608266**
electronic distributors
up to Oct 1985
- 9.35:1cr engines (1) **608266**
- 8.13:1cr engines (1) **RTC3201**
Oct 1985 onwards - all (1) **RTC3201**
Including 3.9 & 4.2 litre.
Mallory distributor (1) **RB7473**

LUMENTITION KIT

Lumenition kit
Includes all parts and instructions necessary to convert Lucas 35D8 points type and 35DE8 electronic distributors to breakerless electronic ignition. Benefits include better starting/reliability, reduced maintenance and improved performance/mpg. (Distributor can also be converted back if so desired).
P6 (points type) (1) **RB7270**
SD1 (electronic) (1) **RB7323**

Lumenition performance ignition kit
As above kit but also offers constant maximum spark energy at coil through the whole rev range. Supplied complete with low resistance coil.
P6 (points type) (1) **RB7270P**
SD1 (electronic) (1) **RB7323P**

DESCRIPTION QTY REQ. PART No.

Sealing ring - distributor shaft (1) **603446**
All distributors.
Drive gear - distributor shaft *(All engines);*
early engines (1) **605217**
With oil pump drive tooth on distributor shaft.
late engines (1) **ERC1353A**
With slot for oil pump drive.
Ignition coil;
SD1/TR8 (1) **GCL143**
Range Rover
points distributor (1) **573038**
electronic distributor
NB. both types interchangeable.
Bosch (1) **PRC6574**
Lucas (1) **RTC5628**
Moroso chrome coil (1) **RB7475**
Suitable for Mallory distributor.
Ballast resistor
Opus 35DE8 type (1) **DRC1638**
Mallory type (1) **RB7476**
Suppressor - coil (1) **DRC1068**
Amplifier module - electronic ignition;
Rover SD1
35DM8 (1) **AEU1917**
Underneath coil.
35DLM8 (1) **NJL100060**
Attached to distributor casing.
Range Rover
remote - Lucas 35DM8 (1) **AEU1917**
Underneath ignition coil.
integral - Lucas 35DLM8
2-pin (1) **NJL100060**
3-pin (1) **STC1184**
remote - late 3.9 & 4.2 (1) **STC1856**
Link lead - amplifier to coil - Range Rover;
2-pin amplifier
3.5 litre (1) **PRC6141**
3.9 litre (1) **PRC6144**
3-pin amplifier (1) **STC1212**

Plug Leads & Spark Plugs

Plug lead set - V8;
original type
Rover SD1
1976-1982 (1) **GHT165**
1982 onwards (1) **GHT206**
Triumph TR8 (1) **GHT182**
Range Rover (1) **RTC6551**
performance (1) **GHT182S**
Silicone leads suitable for all engines.
Plug lead retainer;
All models. Holds 4 leads.
loose (1) **603673A**
fixed (1) **603672A**
Spark plug - V8;
Rover P6 (12.7mm reach) (8) **GSP4376**
Rover SD1 (19mm reach)
carb engines
1976-1982 (8) **GSP4382**
1982 onwards (8) **GSP4362**
efi engines (8) **GSP6462**
Triumph TR8 (8) **GSP4382**
Range Rover
3.5 litre
1970 to 1977 (8) **GSP4376**
1978 onwards (8) **GSP4362**
3.9 litre
9.35:1cr non catalyst (8) **GSP4362**
8.13:1cr & catalyst engines (8) **GSP4482**
4.2 litre (8) **GSP6462**
Spark plug spanner (1) **GAT140**

STANDARD DISTRIBUTOR, CAP, ROTOR ARM & AMPLIFIER

DESCRIPTION QTY REQ. PART No.

FUEL ADDITIVES

Bottled additives are available which can be mixed with either 'Premium' or 'Super' unleaded depending upon application.

It usually works out cheaper to use bottled additives than leaded or LRP - work it out for yourself!

Wynns 4 star plus. (250ml) **RX1407W**
Phosphorous based offering valve seat protection and octane boost when used with premium unleaded. In worldwide use for many years. Competitively priced, treats 250 litres of petrol.

Castrol Valvemaster (250ml) **RX1407VM**

Castrol Valvemaster Plus (250ml) **RX1407VMP**
Endorsed by the federation of British Historic Vehicle Clubs (FBHVC), having been independently tested and approved, both products offer a high level of protection against valve seat recession under all driving conditions. In addition, castrol valvemaster plus provides an octane boost to premium unleaded petrol which reduces pinking or knocking on high compression or performance applications. This also usually avoids the need to re-tune your engine. Treats 250 litres of petrol.

TOOLS

Valve spring compressor (OHV) **RX12260HV**
Clutch alignment tool **RX1386T**

Oil filter strap wrench **RX1514**
Sump key set (5 piece) **RX1515**
Oil pump priming tool **RX1431**
Grease gun **RX1423**
Spark plug spanner **GAT140**

Road spring compressor **RX1328**

DESCRIPTION QTY REQ. PART No.

LUBRICANTS & FLUIDS

Engine oil - V8;
- Unipart 20W50 **GGL104**
  4.55 litre (1 gallon)
- Castrol Classic XL (20W50) **RX1363**
  4.55 litre (1gallon).
- Duckhams Q (20W50) **HMP190100**
  4.55 litre (1 gallon).
- Duckhams Q Storage Oil **HMP190104**
  4.55 litre (1 gallon)

Gear oil;
- Unipart
  - EP90 - 0.5 litre **GGL190**
  - ATF - 0.5 litre **GGL175**
  - ATF - 5 litre **GGL505**

Antifreeze;
It is recommended that a minimum 50% antifreeze mix is maintained all year round on aluminium engines, to inhibit corrosion.
- Unipart - 1 litre **GAC2018**
- Unipart - 5 litre **GAC2019**

Brake/clutch fluid;
- Unipart Dot 3 - 1 litre **GBF103**
- Silicone - 0.5 litre **RX1327**
- Silicone -1 litre **RX1326**

WORKSHOP CONSUMABLES

Grease;
- lithium grease - 0.5 litre tube **GGL111**
- rubber grease (red) **514578**
  For brake assemblies (2oz tube).

Cam Lube **RX1358**
WD40 (large, 400ml) **GAC111**
Radweld (Holts, 250ml) **RX1508**
Silicone Sealant (80ml tube) **GHF6093**
Hylomar (gasket sealant) (100g) **GGC103**
Exhaust jointing compound **GCH112**
Copper grease (tube) (95g) **RX1345**

Brake cleaner (aerosol) **GBF901**
Loctite thread lock (24ml) **GAC100**
Trim adhesive (1 litre) **RX1353**
Trim adhesive (370g aerosol) **RX1353A**
Rubber gloves (box of 100) **RX1406**
Castrol oil jugs;
- 1/2 pint **RX1395**
- 1 pint **RX1396**
- 2 pint **RX1397**
- all 3 jugs **RX1398**

BODY CARE

FINNEGANS 'ANTI-CORROSION' WAXOYL

Waxoyl starter kit *Includes; RX1028, RX1030, RX1031.*	**RX1032**
Waxoyl;	
5 Litre can	**RX1027**
2.5 Litre can	**RX1029**
2.5 Litre cartridge	**RX1028**
Trigger spray gun	**RX1033**
High pressure spray gun *Use with 2.5 litre cartridge.*	**RX1030**
Extension probe *Use with high pressure spray gun.*	**RX1031**
Aerosol *(400ml)*	**RX1026**
Aerosol *(200ml)*	**RX1025**
Underbody seal;	
1 litre	**RX1024**
500ml	**RX1023**

AUTOGLYM CAR CARE PRODUCTS

Autoglym car care pack *Includes 1 of each item listed below.*	**RX1510**
Silicone resin polish *(300ml)*	**RX1312**
Bodywork shampoo conditioner *(500ml)*	**RX1313**
Car interior shampoo *(500ml)*	**RX1314**
Glass polish *(325ml)*	**RX1315**
Cutting polish *(325ml)*	**RX1316**
Extra gloss protection *(325ml)*	**RX1317**
Bumper care *(325ml)*	**RX1318**
Vinyl & rubber care *(500ml)*	**RX1319**
Leather care cream *(325ml)* *Cleans and preserves.*	**RX1320**
Superglym chrome polish *(55ml)*	**RX1321**
Clean wheels *(500ml)*	**RX1322**
Perfect polishing cloth *(21 sq ft)*	**RX1323**
Aqua-dry *(Synthetic chamois)*	**RX1324**
Clean machine *(1 litre)* *Engine Degreaser.*	**RX1325**

The following items are not included in the 'Car Care Pack';

Instant Tyre dressing	**RX1368**
Intensive Tar remover	**RX1367**

GENERAL CAR CARE PRODUCTS

Sponge	**RX1415**
Wash leather	**RX1416**

WHEEL WAX

Prevents the build up of brake dust and stops corrosion. Protects against road salt, tar and grime.
Gives an incredible shine.

Wheel Wax (225g) **RX1262**

'CONCOURS' SPECIALIST WHEEL CLEANER

The 'Concours' specialist wheel cleaning system will help you care for your Classic's wheels.

Suitable for all Steel, Alloy and Wire wheels (including painted & chromed), 'Concours' wheel cleaning system uses a unique 2-stage process that not only cleans, but gives wheels a superb lasting finish that helps to protect them, making them easier to care for and clean in the future.

'Concours' Wheel Cleaning Kit **RX1405**
Kit includes; special cleaning solution (580ml), wooden handled cleaning brush & dispenser, finishing/protection solution (180ml), 2 pair of disposable gloves.

Cleaning solution breaks down brake dust & road grime. Brush & dispenser gets into all those awkward places. Finishing/protection solution leaves wheels like new.

ROADSIDE EQUIPMENT

Tyre pressure/tread depth gauge kit	**STC724**
Lightweight Disposable Overalls	
Medium (approx 47" chest)	**RX1408M**
Large (approx 51" chest)	**RX1408L**
Extra large (approx 55" chest)	**RX1408X**
Rubber Gloves (100)	**RX1406**
AA membership & Relay pack	**RX1329**
Warning triangle	**RX1344**
Safety jacket (luminous)	**GAC2999**
First aid kit	**RX1399**
Fire extinguisher	**GAC9904**

DESCRIPTION QTY REQ. PART No. | DESCRIPTION QTY REQ. PART No. | DESCRIPTION QTY REQ. PART No.

ELECTRICAL

Air Horns - Stop Lamp - Rear Fog Lamp

Air horns *(pair)* **RX1381**
High level brake/stop light **RX1298**
Rear fog light/guard **RB7092**

Front 'Fog light' *(Supplied in Pairs)* **RX1370**
Aftermarket product.

Ideal for working on you car or for jobs around the house. Inc. 240v-500w tungsten halogen lamp, 2m cable and BS plug.

Portable Halogen Worklight (500w) **RX1263**

Battery Conditioner

The battery charger that turns on and off, automatically.

Suitable for all 12 volt batteries (from 5AH to 100AH), this superb product constantly revitalises the battery cells - helping to extend cell life, without the danger of overcharging.

Battery Conditioner Kit **RX1410**
Comes complete with all fittings, connector kit and operating instructions.

LOOK AT THESE BENEFITS;

- Designed to be left connected for long periods.
- Use without disconnecting vehicle electrics.
- L.E.D. battery condition display.
- Thermal cut-out facility.
- 12 month guarantee.

Can also be used for these applications providing they use a 12 volt battery;
Caravans, lawn mowers, motorbikes, motor boats, wheel chairs and general leisure use.

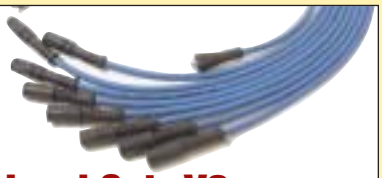
Battery Charger (6v/12v) **GAC7106**
Standard Battery charger

Vehicle Security

'Dis-Car-Nect'
Starter Immobiliser **RX1356**
Replacement Screw Knob **RX1356K**
Replacement Fuse **RX1356F**

HOW DOES 'DIS-CARNECT' WORK?
When leaving your car, simply remove the knob to isolate the starter circuit. The 16amp by-pass fuse will maintain current to all other electrical circuits - stereo memories, alarm etc. Because the starter motor draws over 150amps, any attempt to connect (hot-wire) the starter motor will instantly cause the by-pass fuse to blow, this immobilises the car until the knob is replaced. If this should happen, simply replace the 16amp fuse at your convenience. As an added advantage, the 'Dis-Car-Nect' will also prevent battery drain if you intend to store your car, simply unscrew the knob and remove the fuse. For extra security you can unscrew and remove the immobiliser knob completely.

Inspection Lamp/Halogen **RX1424**
Plugs into cigar lighter.



HT Lead Set -V8

HT lead set - silicone **GHT182S**

GENERAL ITEMS

RIMMER BROS
TEL: 01522 568000
www.rimmerbros.co.uk
QUALITY PARTS AND ACCESSORIES
Triumph
RANGE ROVER
DISCOVERY
LAND ROVER

Tax disc holder **RX1355**

RIMMER BROS

Decal 'Rimmer Bros' **RA1055**
Black/Silver, Self adhesive.

Key ring/fob - V8 **RX1537**
'Rimmer Bros' baseball cap **RX1425**

Rimmer Bros 'Vouchers';
Vouchers make an ideal present for Classic car owners.
£5 value **RX1337**
£10 value **RX1338**
£15 value **RX1339**
£20 value **RX1341**

BADGES & TRANSFERS

V8 chrome badge **BRC6484**
Adhesive -backed badge.

Transfers;

'3.5 LITRE' - each		**'4.6 LITRE'** - pair	
black	**RB7263B**	black	**RB7498 4.6B**
gold	**RB7263G**	gold	**RB7498 4.6G**
silver	**RB7263S**	silver	**RB7498 4.6S**
'3.9 LITRE'- pair		**'V8'** - each	
black	**RB7498 3.9B**	black	**RB7306B**
gold	**RB7498 3.9G**	gold	**RB7306G**
silver	**RB7498 3.9S**	silver	**RB7306S**
red	**RB7498 3.9R**		

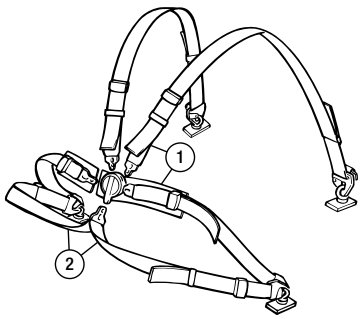
PAINTS

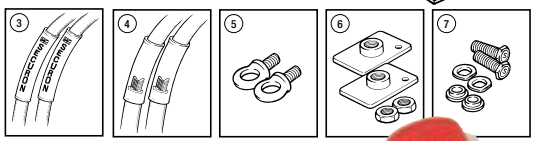
Paint - General

Primer (aerosol) *(150ml)*	
grey	**RX4047A**
white	**RX4048A**
red oxide	**RX4049A**
Chassis paint (black) *(for general touch-up)*	
brush on *(125ml)*	**RX4070B**
aerosol *(400ml)*	**RX4070A**
Engine paint *(high heat)*	
brush on *(125ml)*	**RX1432B**
aerosol *(400ml)*	
black	**RX1432A**
aluminium	**RX1432AL**
Wheels (silver) *(general application)*	
silver paint *(450ml aerosol)*	**RX1265**
clear lacquer *(400ml aerosol)*	**RX1261**
Black aerosol *(general)*	
gloss *(400ml)*	**RX4070A**
matt *(16oz)*	**RX1266**

COMPETITION TYPE HARNESS

A popular alternative to standard seat belts - these really do look the part!
The 4-point harness shown (no. 1) can be converted to the 6-point type by the inclusion of the crotch strap listed (no. 2). Note that fittings (eye bolts, reinforcement plates & bolts/spacer sets) are supplied separately. Harnesses are supplied singularly in 2" wide red webbing (black or blue webbing supplied to special order). This harness is designed for road use - please contact us if you have specific FIA/RAC approved type requirements.





		QTY REQ.	
1	HARNESS, competition type, red (each)	(2)	**RX1500**
2	CROTCH STRAP, red (each)	(2)	**RX1501**
3	SHOULDER PADS, 'Securon' (pair) *available in red or black*	(2)	**RX1502**
4	SHOULDER PADS, 'Triumph' (pair) *black*	(2)	**RX1414**
5	EYE BOLT SET (pair)	(2)	**RX1503**
6	REINFORCEMENT PLATE SET (pair)	(2)	**621112**
7	BOLT & SPACER SET (pair)	(2)	**RX1505**

DESCRIPTION PART No. DESCRIPTION PART No.

BOOKS

Workshop Manuals

V8 engine official overhaul manual **RD1024**
Land Rover publication. 152 pages. Covers 3.5, 3.9, 4.0, 4.2 & 4.6 engine units (exc, carbs, starters and bolt-on parts).

Workshop manual (factory);
Please refer to Range Rover/Discovery catalogues for other factory workshop manuals.
- TR8 **AKM3971**
- SD1 ('82 on) **AKM5343**

Workshop manual (Haynes);
- SD1 (3500) **RO1069**
- Range Rover (to '92) **RA1007**
- Discovery (to '98) **RD1015**

Reference Books

TR7 & TR8 **RB7375**
Owners & Buyers Guide (James Taylor)

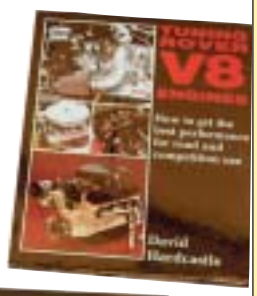
SD1 3500 & Vitesse **RO1070**
Road Tests.

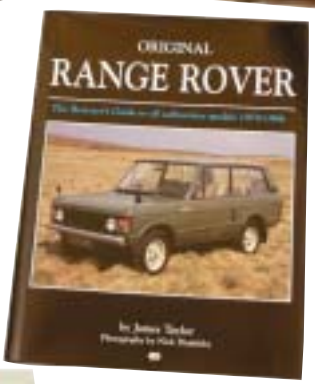
The Rover V8 Engine **RX1429**
By David Hardcastle. 208 pages.

Tuning Rover V8 Engines **RX1430**
By David Hardcastle. 208 pages.

Range Rover - The Complete Story **RA1319**
By James Taylor.

Original Range Rover (1970-1986) **RA1226**
By James Taylor.





Parts Books - Factory

Specific for models listed. Ideal if detailed line drawings and part number information is required.

TR8 (inc. TR7) **RTC9020B**

Range Rover
- 1970-1985 *(410 pages)** **RTC9846CH**
- 1986-1992 *(364 pages)** **RTC9908CB**
- 1992-1995 *(958 pages)** **RTC9961CB**

Discovery *(All models to '98)** *1060 pages.* **RTC9947CF**

**Shrink wrapped. Binder available separately.*

VEHICLE NUMBER PLATES

STANDARD

DELUXE-3D

BLACK - PRESSED ALUMINIUM

BLACK - ACRYLIC

BLACK - ACRYLIC (ENGRAVED)

ONLY AVAILABLE TO PERSONAL CALLERS.
New legislation from 1/1/03 states that number plates can only be sold directly to the owner of the vehicle together with proof of ownership and personal identification.

*We will need sight of the following three **original** documents:-*
- Vehicle registration document (V5)
- Driving Licence or utility bill.
- Passport or credit card (with photo ID), or travel/works pass (with photo ID).

Number plates are made to special order.

Please note that it is also now mandatory in the UK for all new number plates to bear the originating suppliers name, postcode and telephone number (i.e. Rimmer Bros).

Vehicle Number Plate - Front
- Standard **NPF**
- Standard with 'GB' logo **NPFGB**
- Deluxe - 3D effect **NPF3D**
- Deluxe - 3D effect with 'GB' logo **NPF3DGB**

Vehicle Number Plate - Rear
- Standard **NPR**
- Standard with 'GB' logo **NPRGB**
- Deluxe - 3D effect **NPR3D**
- Deluxe - 3D effect with 'GB' logo **NPR3DGB**

Vehicle Number Plate (Pair) - Black
Black background, Silver letters
Legal on Vehicles Reg. to 1/1/73 .
- Pressed aluminium (PR) **RX1365**
- Acrylic - standard letters (PR) **RX1365B**
- Acrylic - engraved letters (PR) **RX1365A**

Fitting Kit - number plates **NPK**
Universal kit including 4 self tap screws, 2 white cups, 2 yellow cups & 8 double sided adhesive pads.

GENERAL FASTENERS

BOLTS *(Imperial)*

Bolts have a NON Threaded Shoulder.

The threaded length can be calculated by multiplying the diameter by 2 and adding 1/4".

Thread Diameter	Bolt Length	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
1/4"	1.5"	UNF	___	GHF102	7/16" AF
1/4"	2"	UNF	___	GHF118	7/16" AF
5/16"	1.5"	UNF	___	GHF104	1/2" AF
5/16"	2"	UNF	___	GHF121	1/2" AF
3/8"	1.5"	UNF	___	GHF106	9/16" AF
3/8"	3"	UNF	___	GHF126	9/16" AF
1/2"	2"	UNF	___	BH608161	3/4" AF
1/2"	2.5"	UNF	___	BH608201	3/4" AF
1/2"	3"	UNF	___	BH608241	3/4" AF
5/8"	3"	UNF	___	GHF11315	16" AF
5/8"	4"	UNF	___	BH610321	15/16" AF

BOLTS *(Metric)*

Bolts have a NON Threaded Shoulder.

The threaded length can be calculated by multiplying the diameter by 2 and adding 6mm.

Thread Diameter	Bolt Length	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
M 6	40mm	Metric Fine	1.0	GHF132	10mm
M 8	40mm	Metric Fine	1.25	GHF134	13mm
M 10	40mm	Metric Fine	1.5	GHF136	17mm
M 12	50mm	Metric Fine	1.75	BH112101	19mm
M 12	60mm	Metric Fine	1.75	BH112121	19mm
M 12	80mm	Metric Fine	1.75	BH112161	19mm
M 16	60mm	Metric Fine	2.0	BH116121	21mm
M 16	80mm	Metric Fine	2.0	BH116161A	21mm

SET SCREWS *(Imperial)*

Set screws are Fully Threaded.

Thread Diameter	Bolt Length	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
1/4"	3/4"	UNF	___	GHF117	7/16" AF
1/4"	1"	UNF	___	GHF101	7/16" AF
5/16"	3/4"	UNF	___	GHF120	1/2" AF
5/16"	1"	UNF	___	GHF103	1/2" AF
3/8"	1"	UNF	___	GHF105	9/16" AF
7/16"	1.5"	UNF	___	GHF107	5/8" AF
1/2"	1.5"	UNF	___	GHF109	3/4" AF
1/4"	1"	UNC	___	GHF161	7/16" AF
1/4"	1.5"	UNC	___	SH504121	7/16" AF
5/16"	1"	UNC	___	GHF163	1/2" AF
5/16"	1.5"	UNC	___	GHF164	1/2" AF
3/8"	1"	UNC	___	GHF165	9/16" AF
3/8"	1.5"	UNC	___	GHF166	9/16" AF

SET SCREWS *(Metric)*

Set screws are Fully Threaded.

Thread Diameter	Bolt Length	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
M 6	25 mm	Metric Fine	1.0	GHF131	10mm
M 8	25 mm	Metric Fine	1.25	GHF133	13 mm
M 10	25 mm	Metric Fine	1.5	GHF135	17mm

STEEL NUTS *(Plain NON Locking - Imperial)*

Thread Diameter	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
3/16"	UNF	___	HN2005	3/8" AF
1/4"	UNF	___	GHF200	7/16" AF
5/16"	UNF	___	GHF201	1/2" AF
3/8"	UNF	___	GHF202	9/16" AF
7/16"	UNF	___	GHF203	5/8" AF
1/2"	UNF	___	GHF204	3/4" AF
1/4"	UNC	___	GHF207	7/16" AF
5/16"	UNC	___	GHF208	1/2" AF
3/8"	UNC	___	GHF209	9/16" AF

STEEL NUTS *(Plain NON Locking - Metric)*

Thread Diameter	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
M 4	Metric Fine	0.7	NH104041	7mm
M 6	Metric Fine	1.0	GHF212	10mm
M 8	Metric Fine	1.25	GHF213	13mm
M 10	Metric Fine	1.5	GHF214	17mm
M 12	Metric Fine	1.75	GHF215	19mm

STEEL NUTS *(Nylon Insert Self Locking - Imperial)*

Thread Diameter	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
3/16"	UNF	___	GHF220	5/16" AF
1/4"	UNF	___	GHF221	7/16" AF
5/16"	UNF	___	GHF222	1/2" AF
3/8"	UNF	___	GHF223	9/16" AF
7/16"	UNF	___	GHF224	5/8" AF
1/2"	UNF	___	GHF225	3/4" AF
5/8"	UNF	___	138563	15/16" AF

STEEL NUTS *(Nylon Insert Self Locking - Metric)*

Thread Diameter	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
M 6	Metric Fine	1.0	NY106041	10mm
M 8	Metric Fine	1.25	GHF232	13mm
M 10	Metric Fine	1.5	GHF233	17 mm
M 12	Metric Fine	1.75	NY112041	19mm

BRASS NUTS *(Standard & Deep Section - Imperial)*

Thread Diameter	Thread Type	Thread Pitch	PART NUMBER	Spanner Size
5/16" Std	UNF	___	515369	1/2" AF
3/8" Std	UNF	___	GHF262	9/16" AF
3/8" Deep	UNF	___	AEC350	9/16" AF

WASHERS *(Imperial)*

Internal Diameter	*Plain* Standard Diameter PART NUMBER	*Repair* Large Diameter PART NUMBER	*Spring* Standard Diameter PART NUMBER	*Shakeproof* Standard Diameter PART NUMBER
3/16"	WP20	___	___	___
1/4"	GHF300	GHF314	GHF331	GHF321
5/16"	GHF301	GHF315	GHF332	GHF322
3/8"	GHF302	GHF316	GHF333	GHF323
7/16"	WC600071	___	GHF334	GHF324
1/2"	WA112081	___	GHF335	GHF325
5/8 "	PWZ110	___	LWZ310	LWZ410

WASHERS *(Metric)*

Internal Diameter	**Plain* Standard Diameter PART NUMBER	**Repair* Large Diameter PART NUMBER	*Spring* Standard Diameter PART NUMBER	*Shakeproof* Standard Diameter PART NUMBER
M 6	GHF300	GHF314	WL106001	GHF371
M 8	GHF301	GHF315	GHF382	WF108001
M 10	GHF302	GHF316	GHF383	WF110001
M 12	GHF304	___	WL112001	WF112001
M 16	PWZ110	___	WL116001	WF116001

**Please Note: Some plain and repair washers are suitable for imperial and metric applications eg: GHF300 = 1/4" ID or 6mm ID.*

SELF TAPPING SCREWS

Pan Head - Pozi Drive

Screw Size No	Screw Length	PART NUMBER
6	1/2"	GHF421
6	3/4"	GHF422
8	1/2"	YZ3404
8	3/4"	GHF424
10	1/2"	GHF425
10	3/4"	YZ5505
12	1/2"	GHF427
12	3/4"	GHF428
12	1"	GHF429
14	3/4"	GHF430
14	1"	GHF431

SPLIT PINS *(Imperial)*

Pin Thickness	Pin Length	PART NUMBER
1/16"	1.5"	GHF500
5/64"	1.5"	GHF501
3/32"	1.5"	PC34
7/64"	1.5"	GHF503
1/8"	2.25"	PC15
9/64"	2.25"	GHF505
5/32"	2.25"	GHF506
11/64"	2.25"	GHF512
3/16"	3"	GHF513
7/32"	3"	PS614240
1/4"	3"	PS616240

SELF TAPPING SCREWS

Countersunk - Pozi Drive

Screw Size No	Screw Length	PART NUMBER
6	1/2"	GHF400
6	3/4"	GHF401
8	1/2"	GHF402
8	3/4"	GHF403
10	1/2"	GHF404
10	3/4"	GHF405
12	1/2"	AC612041A
12	1"	AC612081
14	3/4"	AC614061
14	1"	AC614081

SPLIT PINS *(Metric)*

Pin Thickness	Pin Length	PART NUMBER
2.0mm	40mm	PS104400
2.5mm	40mm	GHF509
3.2mm	56mm	GHF510
4.0mm	56mm	GHF511

'P' CLIPS

Imperial Sized

Part Number	Cable Diameter	Fixing Hole size
PCR207	1/8"	7/32"
PCR307	3/16"	7/32"
PCR309	3/16"	9/32"
PCR311	3/16"	11/32"
PCR407	1/4"	7/32"
PCR409	1/4"	9/32"
PCR411	1/4"	11/32"
PCR507	5/16"	7/32"
PCR509	5/16"	9/32"
PCR511	5/16"	11/32"
PCR607	3/8"	7/32"
PCR609	3/8"	9/32"
PCR611	3/8"	11/32"
PCR707	7/16"	7/32"
PCR709	7/16"	9/32"
PCR711	7/16"	11/32"
PCR807	1/2"	7/32"
PCR809	1/2"	9/32"
PCR811	1/2"	11/32"
PCR813	1/2"	13/32"
PCR1007	5/8"	7/32"
PCR1009	5/8"	9/32"
PCR1011	5/8"	11/32"
PCR1207	3/4"	7/32"
PCR1209	3/4"	9/32"
PCR1211	3/4"	11/32"
PCR1407	7/8"	7/32"
PCR1409	7/8"	9/32"
PCR1411	7/8"	11/32"
PCR1607	1"	7/32"

Metric Sized

CP105081	8mm	5mm
CP108101	10mm	8mm
CP108121	12mm	8mm
CP106161	16mm	6mm
CP108165	16mm	8mm

HOSE CLIPS *Use as required.*

3/8"	to	1/2"	GHC304
7/16"	to	5/8"	GHC405
1/2"	to	3/4"	GHC406
5/8"	to	7/8"	GHC507
3/4"	to	1"	GHC608
7/8"	to	1.1/8"	GHC709
1"	to	1.3/8"	GHC811
1.1/8"	to	1.5/8"	GHC913
1.3/8"	to	2"	GHC1015
1.1/2"	to	2.1/8"	GHC1217
2"	to	2.3/4"	GHC1622

GREASE NIPPLES

Part Number	Thread Size	Angle
UHN400	1/8" BSP	straight, short
UHN445	1/8" BSP	45º angle
LN30041	1/8" BSP	90º angle
144825	1/8" BSP	straight, long
56935	1/4" BSP	straight
125361	1/4" BSP	45º angle
56934	1/4" BSP	90º angle

POP RIVETS

Part Number	Size
Open End Type	
RA607096	2.9mm x 5mm
RA608126	1/8" x 3/16"
RA608176	1/8" x 1/4"
RA608236	1/8" x 5/16"
RA608253	1/8" x 3/8"
Closed End Type	
RU608123	1/8" x 3/8"
RU608313	1/8" x 1/2"
RU612123	3/16" x 5/16"

CABLE TIES

Part Number	Diameter
GHF1265	3 1/2"
GHF1266	5 1/4"
RTC222A	6"
GHF1267	8 3/4"
GHF1268	11"

PIPES AND FITTINGS

Part Number	Material	Size
Brake and Fuel Pipe		
Supplied in 25 footrolls.		
MPKF125	CUPRO-NICKEL	3/16" Dia.
MPKF225	CUPRO-NICKEL	1/4" Dia.
MPKF325	CUPRO-NICKEL	5/16" Dia.
EF125	STEEL	3/16" Dia.
EF225	STEEL	1/4" Dia.
EF325	STEEL	5/16" Dia.

Part Number	Thread Size	Pipe Bore
Pipe Nuts - Male, Steel.		
TM606031	3/8" UNF	3/16"
TM110051	10mm x 1mm	3/16"
LK21994	3/8" BSF	3/16"
BCA4370	7/16" UNF	3/16"
BHA4706	7/16" UNF	1/4"
AUSU40A	1/2" UNF	5/16"
Pipe Nuts - Male, Brass.		
AEHU1	3/8" UNF	3/16"
AEHU2	10mm x 1mm	3/16"
AEHU3	3/8" BSF	3/16"
AEHU7	7/16" UNF	1/4"
Pipe Nuts - Female, Steel.		
TN606031	3/8" UNF	3/16"
SU2A	10mm x 1mm	3/16"
SU4A	7/16" UNF	1/4"
HU41A	1/2" UNF	5/16"
Pipe Nuts - Female, Brass.		
AEHU1A	3/8" UNF	3/16"
AEHU2A	10mm x 1mm	3/16"
AEHU4A	7/16" UNF	1/4"

Part Number	Thread Size
Bleed Screws	
556508A	3/8" UNF
608400A	10mm metric
27H7166	3/8" BSF

Part Number	Capacity
Pipe Clips	
GHF1191	SINGLE, 3/16"
GHF1192	SINGLE, 1/4"
624155	DOUBLE, 3/16"

WE'RE BUYERS AS WELL AS SELLERS

Alongside our new parts, we also offer parts which have been reconditioned (to the very highest standards).
Because of this, we are often in the market for V8 engines, which are suitable for reconditioning purposes.
Please give us a call.

ALL PARTS ARE GUARANTEED

"It's our objective to ensure the satisfaction of every one of our customers."

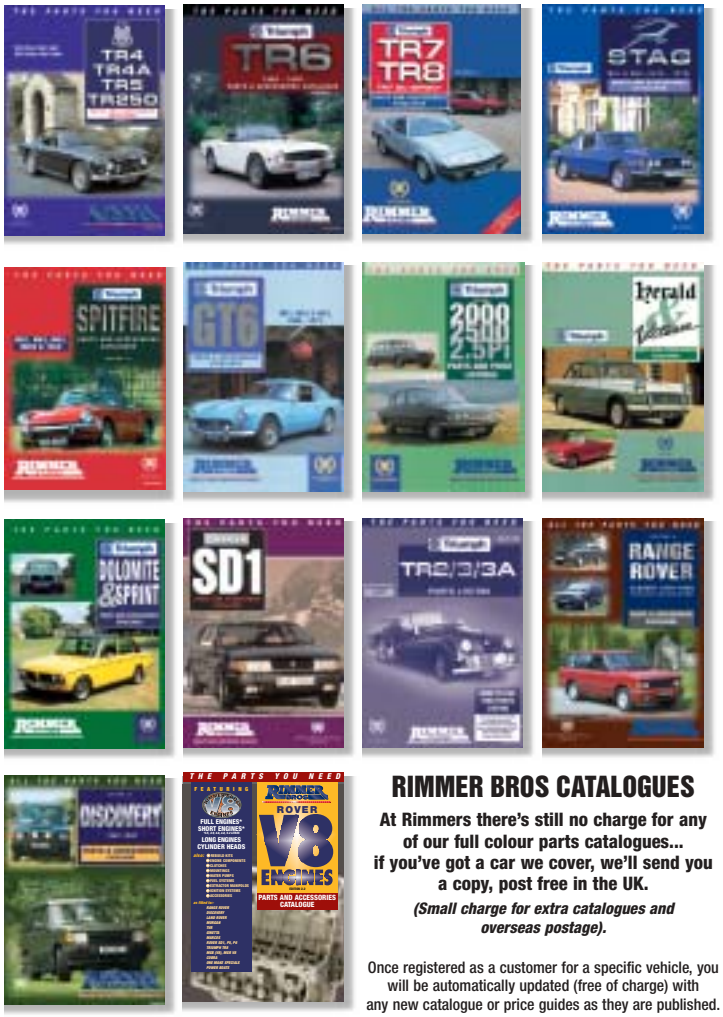
Please refer to our Price Guide for warranty information.

HOW TO FIND US
We're 2 miles south of Lincoln, on the A15 Lincoln to Sleaford Road.

BUSINESS HOURS
8.30am - 5.30pm Monday to Friday.
8.30am - 1.30pm Saturday.
(Closed Sunday and Bank Holidays except Good Friday)

OUR CATALOGUES

ARE YOUR PASSPORT TO THE FINEST MAIL-ORDER PARTS SERVICE



RIMMER BROS CATALOGUES

At Rimmers there's still no charge for any of our full colour parts catalogues... if you've got a car we cover, we'll send you a copy, post free in the UK.

(Small charge for extra catalogues and overseas postage).

Once registered as a customer for a specific vehicle, you will be automatically updated (free of charge) with any new catalogue or price guides as they are published.

RIMMER BROS

Rimmer Bros Ltd. Triumph House, Sleaford Road, Bracebridge Heath, Lincoln LN4 2NA, England.

Telephone: 01522 568000.

Fax (01522) 567600. **E-MAIL: sales@rimmerbros.co.uk** **www.rimmerbros.co.uk**