

ROVER V8 ENGINE PARTS

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Cylinder Block Area

Cylinder Block Plugs/Dowel and Tap

CX954	Main core plug (8)	£3.12
CX964	Front oil gallery plug (4)	£3.34
CX974	Rear threaded gallery plug (2)	£1.12
CX984	Rear core plug over cam (1)	£4.60
BYAJG730	Cylinder block drain tap	£5.47
CX944	Dowel for cyl block top face	£8.40



Clevite 77 Cam Bearing Set.

DW934F Finished size

£25.14



ARP Main Bearing Bolts

These bolts are forged from 8740 chrome moly. The threads are rolled after heat treatment. In the High Performance Series, they have a nominal rating of 180,000psi. kits include hardened washers.

BYAJG1090	3.5/3.9/4.0/4.6 engines [10]	£2.88ea
AZ570	4.0 & 4.6 engines [kit]	£89.05

PARTS FOR CROSSBOLTED BLOCK

CX221	Cross bolt-hex head	£3.04
1994-99 uses qty 9. 1999-03 uses qty 8		
CX224	Cross bolt-allen head	£4.10
1994-99 uses qty 1. 1999-03 uses qty 2.		
CX220	Cross bolt Dowty washers (8/9)	£1.94
CX222	Cross bolt Dowty washers (1/2)	£4.31



Main Stud Kit

In a performance engine, studs are best. They eliminate main cap walk & fretting, as well as protecting the threads in the block. The studs are manufactured from 8740 chrome moly. they have a 200,000psi tensile strength, & the threads are rolled. *Torq- 135 lb ft with oil, 90 lb ft with ARP moly.*

AZ550	3.5 & 3.9 non-crossbolted	£79.79
AZ575	4.0 & 4.6 engines	£115.25

Main Studs Extra Long

ARP Main studs are manufactured from aircraft quality 8740 chrome moly steel. Tensile strength of 190,000 psi. At 5.3" length, this allows for the addition of a stud girdle or plate.

AZ585	Extra long stud- 5.30"	£6.06
BY38310	Washer for stud	£0.85
AZ595	Nut for stud	£0.71

Crankshaft Area



Big End Bearings 3.5-3.9-4.2 only

Made by Federal Mogul [Sealed Power] in the USA.

CX2104F	Std big ends 3.5-4.2 only	£19.68
CX2114F	.010" big ends 3.5-4.2 only	£19.68



Main Bearing Sets 3.5-3.9-4.2

[made in USA]

CX2124	Std mains 3.5-4.2 only-Clevite	£50.50
CX2134	.010" mains 3.5-4.2 only-Clev	£50.50
CX2234	.020" mains 3.5-4.2 Fed Mogul	£46.93



Big End Bearings 3.5-3.9-4.2

[made in the USA]

CX2104	Std big ends 3.5-4.2 only-Clevite	£33.92
CX2114	.010" big ends 3.5-4.2 only-Clevite	£33.92
CX2224	.020" big ends 3.5-4.2 only-Clevite	£33.92
CX2225	.030" big ends 3.5-4.2 only-Clevite	£33.92



Main Bearings-extra- plain shells

Late 3.5/3.9. made in USA

On cylinder blocks where there is only one centre main crankshaft thrust [upper], instead of upper & lower, an extra- plain shell, for the centre main cap, will be required. Applies to very late 3.5, & 3.9.

CX2125	Std mains- extra plain shell 3.9-Clevite	£13.63
CX2135	.010" mains- extra plain shell 3.9-Clevite	£6.70

Big End Bearings-4ltr & 4.6ltr onlyStd crank sizes: **B.E.** 2.185"-2.1855" // 55.5-55.513mm

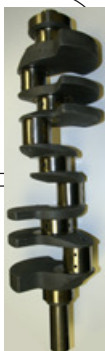
CX2555	Std big ends 4.0-4.6 only	£24.76
DW410	.010" big ends 4.0-4.6 only	£24.55
DW425	.020" big ends 4.0-4.6 only	£28.44

**Big end Bearings-Our 5L STROKER only***modified from 283 Chevy brgs**[made in USA]*

DW49955	Std big ends "H" type HD	£92.83
DW49965	1 thou tighter big ends "H" type HD	£67.32
DW49960	1 thou looser big ends "H" type HD	£80.12

**305cu in/5L STROKER CRANKSHAFT- 4998cc**

This crank has a stroke of 3.508". Used with our forged stroker pistons, the capacity will increase to **4998cc**. Crank must be used with our conrods, as the big end journals are wider than standard. Nitrided & crossdrilled. Long nose. **Small diameter mains** for 3.9/4.2 cylinder blocks. 2" big end journals. Weight = 19.6k. Made in England.

DW49951 Stroker crank-cast 3.9/4.2 blocks **£873.00****305cu in/5L STROKER CRANKSHAFT- 4998cc**

This crank has a stroke of 3.508". Used with our forged stroker pistons, the capacity will increase to **4998cc**. Crank must be used with our conrods, as the big end journals are wider than standard. Nitrided and crossdrilled. Long nose. **Large diameter mains** for 4.0/4.6 cylinder blocks. 2" big end journals. Weight = 19.6k. Made in England.

DW49953 Stroker crank-cast 4.0/4.6 blocks **£871.20****Timing Chain Sets and Parts**

AZ780 Cloyes Race Billet True Roller set **£110.80**
Features: Induction heat-treated, Billet Steel gears, 9 keyway crank gear allows +/- 8 degrees. Adjustability in 2 crank degree increments. Premium True-roller chain with .250" rollers. Hand matched to qualify both centre distance & run-out.

AZ620CH Replacement chain for AZ780 **£50.80**

BY9-1132 Cloyes "Street True-Roller" set **£49.16**
Features: Cast iron cam gear, Induction heat treated, billet steel crank gear [3 keyways], True-roller chain with .250" rollers. Made in the USA.

BY9-143 Replacement chain for BY9-1132 **£15.00**

AZ770 Standard timing set [3 pieces] **£26.34**
Above kit is for early engines with gear type oil pump in timing cover.

AZ764 Timing chain for std timing set **£10.08**
CX2024 Crank gear, std metal **£6.05**

**Main Bearing Sets-4 litre and 4.6 only**

Standard crank sizes:

Mains. 2.4995"-2.5" // 63.487-63.5mm

CX2560	Std mains 4.0-4.6 only	£55.18
DW405	.010" maind 4.0-4.6 only	£55.18

**Con Rod Bolts and Nuts**

AZ215 ARP Hi-Performance 3.5-3.9-4.2 **£64.19**
ARP kit comprises of bolts and nuts forged from 8740 Chrome Moly. Tensile strength of 190,000 PSI.

CX1044	Standard bolt-3.5-3.9	£4.94ea
CX1034	Standard nut- 3.5-3.9	£1.00 ea
CX3000	Standard bolt 4.0-4.6	£4.40ea

**Crankshaft Spigot Bushes**

CX2074	For 4 spd and Range Rover	£2.76
CX2084	For SD1 Manual 5 spd, thick wall	£11.59

**Crankshaft Key**

CX2064	Standard	£2.50
CX2559	3.9 Disc/short nose long key	£7.81

Mr Gasket Offset Crankshaft Key

The offset crankshaft key is another method to increase torque and horsepower within the operating range you select.

BY986 Copper 4° **£14.95****Stroker Conrods 6.0" c to c**

Made to suit our 5 litre stroker kit. H.D. "T" beam, forged 5140 steel with ARP 3/8" capscrew style bolts. These conrods should be good to 500bhp+. For 2" bearings. Weight = 603g.

DW49954 Forged steel "T" beam conrod set **£380.96****CRANKSHAFT SPACER**

This spacer is needed when a long nose crankshaft like a 4.6 is used with the early timing cover with the gear type oil pump. Otherwise the end of the crank protrudes past the end of the harmonic balancer.

DW525 Spacer-use with long crank **£21.26****Pistons for 3.5/3.9 litre Engine****Cast 3.5 Pistons & Pins**

Set of 8 pistons with pins included [3.520" bore]

CX2492 +.020" pistons, 9.75:1 comp **£138.80**
Used originally on the Rover Vitesse. Use with ring set AZ899.

**Cast 3.9 Pistons & Pins**

Set of 8 pistons with pins included [3.720" / 94.5mm bore]

DW995	3.9 +.020" -8.13:1 comp*	£91.20
DW895	3.9 +.020" -9.35:1 comp*	£162.40

* with 3.9 cylinder heads. Use with rings AZ3920

**Pistons for OEM 4.6 Engine & 3.9/4.0/4.6 Stroker****Cast 4.6 Pistons & Pins**

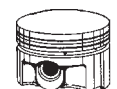
Set of 8 pistons with pins included [3.720" / 94.5mm bore]

DW4620 4.6 +.020" -9.35:1 comp* **£156.32**
* with 4.6 cylinder heads. Use with rings AZ4620

**3.720" -Forged Pistons for Stroker Kit [4998cc]**

Set of 8 pistons with .927" pins included. These forged dished top pistons feature forced pin oilers, and are designed to cope with Street/Racing. Use ring set DW1185. C.H. is 1.195". Dish is 27cc.

Comp Rings:	1.5mm	Oil Ring:	3mm	Weight:	480g
DW49952	Forged-dished piston set-3.720"				£429.30

**Rings for 3.5 litre Engine****Ring Sets for 3.5 Pre-SD1/R/Rover pre 1976**

Bore: 3.5" Comp: 5/64" Oil: 3/16"

DW884	Cast rings standard	£36.80
AZ885	Cast rings +.020"	£40.22

**Ring Sets for 3.5 SD1/R/Rover 1976 on**

Bore: 3.50" Comp: 1/16" Oil: 3/16"

DW889	Cast rings standard	£32.16
DW8891	1 cylinder only-as above entry	£5.51
AZ899	Cast chrome faced rings +.020"	£36.08
AZ8991	1 cylinder only-as above entry	£8.17



Ring Sets for 3.5 SD1/R/Rover 1976 on

Bore: 3.50" Comp: 1/16" Oil: 3/16"

These rings have a recess in the upper outer edge of the top ring, they can be used in a worn bore with a ridge at the top.

DW889RD Cast rings std 'Ridge Dodger' £66.41
 DW889RD1 1 cylinder only-as above entry £9.11

**Rings for OEM -3.9/4.2/4.0/4.6 and RS Stroker Engines****Ring Sets for -3.9/4.2 OEM Engines & some Stokers**

Bore: 3.7/3.720"[94/94.5mm] Comp: 1.5mm Oil: 3mm

AZ3905 Chrome rings std bore £45.28
 AZ39051 Chrome rings std (1cyl) £8.33
 AZ3920 Chrome rings +.020" £50.27
 AZ3921 Chrome rings +.020" (1cyl) £9.06

**Ring Sets for -4.0/4.6 OEM Engines**

Bore: 3.7"[94mm] Comp: 1.2mm/1.5mm Oil: 3mm

AZ4605 Chrome rings std bore £38.86
 AZ4620 Chrome rings +.020" oversize £38.86

**Ring Sets for -3.9/4.2 OEM Engines & some Stokers**

These rings have a "ductile" high strength top ring, moly coated. Ideal for performance & / or racing.

Bore: 3.7/3.720"[94/94.5mm] Comp: 1.5mm Oil: 3mm

DW1180 Moly rings std bore £116.24
 DW1185 Moly rings +.020" bore £108.71

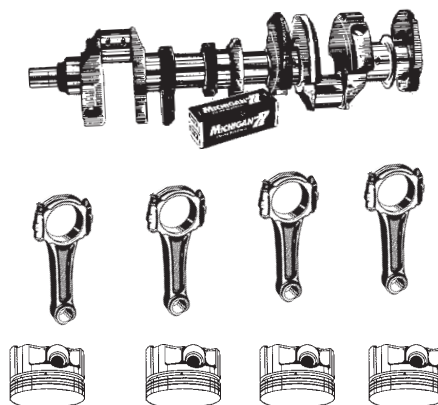
**Rover V8 Stroker Kit****305cu in/4998cc Stroker Kit**

Real Steel's Rover V8 stroker kit will increase your engines horsepower and torque. The kit has been tested, and it is awesome!

Crankshaft - a nodular iron crankshaft crossdrilled & nitrided, with increased stroke (3.508") Available for small main [3.9/4.2 block] and large main [4.0/4.6 block].

Con-rods - 6" steel "T" beam conrods are used, these are very strong, & give a better rod to stroke ratio.

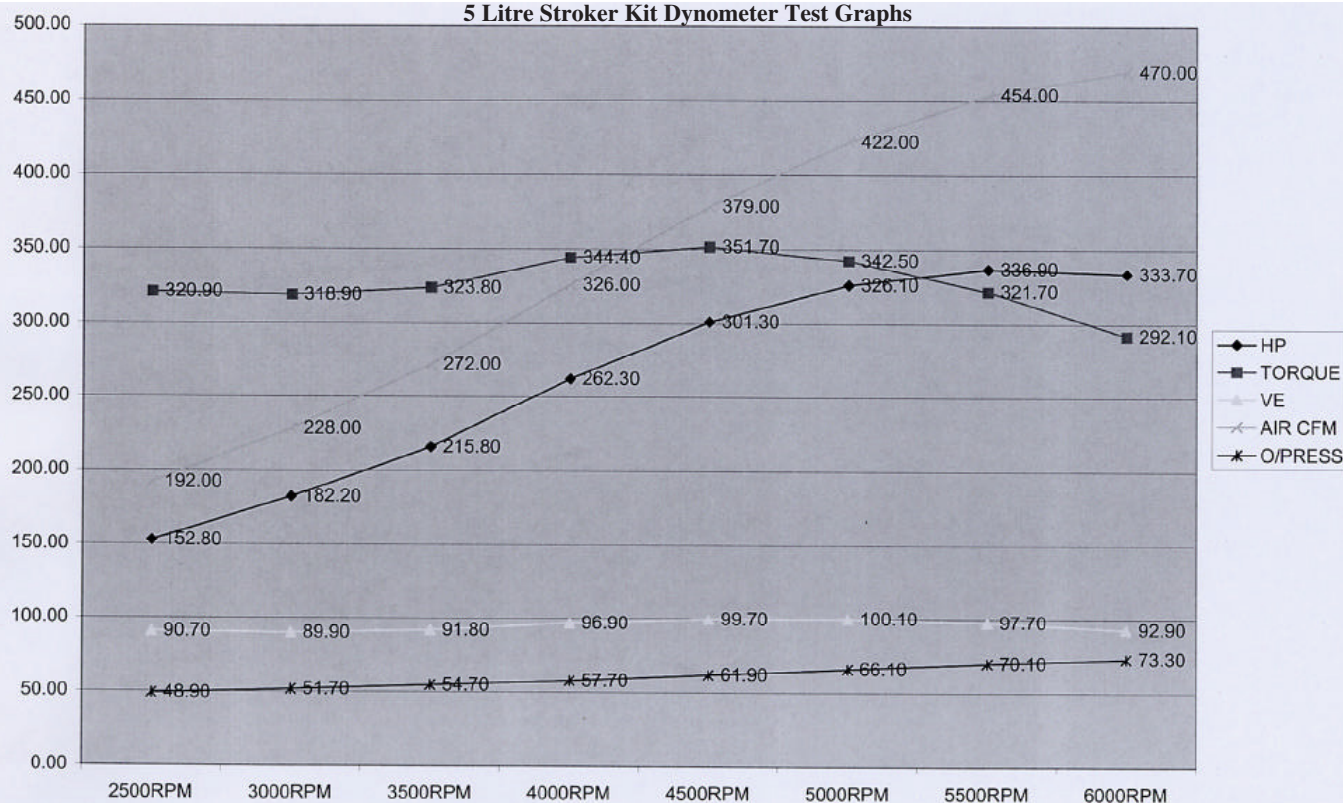
Pistons - Forged, high compression, 3.720" pistons are strong and lightweight. Larger 0.927 gudgeon pins are used.



Fitting - Some grinding will be required, to enable the reciprocating components to clear the inside of the block.

A small area of the sump will need to be panelled out to avoid the second conrod from the front of the engine hitting the sump during rotation.

Rotate the engine completely to check that nothing is touching internally. A minimum of .060" clearance is required. Be careful not to grind through the "raised" oil gallery "tunnel".

5 Litre Stroker Kit Dynamometer Test Graphs

Camshaft/Valve Train Area

Street/Strip Camshafts

AZ754 **STANDARD Hydraulic Camshaft for most 3.5 engines** **Price:£68.18**



DW262 **Viper HURRICANE Hydraulic Camshaft** **Price:£145.13**

Ideal for most applications, including automatic transmission. Worth an extra 20hp over a std engine. If the cylinder block and cylinder head faces have not been heavily machined, and the valve guides are fitted to the correct length, then this cam should bolt straight in.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>Idle-6000rpm</i>	<i>In.200 Ex.200</i>	<i>In; .433"Ex; .433"</i>	

DW252 **Viper CYCLONE Hydraulic Camshaft** **Price:£145.13**

Designed for 3.9 Hot-Wire injection engines. OK for most applications, including automatic transmission. Worth an extra 26hp over a std engine. If the cylinder block and cylinder head faces have not been heavily machined, and the valve guides are fitted to the correct length, then this cam should bolt straight in. Use 3 degrees extra ignition advance, and a "cone" style free flowing air cleaner. In dyno tests, we obtained 26bhp extra at 5000rpm, with an extra 27ft lbs of torque at the same rpm.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>Idle-5500rpm</i>	<i>In.206 Ex.206</i>	<i>In; .433"Ex; .433"</i>	<i>108 degrees</i>

DW260 **TURBO/BLOWER Hydraulic Camshaft** **Price:£167.48**

Use dual valve springs **DW550** with this cam, together with **DW520** top caps. Heads will need machining. Follow the instructions for setting the hydraulic tappet preload. If using over 5000rpm, use high rev lifters.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>Idle-6000rpm</i>	<i>In.212 Ex.218</i>	<i>In; .465"Ex; .480"</i>	<i>114 degrees</i>

DW268 **Viper 'STUMP PULLER' Hydraulic Camshaft for 3.9 & above** **Price:£145.13**

Installed in a 4.0 litre engine, this cam gave 267 ft lbs of torque, at 4000rpm, and 260 bhp at 5500rpm. Installed in a 4.3 'stroker' engine, we obtained 297 ft lbs of torque at 3500rpm, and 251 bhp at 5000rpm. Dyno tested right here, on site. Installation: use **DW550** valve springs & **DW520** top caps. Heads will need machining. Machine the top off the valve guides (.100") or use shortened hi-flow guides **DW125** & **DW135**. Use **DW400** shims or **AZ1005** adjustable pushrods to set lifter preload. All preload setting info supplied with each camshaft.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>1500-5800rpm</i>	<i>In.213 Ex.213</i>	<i>In; .465"Ex; .465"</i>	<i>110 degrees</i>

DW270 **Viper TYPHOON Hydraulic Camshaft** **Price:£145.13**

Ideal for use with a Holley 390, stage 2 heads, Edelbrock or Offenhauser manifold, Rhoads, 1-1/2" headers, 9.75 compression pistons and a Mallory distributor. Dyno tested on a 3.5 litre with all the above mods gave 252 bhp @ 6000 rpm. Installation: use **DW550** valve springs & **DW520** top caps. Machine the top off the valve guides (.100") or use shortened hi-flow guides **DW125** & **DW135**. Use **DW400** shims or **AZ1005** adjustable pushrods to set lifter preload. All preload setting info supplied with each camshaft.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>1200-6200rpm</i>	<i>In.220 Ex.220</i>	<i>In; .480"Ex; .480"</i>	<i>111 degrees</i>

BYAJG120 **TORNADO Camshaft** **Price:£194.63**

Used with our "5litre" Stroker kit, and our Merlin F85 cylinder heads, we obtained 337bhp at 5500rpm, and 352ft lbs of torque at 4500rpm. The torque curve is quite flat, & the engine pulled like a train. Use **AZ1005** adjustable pushrods or **AZ500** cut to length pushrods to set lifter preload. All preload setting info supplied with each camshaft.



<i>Rpm Range</i>	<i>Duration@ .050"</i>	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>1800-6500rpm</i>	<i>In.224deg Ex.231deg</i>	<i>In; .508"Ex; .512"</i>	<i>110 degrees</i>

DW510 **RS234 Camshaft** **Price:£154.76**

Race camshaft. Installation: use **DW550** valve springs, **DW520** retainers. Spring seat machining will be required. Machine valve guides as per **DW270**, use **AZ1005** adjustable pushrods to set lifter preload. All preload setting info supplied with each camshaft.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>3000-7000rpm</i>	<i>In.234 Ex.244</i>	<i>In; .520"Ex; .542"</i>	

Mechanical and Solid Racing Camshafts

DW350 **RS238 Camshaft** **Price:£142.06**

Race/rally cam. Instaln: use **DW550** v/springs and **DW520** retainers. Machine top of valve guide so that the underside of the retainer has at least .090" clearance with the valve at full lift. Spring platforms may need machining/shimming. Use **BY2900-16** solid lifters. Use **AZ700516** adjust. push rods to set tappets correctly.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>3000-6000rpm</i>	<i>In.238 Ex.238</i>	<i>In; .512"Ex; .512"</i>	

DW650 **RS248 Camshaft** **Price:£155.76**

Race cam. Installation: use **DW550** v/springs and **DW520** retainers. Machine top of valve guide so that the underside of the retainer has at least .090" clearance with the valve at full lift. Spring platforms may need machining/shimming. Use **BY2900-16** solid lifters. Use **AZ700516** adjust. push rods to set tappets correctly.



<i>Rpm Range</i>	@ .050"	<i>Lift-1.60 Rockers</i>	<i>Lobe Sep</i>
<i>3400-7000rpm</i>	<i>In.248 Ex.248</i>	<i>In; .533"Ex; .533"</i>	

Mechanical and Solid Racing Camshafts

DW300

RS256 Camshaft

Price:£139.32

Race cam. Installation: Machine top of valve guide so that the underside of the retainer has at least .090" clearance with the valve at full lift. Spring platforms may need machining/shimming. Use BY813-16 solid lifters. Use adjustable pushrods AZ700516 to set tappets correctly.

Rpm Range
4000-7400rpm

@ .050"
In.256 Ex.266

Lift-1.60 Rockers
In; .546"Ex; .564"

Lobe Sep



DW250

RS266 Camshaft

Price:£141.90

Race cam. Installation: Machine top of valve guide so that the underside of the retainer has at least .090" clearance with the valve at full lift. Spring platforms may need machining/shimming. Use BY813-16 solid lifters. Use adjustable pushrods AZ700516 to set tappets correctly.

Rpm Range
4500-7800rpm

@ .050"
In.266 Ex.276

Lift-1.60 Rockers
In; .564"Ex; .584"

Lobe Sep



STANDARD HYDRAULIC LIFTERS/TAPPETS



AZ794-16
AZ794-16SP

For all V8 engines
As above but seconds- not perfect

£50.88set
£35.03set



SOLID OR MECHANICAL LIFTERS

Built to exacting tolerances these premium lifters are designed for high-end street and race. Includes precision ground crown radius & surface finish. 86g each. Seat height 1.88". Be sure to put a container of BY159 into your oil, to protect cam & lifters from failure. Use pushrods- AZ700516.

BY2900-16 Fits 3.5 through to 4.6 £99.36set



Rhoads Hi-Rev Lifters

These lifters are for Hi-revving applications. They are unique in that they 'Bleed Down' below 3500 rpm, thereby reducing overlap and lift giving better vacuum and mpg. On reaching 3500 rpm they are back to normal. This enables one to use a wilder camshaft and yet retain reasonable part throttle response. Preload must be checked.

AZ905-16 For all V8's £118.78



Cam retaining plate [where block is drilled]

This plate is fitted to later engines, generally using the oil pump that slides on to the crankshaft.

CX2820 Cam retaining plate £22.34

Distributor Drive Cam Gear



CX1064 For pre-SD1 engines
CX1065 For SD1 engines

£59.57
£32.51

Push Rods



CX2054 Standard (Heavy duty) £25.60
[Pushrod holes in head may need enlarging]

Push Rods with Oil Holes

These chrome moly push rods allow you to convert to the Chevy style oiling system. The oil is allowed to flow from the lifter, through the push rod, and into the rocker arm. To complete the system use hydraulic lifters BYHT817-16, or solid lifters tba depending on your cam.

Tube Dia: 5/16" Rocker End: 3/16" rad Lifter End: 5/32"

AZ500 Overlength (209.6mm/8.25" semi-finished) £162.98



Adjustable Push Rods

These adjustable, 5/16" tube, chrome moly push rods will allow you to properly set the preload. Always check that the pushrod does not rub on the cylinder head, when the engine is turned over, and the pushrod moves up and down, through its complete cycle. Measurements quoted, refer to approximate overall length, with loose end fitted, and adjuster fully collapsed. Correct radius for Rover OEM rockers.

AZ1005 For hyd lifters (5/16 tube) £156.65 set
AZ1005-1 As above, but single replacement p/rod £16.48 ea
Length 200.15mm // 7.880"

AZ1005 pushrods come with 3/16" & 5/32" radius ends, loose. This means you can choose the correct ends to suite your lifter/cam follower, before you fit them.

AZ700516 For mech lifters (5/16" tube) £145.07
Length tba mm // tba"

AZ700516 pushrods come with 5/32" radius ends. These are for use with Chevrolet mechanical/solid lifters/cam followers. These pushrods are over-length. You will need to shorten them for your application.



Replacement Ends for Push rods

AZ975 Adjustable end for 3/8" tube-adjustable pushrods £3.52
AZ170 5/32" fixed end for 3/8" tube pushrods £1.06
AZ180 3/16" fixed end for 3/8" tube pushrods £1.06
AZ150 3/16" end for 5/16" tube pushrods £1.87
AZ160 5/32" end for 5/16" tube pushrods £1.50
AZ190 3/16" end with oil hole for 5/16" tube pushrods £1.68
AZ195 5/32" end with oil hole for 5/16" tube pushrods £1.62

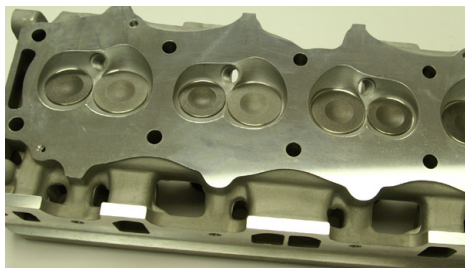


Cam Keys

CX2064 Standard for engines up to 1976 £2.50
BY986 Mr Gasket 4° Offset for eng up to 76 £14.95
The copper offset key can be used to advance the cam for increased low-end torque and mid-range horsepower, or retarding the cam and reducing excessive low end torque and increasing top-end horsepower.
CX2004 Standard for engines 1976 and on £4.24



Cylinder Head/Valves



Performance Cylinder Heads



On Friday May 4th 2007, we dyno tested the final version of our "Merlin F85" heads. The heads were fitted to a 5 litre engine, which had been converted from a 3.9, using our 5litre stroker kit. The heads performed very well, and you can see by the graph on page 4, that we obtained 353ft lbs of torque. Also, the torque exceeds 321ft lbs between 2500 & 5500rpm. These figures were obtained using 10.5:1 compression, and our new "Tornado" camshaft, 224/231 degrees @ .050" lift, .508"/.512" lift. The cylinder heads are much stiffer than the standard Rover unit, which can distort easily, and the rocker gear is not very stable. Two extra rocker pedestals are supplied for each head. Rocker covers are supplied, complete with bolts. Valve guides are manganese bronze, and the valves are stainless (1.73 & 1.45"). The exhaust seats are very hard, and will withstand most fuels including LPG. As supplied, the heads are good for .500" lift. Use an BYRC9YC spark plug to begin with. Exhaust ports are raised slightly. Regular inlet manifolds fit. Special head bolts required.

DW1917 Merlin F85 cyl heads for 3.9litre & above £1490.40pr



INLET VALVES

	Head Dia	Overall Length	Price
CX2250⁽³⁾	1.568"	4.602"	£3.61
DW500⁽²⁾	1.630"	4.595"	£6.11
DW500M⁽⁴⁾	1.732"	4.912"	£4.92

⁽²⁾ - Stainless steel [21-4N]/tufridged with a wafer tip

⁽³⁾ - SUH3 magnetic material, HD

⁽⁴⁾ This valve is for the Merlin head



Valve Springs

CX2264	Inner v/spring for Pre SD1	£2.24 ea
CX2274	Outer v/spring for Pre SD1	£2.46 ea
CX2284	Single spring for SD1	£40.64 set

(Fitted length 1.59")



Valve Spring Shims

Packet of shims to go under the valve spring. 1.25" O.D. and .625" I.D. Contents- 16 of .016": 16 of .032": 16 of .064":

BY6 Shim kit £26.64



Valve Locks/Collets

CX2194	Standard for top cap	£1.03 ea
AZ6705	Race 8620 for 10 degree SB Chevy cap	£41.35 set



Valve Stem Seals

CX2286	Rubber seal for SD1 inlet valve	£0.82 each
CX4580	Late type-OEM full hooded style	£1.28 each



CYLINDER HEAD TO BLOCK BOLTS

CX2334	2.25" uhl (7/8 per engine)	£ 2.63 each
CX2354	2.6875" uhl bolt (14 per engine)	£3.41 each
CX2314	3.875" uhl bolt (6 per engine)	£5.71 each
CX2324	2.7" uhl. Has male thread above head	£6.92 each

The above bolt has a male thread on top- .850" long 3/8" diameter.



Rocker Pillar Preload Shims

For setting the preload of hydraulic tappets when using a non-standard cam. The shims are installed under the rocker pillars.

DW400 Shim Kit £17.68



Valve Seat Inserts

CX2204	.010" oversize for SD1 inlet valve	£14.77ea
AZ1500	Unleaded/LPG exhaust seat	£2.82ea
	O.D. 1.5075". Depth .3265". Throat (narrowest point) 1.14"	
DW530	Inlet seat RS Merlin head	£2.75ea
DW535	Exhaust seat RS Merlin head	£3.64ea



Cylinder Head Plugs for OEM Heads

CX2254	Threaded plug	£1.20
CX2750	Cup plug	£1.01



VALVE GUIDES

DW125	Modified In guide-better flow-seal step	£1.54 each
DW135	Modified Ex guide-better flow-seal step	£1.54 each
	The modified guides have their tops shortened for a higher lift cam and have their noses modified for better gas flow.	
DW540	Bronze type guides for Merlin heads	£3.31 each



EXHAUST VALVES

	Head Dia	Overall Length	Price
DW555^(2) + 3)	1.356"	4.613"	£6.66
DW501⁽²⁾	1.400"	4.595"	£6.74
DW501M	1.452"	4.929"	£6.25

The above valve [DW501M] is for the Merlin cylinder head

⁽²⁾ - Stainless steel [21-4N]/tufridged with a wafer tip ⁽³⁾ - Waisted stem



Alternative Valve Springs

DW550 Dual spring (heads need machining) **£68.27set**
Must use top cap- **DW520**

The fitted length for each cam varies, check the sheet supplied with each cam.



Spring retainers/top caps

CX2230	SD1 OEM-single spring	£2.42 ea
DW520	Dual spring assys [DW550]	£56.80set



HEAD STUD KIT 7/16"

ARP Head Studs ensure more consistent torque values, enhance cylinder head sealing, and help prevent damage to the threads in the block. The kit comes with aerospace-quality hex nuts and parallel ground, hardened washers. Tensile strength of 190,000 psi. (14 per head) **Torque 65 ft lbs using ARP Moly lube [BY100-9903].**

AZ510	Head stud set- 28 per engine	£145.58
AZ510A	No front row-20 per engine	£101.10



Cylinder Head to Block Bolts

For Real Steel Merlin Heads only

BYAJG550	Short bolt	£2.96ea
BYAJG555	Long bolt	£3.44ea



Moroso Head Bolt Washer

The washers are machined from 4130 chrome moly steel, heat-treated and parallel ground. They will not bend or gall. The washers will promote accurate torque readings and more evenly distribute stress loadings. Also good for main bearing caps, rocker arm stands, etc. Note: washers are a must when using aluminium heads. Chamfered side of washer should be toward the head of the bolt.

BY38300 For 7/16" (28 per engine) **£0.76 each**



Rocker Pillar Preload Shims

For setting the preload of hydraulic tappets when using a non-standard cam. The shims are installed under the extra-end rocker pillars.

DW420 Shim Merlin F85 end pillars- .016" **£1.15**



Oil System

Oil Pump Gears and Shafts

AZ400 Oil pump gear set for pre-SD1 **£24.61**

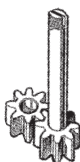
The set contains the oil pump shaft (female connector) and the oil pump idler gear. The female oil pump shaft gear is 22.2mm/0.874" long.

CX2034 Oil pump idler gear for SD1 **£tba**

The idler gear is 26.5mm/1.043" long.

CX2044 Oil pump shaft and gear assy for SD1 **£tba**

The oil pump shaft has a male connector.



High Volume & Pressure Oil Pump Kit

This kit will cure the inherently low oil pressure and volume of the Rover pre-SD1 V8 engine. The low pressure at idle and at higher rpm starves bearings and other critical components. As the bearing, lifter bore, oil pump and other clearances wear, the std pump- which was marginal to begin with- is no longer sufficient. This kit will increase idle pressure and high rpm pressure. Raises volume 40%.

AZ844 HV oil pump kit for pre-SD1 engines **£57.74**

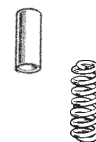


Pressure Relief Components

DW100 Standard pressure relief spring **£2.27**

CX2634 High pressure relief spring (MGB style) **£1.75**

CX2754 Pressure relief valve **£3.13**



Oil Filters

BYPH25 Fram 102mm/4" for Pre-SD1 **£6.70**

BYPH8A Fram 130mm/5-1/8" for SD1 **£5.45**

BYPH43 Fram, 103mm/4.055" for SD1 **£6.14**

Moroso Oil Filters

Moroso filters have a micron rating of 20, which results in less restriction, less by-pass and more total filtration time. This is especially important with cold race engines or in cold climates.

BY22400 Hi-Performance, (5-1/4") for SD1 **£22.55**

Hi-Performance chrome plated filter that exceeds OEM requirements, designed to withstand 200 psi plus.

BY22470 Racing, (5-1/4") **£16.18**

Features: thicker flange plate for better gasket retention, anti-drainback valve, will withstand 425 psi and filter material insures proper oil flow with a minimum of pressure drop.



Oil Pump Primer



The best way to build up oil pressure in a new engine. The distributor is removed and the primer inserted in the oil pump drive, the other end fits into your drill.

BY62200 For o/pump d/shafts with "slot" end **£14.47**

DW1175 For o/pump d/shafts with "blade" end **£15.64**



Oil Sump Bolts

AZ800 Stainless Steel **£12.67**

Stainless steel hex headed bolts for all engines.



Electrical/Distributor

For Mallory and MSD Distributor spare parts see Section 9, Pages 8 & 9



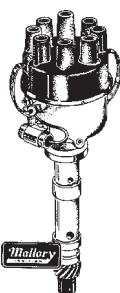
Mallory Dual Point Distributors

Features: self-lubricating bushings and a Super Duty cap & rotor, stabilized dual points that increases coil output for maximum performance at any rpm. The distributor comes with a pre-set, factory installed advance curve calibrated for maximum performance, which if required can be adjusted to suit your specific needs.

The distributor has a fully adjustable vacuum advance system. This lowers combustion chamber temperatures at cruising speeds and improves fuel economy.

AZ540 Vacuum Advance for Pre-SD1 **£T.O.**

AZ990 Vacuum Advance for SD1 **£T.O.**



Mallory MAGNETIC Electronic Distributor

Based on a CNC machined billet housing, with the main shaft running in an upper ball bearing, and a lower bush for maximum stability & rpm. Fitted with a "male connector" cap incorporating a wire retainer [removeable] - 20% more cross-fire resistant. Easy to adjust mechanical [extra springs supplied] and vacuum advance. In cases where the vacuum advance is not required, a vacuum advance eliminator conversion plate is supplied.

Use with: BY29216 coil, BY700 resistor, BY8213 bracket.

Using a vacuum advance is recommended on most applications, except Racing. The vacuum advance has the effect of lowering internal engine temperature and increasing fuel economy.

AZ420 Vacuum Advance for Pre-SD1 **£245.60**

AZ665 Vacuum advance for SD1 **£287.89**



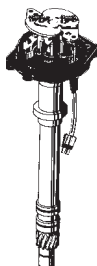
MSD Billet Race Distributor

The housing is machined from aluminium using a CNC machine and then highly polished. Two 'O' rings at the bottom of the housing improve oil control and a small oil hole at the distributor base allows better lubrication of the distributor and cam gears.

A high output magnetic pickup produces accurate timing signals to the MSD ignition unit. An adjustable mechanical advance allows fine tuning of the advance curve with the supplied springs and bushings. Being a racing distributor no vacuum advance can be used. A Rynite base is used to prevent arcing and protects the cap from vibration.

Note: Must be used with a MSD 6 or 7 series ignition. *Can be used on SD1 if new gear is fitted (CX2694).* **Cap** BY8433. **Rotor** BY8467.

AZ8548 Magnetic Trigger Pre -SD1 **£330.82**



Mallory Electronic Ignition Conversion

Replaces the points in a Mallory dual point distributor. Thereby converting the distributor to a maintenance free, breakerless electronic ignition system. Better starting, more accurate timing [cylinder to cylinder] & improved performance.

BY61004M For Mallory non vacuum advance, YL/HP 25 series dual point distributor, with std, stack style cap **£64.07**

BY61011M For Mallory vacuum advance, 27 series dual point distributor, with std, stack style cap **£69.08**

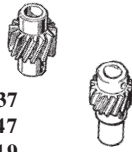


Real Steel Tel: 01895 440505

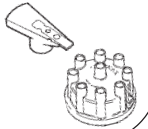
e-mail: sales@realsteel.co.uk

DISTRIBUTOR DRIVES

CX2704	Std for pre-SD1 engine	£18.37
CX2694	Std for SD1 engine	£32.47
DW1022	Roll-pin-Mallory distrib	£0.19

**DISTRIBUTOR PARTS- LUCAS DISTRIBUTOR**

BYLU913	Rotor Arm	£5.02
BYLU932	Cap 1968 on Lucas distribs	£20.08
The above cap & rotor fit 1968-81. They could be used up to 1994, as they are just made from a different material.		
CX2825	"O" ring for body	£0.30

**Mr Gasket Timing Tape**

The precisely calibrated tape avoids the expense of having the balancer degreed. Designed for timing hi-performance engines for increased performance, finding each cylinders Top Dead Centre and setting valve lash at the proper timing. Printed with high visibility white numbers on black vinyl backing.

BY1592	For 6" dia. dampener	£10.04
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**Moroso Blue X-Box Advance Curve Kits**

These advance curve kits can be used to modify distributors with either clockwise or anti-clockwise rotations. Three different sets of springs are included in the kits to allow the engine builder to recurve the distributor for full advance at the optimum rpm range. Originally designed for use on GM distributors, the kit will work just as well on the Rover. Full instructions including all the spring curve options come with each kit.

BY72310	For all engines	Price:£11.86
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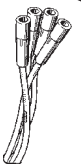
**Thermal Transmitter**

The sender unit for the temperature gauge.

CX2384	For Rover SD1	£5.56
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**Plug Leads 8mm**

Please see section 9/accessories [p4] in the RS catalogue & on the website

**Champion Copper Core Spark Plugs***

DW810	Pre-SD1 standard plug	£2.11
DW880	SD1 standard plug	£2.40
DW800	SD1 moderate nitrous plug	£2.62

*Note: For racing spark plugs see section 9, page 11

**Starter Motor [compact]**

New Bosch type starter with solenoid, compact Mini type

AZN17792	R/Rover starter motor-new	£102.12
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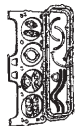


Gaskets and Seals

Overhaul Sets

Overhaul sets are for all engines.

AZ884H	Top set- 3.5- tin head gaskets	£39.47
Does not include injector seals, or su carb gaskets.		
AZ884HC5	Top set- 3.5- composite head gaskets	£51.49
Does not include injector seals, or su carb gaskets.		
AZ884HS9	Top set- 3.9- tin head gaskets	£52.50
Does not include injector seals, or su carb gaskets.		
AZ884HC9	Top set- 3.9- composite head gaskets	£51.62
Does not include injector seals, or su carb gaskets.		



AZ884C	Lower Overhaul Set	£26.53
Does not include rope type front and rear oil seals. [CX2174/AZ704] (used in P5B, P6 & early Range Rover)		

**Exhaust Manifold**

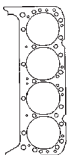
CX1084	Standard (8 per engine)	£0.60 ea
AZ830	HD for tubular manifolds etc	£13.36 et

**Inlet Manifold**

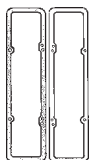
CX7590	Latest composite black gasket	£12.18
CX2684	Rubber end seal (2 per engine)	£2.28

**Cylinder Head Gaskets**

CX2764	Standard tin for 3.5 engine	£15.48 each
Bore diameter: 88.90mm/3.500" Comp. thkness: 0.5mm/.020"		
CX7890	Standard tin for 3.9 engine	£15.25 each
Bore diameter: 95.50mm/3.76" Comp. thkness: 0.45mm/.018"		
AZ744	RS Composite for 3.5 engine	£14.95 each
Bore diameter: 92.96mm/3.660" Comp. thkness: 1.0mm/.040"		
AZ900	RS Composite for 3.9 engine	£12.62 each
Bore diameter: 95.00mm/3.740" Comp. thkness: 1.2mm/.046"		

**Rocker Cover**

CX2454	Cork	£2.26 ea
DW960	Rubber type- like 4.6 late	£5.11 ea

**Oil Sump Gasket**

CX2464	Standard	£4.08
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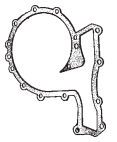


Timing Cover Gaskets

CX2144	Standard gasket	£1.67
CX2174	Rubber seal kit for pre-SD1	£7.70
Above part replaces the OE "Graphite string" seal		
CX2184	Lip type seal for SD1	£2.28

**Water Pump Gaskets**

CX1104	For all engines (exc. R/Rover)	£1.01
CX1110	For Range Rover engines	£1.31

**Thermostat Housing Gaskets**

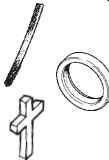
CX2619	For pre-SD1 engines	£0.48
CX2616	For SD1 engines	£0.36

**Heater Water Pipe Gasket**

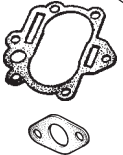
CX2784	Standard	£0.34
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**Rear Main Oil Seals**

AZ704	Rear rope seal kit	£9.22
CX1014	Lip type for approx 1973 and on eng	£4.50
CX1024	T' cross for rear main bearing cap	£1.32

**Oil Pump Gaskets**

CX2049	Oil pump cover	£1.18
CX2805	Oil pump pick up	£0.29



Cooling

Buick Water Pump

This could be used for Hot-Rods & Kitcars where the engine has no pump & different pulleys can be experimented with.

BYAW855	Water pump	£40.27
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Thermostat Housing- with bypass hose connection

These parts can be used on some std & Offenhauser/Edelbrock manifolds

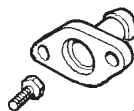


DW974	Aluminium P5B/P6 etc- picture [a]	£34.94
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Heater Water Pipe Connector

This connector fitting, fits at the bulkhead end of the Rover inlet manifold. Also fits the Offenhauser or Edelbrock manifolds.

CX2774	Connector fitting for manifold	£30.17
CX2794	Bolt [check uhl is 5/8"] 2 req	£0.46
KIT952	Spring washer 1/4" 2 req	£0.06

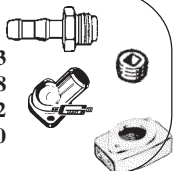
**Thermostats**

CX2394	82°C / 180°F	£6.82
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**Remote Thermostat**

DW630	1/2" hose fitting	£7.73
BY123381361/4"	NPT blanking plug	£1.38
BY9842	Mr Gasket chrome cover	£11.82
BY5308	Offenhauser housing	£52.70

For use with the Huffaker manifold.

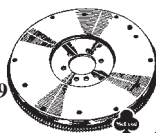


Clutch Parts

**McLeod Steel Flywheel**

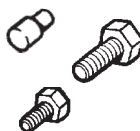
McLeod steel 12.40kg/27.34lb flywheel.

AZ610	For all engines ***	£276.59
Clutch patterns: Drilled for 9-1/2" OEM and 10-1/2" McLeod		
*** Does not have dowel holes for std clutch cover		

**Flywheel Dowel & Bolts**

For use with the original clutch only

AZ670	Flywheel dowel pins	£2.40
CX2485	Flywheel to crank bolt	£0.82
CX2486	Clutch cover to flywheel	£1.06

**ARP FLYWHEEL BOLTS**

Forged from aerospace alloy and heat treated before thread rolling and machining. The 12 pt head and larger shank diameter improve flywheel register. Rated at 200,000 psi tensile strength. Smaller head to enable use on flywheels with smaller recess. 7/16" x 1.00", 6 pieces.

BY200-2807 ARP Pro series	£16.63
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**McLeod 10.5" HD Clutch Plate**

This is a heavy duty lined plate with a sprung hub. It is for the Rover V8 23 spline gearbox. It will not fit the Gertrag. Use with the McLeod pressure plate. Should be ok to 350bhp on a street car. Not for racing or use with Nitrous.

AZ935	1" x 23	10.5"	£130.21
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McLeod HD Clutch Cover

The standard flywheel will require redrilling to accept the diaphragm, or use the McLeod steel flywheel AZ610 with bolts BY1500. The clutch linkage must be in perfect condition to use this pressure plate, as slightly more movement is required to dis-engage it. Good to 350bhp.

BY360703 10-1/2" Diaphragm 2400lb **£166.93**

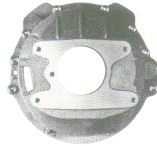
**Bolt Kit For McLeod Pressure Plate**

Special pressure plate bolt, grade 8. Used without a lock washer. 30-35 ft/lbs of torque. For McLeod steel flywheel.

BY1500 McLeod 3/8" diameter **£25.04**

**Bell Housing**

See section 11, page8 for Transmissions



DW640 Tremec g/box to Rover V8 **£284.28**
[could be drilled to take Cosworth T5, or USA Ford T5]

Induction

For more carburetors, self tuning fuel injection and fuel pumps see Fuel Systems [section 6].

Holley 390 cfm Carburetor

Shiny, "polished looking", version, vacuum secondary.

Features: Manual choke, power valve blowout protection. Prim jet 51, sec plate equiv to a 53 jet. Jetted for a standard 3500 Rover V8. Rejet for use with modified cam etc.

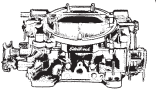


QJ12890S Latest "shiny body" version **£327.88**

Edelbrock 500cfm Performer Carburetor

Shiny, "polished looking", version. Basically a revamp of the the old Carter AFB carb from the 60's. Should work well on 4.6litre and above.

Features: Manual choke, prim jet .086, secondary .095, metering rods .065 x .052. jet. May need **BY8089** banjo union.



BY1404 500- manual choke **£327.18**
BY1486 Calibration/tuning kit **£53.09**

Universal Accelerator Cable Kit

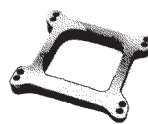
For use with a Holley carburetor and Offenhauser or Edelbrock manifold. The kit includes a cast aluminium bracket. Check to see if the accelerator pedal fitting is the ball type or the barrel type.



DW994BAL Ball type connector **£29.70**
DW994BAR Barrel type connector **£29.70**

Carburetor Levelling Plate

The Rover V8 engine originally sat in the car-tail down. Inlet manifolds were designed with a built in "angle", to keep the carburetor level. When the engine is mounted level, as in the Range Rover and most kit cars, it results in the carburetor being tilted. The simple solution to this problem is the use of a level plate to mount the Holley carburetor level.



BY65030 Moroso 5° open centre plate **£32.76**
BY5584 Offe' 4 hole 5° angle plate **£40.82**

Edelbrock 4 Barrel Inlet Manifold

Dual plane, low rise, aluminium inlet manifold with a 180° firing order. The runner design improves torque over a wide rpm range, especially off-idle through the mid-range. Throttle response is excellent. Up to 10bhp more than the AZ834 in the high mid range. Will not work with the standard carburetors.



Manifold Dimensions: A= 127mm/5" B=150mm/5.92"
AZ435 Edelbrock Performer (Idle to 5500 rpm) **£243.72**

Inlet Manifold Bolts

Features a 12 point head, a generous flange for even loading, and washers to prevent galling and promote accurate torque readings. Rated at 170,000 psi tensile strength. Uses a 3/8" socket.

AZ300 ARP Stainless bolt kit **£39.79**
AZ300B ARP Black bolt kit **£31.38**

**Offenhauser 4 Barrel Inlet Manifold**

This manifold is a bit lower than the Edelbrock and gives slightly less power in the high mid range. A new top plate is available under part number **BY4006** if you have bought a used manifold with it missing.



AZ834 Offenhauser 360° (Idle to 5500 rpm) **£265.91**

Offenhauser JWR 4 Barrel Inlet Manifold

This manifold is the lowest available, & widely used for conversions like the MGB V8. It requires a 4 hole spacer or wedge plate, as the manifold entry is the 4 hole type. The manifold has dual ports, where it meets the inlet port. Several benefits are claimed by using dual ports. The primaries use the lower port, and the gas speed is claimed to be higher than normal. The secondaries use the upper port, which being shielded by the primaries, will be cooler.



AZ835 Offenhauser Dual Port 360° JWR **£305.09**

Offenhauser Top Plate

This plate bolts on the top of some Offenhauser manifolds to enable the carb to bolt on.

BY4006 Offenhauser top plate **£51.32**

Exhaust

Hedman Hedders

AZ824 Range Rover
Exits at the wing well.

£192.68 pr



Primary Tube Size: 1-1/2" **Collector Size:** 2-1/2"

ARP Header Bolts

3/8" dia., 1.00" U.H.L. All kits come with precision-hardened washers.

AZ325 Stainless steel Hex, 16pcs **£30.98**

300-series stainless bolts are not affected by extreme heat, eliminating the possibility of retempering due to exhaust temperature cycles. Rated at 170,000 psi tensile strength.

