75ZT Community

Ultimate Buyers Guide By Colin NI

PURCHASING ADVICE FOR THE ROVER 75 AND MG ZT

Ultimate Buyers Guide Introduction

Let me welcome you to my long worked on guide. As you have no doubt posted somewhere on the forum inquiring about either the Rover 75 or MG ZT (shall be referred to 75 and ZT from now on, and 75-T and ZT-T in tourer form) as a potential car to purchase and have been redirected to this guide.

Well firstly let me make it clear that you have already made the first step to owning a true classic piece of motoring heritage. Everyone here is an enthusiast, even those who originally joined up just for assistance, often like yourselves. These cars have a wonderful soul and many of us compare it to the British equivalent of the Alfa Romeo effect when you drive them

The single thing you must realise before purchasing either a 75 or ZT that this guide may look like a horror story of faults and problems, however, these problems are no worse than you would get with any other manufacturer, including the German and Japanese brands and showing these issues up front will prevent you being exposed to nasty surprises and allowing you to negotiate for repairs in the purchase price.

I produced this guide to allow people to avoid wasting money on cars that might seem like a bargain and are actually a money pit. This guide will help you hopefully make the bargain buys like I myself and many others on the forum have made.

I myself purchased my current 2001 MG ZT V6 in 2009 for £500 following this guide. The car had 109,000 miles on it. It it was my second MG ZT V6, the first one was a 2002 and I payed over £2000 for it 18 months before hand for a car of lower specification and it had 92,000 miles on it! Im now on my fourth car, my second Rover 75 Tourer CDT also!

BASIC ROVER 75 AND MG ZT INFORMATION

The Rover 75 is an executive car produced initially by the Rover Group at Cowley, Oxfordshire, UK, and later by MG Rover at their Longbridge site in Birmingham, UK. The Rover 75 was available with front-wheel drive in either a saloon or estate body and latterly, in long wheelbase form (the limo had 200mm rear leg room stretch for the rear passengers) and a rear-wheel-drive, V8-engined specification.

The car was unveiled to the public at the 1998 Birmingham Motor Show, with deliveries commencing in February 1999. Here's a link to a nice video from Top Gear in 1998 the weekend it was launched.

http://www.youtube.com/watch?v=CfsJIDBstkk

In 2001, three years after the launch of the Rover 75 and less than a year after the de-merger of MG Rover from BMW, the MG ZT and MG ZT-T were launched.

The body shell and chassis of the car was almost identical to the Rover 75, but with more aggressive grille, sportier styling, stiffer suspension and re-tuned engines, along with a more interesting advertising scheme.

http://www.youtube.com/watch?v=gv7mIjlVY1o

Production of the Rover and later MG badge models ceased on 8 April 2005 when manufacturer MG Rover Group entered administration.

You can still find both 75's and ZT's that have yet to be registered with delivery miles, that where sold when MG Rover went into liquidation and cars that where made in 2005, where often sold and registered after that date along with cars that where shipping off from England, where brought back and sold again into England! So purchasing a 2009 registered Rover 75 with delivery miles is still a realistic chance if you are willing to pay for it!

A key feature of the 75/ZT range was actually its safety in crash tests, making 4 stars in NCAP tests and 5 stars when the cars where fitted with the optional head "pillow" side air bags. These are the same standard of tests that are used today.

Rover 75 crash test video

http://www.youtube.com/watch?v=PFzP0lCh2EA

Note, that some cars on "S" regs exist, and S reg cars are usually preproduction models that where sold on in 1999 alongside "T" reg cars and are quite desirable within ownership circles itself but maybe not to the casual individual.

The Rover 75 and MG ZT where survived by SIAC and Nanjing Automotive (Now one company and selling under the MG name in the UK) who purchased between them the rights to all the MG and Rover cars. The MG 7 was essentially a mix of both 75 and ZT parts and was sold in china, asia and parts of Australia. The MG6 sold by MG Motors UK shares only a single component from the MG7, which is the front engine subframe from a MG ZT 1.8 Turbo 160 model, lest the rest of the car is new.

The Roewe 750 was based on the Rover 75 limos (with a 100 mm stretch in the rear cabin for more leg room, modern rear end similar to the 5 series of the time, V8 front end as seen on the UK Rover 75 V8 models and a revised interior) and was also sold in China and Asia.

Neither of these cars are sold in the UK.

THE HEAD GASKET / RELIABILITY / YOU CANT GET PARTS MYTH.....

People have a terrible opinion of the Rover K series engine and its deeply unfair. They have a reputation for head gasket failures and was exposure on BBC's Watchdog during the 1990's. As a result, all Rovers suffer HGF *(Head Gasket Failure)* according to the uninformed!

The fact that HGF occurs on many cars is often the result of a problem elsewhere that has not been addressed. The fact that Lotus used them in their Lotus Elise sports car should be proof enough that they can be reliable when driven hard IF maintained appropriately. If anything a 1.8 or 1.8T is usually a bargain because people are afraid of buying a K series engine 75/ZT.

These are alloy engines and the appropriate maintenance and checks of the cooling system are essential as on any other make. People are dangerously ignorant to the fact that you can not run a car for 12,000 miles a year without checking the oil, coolant and other such parts and only do it once a year for the MOT. These are the people who often had the failures in their cars!

Head gasket failure on the 1.8 and 1.8T engines typically occurs around 30,000 miles, and thus the majority of high mile 1.8/1.8T engines will almost certainly have had "a head gasket repair" done at some stage. If done correctly, then we have multiple members whose cars have done into the 100,000 of thousands of miles!!!

When purchasing a 1.8/1.8T ask if the head gasket was done. If it was done, ask for the receipts as often people cheat and simply pour a tank of "Radwell or K seal" into the engine coolant tank which will temporarily cure the car, often enough for you to have driven the car away and it fail a week or two later. Its a dirty trick in the second hand market, HOWEVER some people have reported it has worked to their advantage curing tiny leaks.

I will cover in detail the list of parts and procedures and what to watch for specifically in the 1.8 and 1.8T engine sections along with photos and explanations of what is what.

It should be noted that the 75/ZT V6 engines KV6 almost never have a head gasket failure, and it is extremely unlikely to occur unless servicing has been terrible. Be wary of mechanics claiming the V6 needs head gasket work as 90% of the time, they wont know what they are talking about. The KV6 can have a failure however it boils down to poor maintenance not a mechanical fault, but like anything mechanical it can still fail.

The diesels and V8 NEVER suffer a common head gasket failure as they are BMW sourced and the V8 is Ford sourced.

Take the car to a recommended Rover/MG expert every time as mechanics love to con people with Rovers and often do more and I mean MUCH more damage than good. Ask on the forum for someone in your area and recommendations!!!

On the subject of parts. With such companies as Rimmer Bros (www.rimmerbros.co.uk), X-part (www.xpart.com a division of Caterpillar Inc also, X-part are the Mg Rover approved servicing centres around the uk) and the various aftermarket manufactures, there are very few and I mean very few parts that you cannot get for the cars.

YOUR CONSUMER RIGHTS

When buying from a dealer, under the Sale of Goods Act 1979 (as amended) a car must be:

Of satisfactory quality. It must meet the standard a reasonable person would regard as satisfactory, bearing in mind the way it was described, how much it cost, the make, the age, the history, the mileage, the intended usage of the car and any other relevant circumstances.

Amongst other things, this covers the fitness, appearance and finish of the car, its safety and its durability.

The car must be free from defects, except when they were pointed out to you by the seller before you agreed to buy it or where you have inspected the car and that inspection ought to have uncovered the car defects.

Even where a car appears to have a minor defect, it may still be of unsatisfactory quality if that defect could lead to extensive damage or render the car dangerous to drive.

- It is not sufficient that a car is merely roadworthy and safe.
- The dealer may be liable for faults that were present at the time of sale, even though they may only become apparent later on.
- Dealers are not liable for fair wear and tear, where the car broke down through normal use. Nor are they liable for your misuse or accidental damage

As described. This covers all statements made about the car, whether in writing, in a conversation over the phone or in the showroom, in a newspaper, website, email or text, or in documentation. If the advert states "air conditioning and CD player" then the car should come with these features and they should be working.

Reasonably fit for any normal purpose. It should get you from A to B with the appropriate degree of comfort, ease of handling and reliability that a reasonable person would expect.

Reasonably fit for any other purpose you make known to the dealer. For example, if you require a vehicle for towing a caravan.

HOW TO DECODE YOUR CARS VIN

The Vehicle Identification Number (VIN) comprises a series of letters and numbers representing, in code, the World Make Identifier, Marque, Model, Class, Body, Engine, Transmission, Steering, Model Change, Assembly Plant and Serial Number applicable to each individual vehicle (effective from November 1998). This number should be quoted in full when communicating with your dealer. The VIN number can be found on the VIN plate, stamped into the top of right hand front suspension mounting (inside the engine compartment) and on a plate visible through the bottom left hand corner of the windscreen.

SAR RJ H L P B X M 100001

The 1st, 2nd and 3rd letters represent the World Make Identifier.

SAR **RJ** H L P B X M 100001

The 4th and 5th letters represent the Marque and Model, in this case RJ = Rover 75.

SAR RJ **H** L P B X M 100001

The 6th letter represents the Class of vehicle eg:

H	=	Classic (TL2)	X	=	MG (TL5.1)
L	=	MG (TL7.1)	Z	=	Connoisseur (TL7)
S	=	Comfort (TL4)			

SAR RJ H **L** P B X M 100001

The 7th letter represents the Body eg:

L	=	4 Door Saloon	T	=	Tourer

SAR RJ H L **P** B X M 100001

The 8th letter represents the Engine eg:

P	=	18K4F, 1800 Petrol	K	=	20K4F, 2000 Petrol
L	=	25K4F, 2500 Petrol	H	=	204D2, 2000 Diesel
E	=	25K4F 160PS 2500 Petrol	F	=	25K4F 190PS 2500 Petrol

SAR RJ H L P **B** X M 100001

The 9th letter represents the Transmission/Steering eg:

B	=	1800P Manual RHD	N	=	1800P Manual LHD
C	=	2000D Manual RHD	P	=	2000D Manual LHD
D	=	2000P Manual RHD	R	=	2000P Manual LHD
E	=	2500P Manual RHD	S	=	2500P Manual LHD
F	=	2500P Manual RHD	T	=	2500P Manual LHD
J	=	1800P Auto RHD	W	=	1800P Auto LHD
K	=	2000D Auto RHD	X	=	2000D Auto LHD
L	=	2000P Auto RHD	Y	=	2000P Auto LHD
M	=	2500P Auto RHD	Z	=	2500 Auto LHD

SAR RJ H L P B **X** M 100001

The 10th letter represents the Model Change eg:

X	=	1999 Model Year	1	=	2001 Model Year
Y	=	2000 Model Year	2	=	2002 Model Year etc.

Note 1=Z in Parts List

SAR RJ H L P B X **M** 100001

The 11th letter represents the Assembly Plant eg:

D	=	Longbridge	M	=	Cowley

SAR RJ H L P B X M **100001**

The remaining digits are the vehicle Serial Number

Common faults to all Rover 75 / MG ZT'S

This is a list of common faults all the cars can suffer from, none specific to engine, transmission or bodyshell type and is very much worth noting. The majority of these problems are very simple fixes and can be excellent bargaining tools when purchasing a car.

From now on, all Rover 75/Rover 75 Tourers/MG ZT/MG ZTT's shall be referred to as "the cars" however unique tourer and saloon problems are listed at the end.

You will note mention of the "T4 *(Testbook version 4.Computer Diagnostic System)*" diagnostics machine a lot. This was a computer system designed for the MG Rover cars, to give readouts via an ODB plug in the cars (Just above the accelerator pedal!).

A T4 can preform many specific tasks on our cars, and often only a T4 can read them correctly, despite what many other aftermarket systems offer. A T4 session can be booked through your local X Part dealership, the website and contact details can be be found in the useful links section at the end.

Major Recalls.....

Servicing and service history can be an issue with cars, especially with so few MG Rover focused dealerships now days, often they will have been maintained by mechanics not knowledgeable in the solutions.

This forum is proof of it and many cars have been saved through the DIY and how to guides.

Important recalls effecting the cars over the years, worth checking on service history....

March 2000 - Engine may cut out while the vehicle is being driven (cars built 01/02/1998-08/10/1999)

July 2002 - Front suspension spring problems (cars built 01/12/1998-27/10/1999)

May 2004 - Possible damage and deflation of tyre due to road spring (cars built 27/10/1999-20/02/2002)

Keys

The first thing you want when purchasing your car is the keys to drive it, well check there are two keys with it!

Purchasing new keys that actually work properly is an expensive (Â£180 - Â£220) and takes a while because they have to be supplied by BMW in Germany.

That means you have to seek out an authorized UK agent to start the process which is an Xpart dealer and also has a T4 to code the keys correctly to the car.

A considerable expense on a second hand car! A member on here can help out as he can order keys at a discounted rate. http://www.75ztcommunity.co.uk/fully-working-coded-keys-t4070.html?hilit=keys#p36746

You may also notice the key fobs are worn or split around the rubber area you press your finger on to activate the fob itself. You can source these on ebay for around Â£5 all in.

Air bag light always on

A common problem on the cars and 90% of the time its just the connectors under the seat. There is a yellow connector and a blue connector, often when the seat is moved or jerked they will pull out slightly.

Just reinsert them / squeeze them in tighter and it will sort the airbag light. Make sure to do both sides just incase. Turn the car on and let the engine run for a second and then turn off, the light will then go off and be recorded by the cars ecu as fixed so you have full airbag safety again.

The other 10% of the time theres an Airbag control module or side impact sensor which can fail, and whilst not expensive it then a T4 session will give you the exact error code to confirm which is at fault.

Bonnet cable

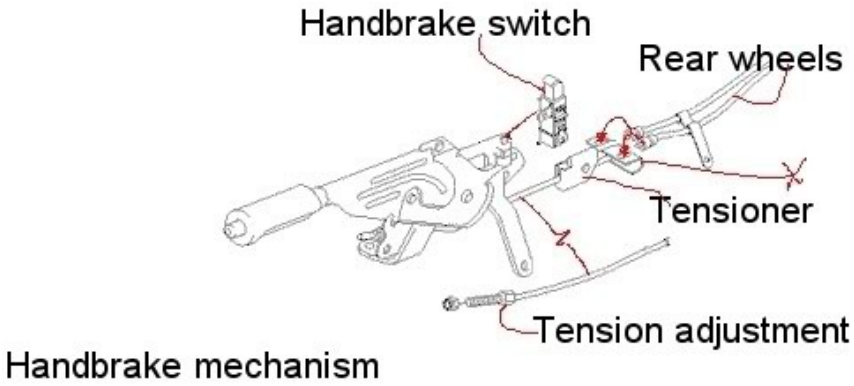
This is very common on second hand cars, as the cable to the bonnet as a "dividing block" on it which stretches and sometimes pulls through. Should your cable snap you are going to have fun getting under your bonnet.

There are many ways you could do it, but if you PM a member of the moderation team and explain the problem they will give you the list how. Its actually shockingly obvious and most mechanics would do the same.

This bonnet cable and catch issue can be prevented by following the very basic advise in this thread! http://www.75ztcommunity.co.uk/xpdfdocuments/engineandtechnical/Bonnet_Cable_Splitter_Box_Invert.pdf

Handbrake not holding car

The usual common problem with our cars and one the forum has only managed to solve recently. Due to the design on the cars, you could actually replace everything and still have a poor handbrake because of a single simple metal clip which stretches and deforms over time.



Handbrake mechanism

You will notice a little X to the right of the image pointing to a clip behind the tensioner. This is the section which warps and deforms over time. Much debate as to the best solution to prevent this is ongoing, but most people are replacing the unit and having a perfect handbrake after.

Link to Arctics Stainless Steel Compensator Upgrade http://www.75ztcommunity.co.uk/rover-75-mg-zt-handbrake-compensator-fitting-ssc-t7258.html

Plenums / Water logging / Flooded ECU *(Engine Control Unit)*

The plenum is a chamber that collects fresh air to feed the interior vents/aircon system. It's located between the firewall at the rear of the engine and the wall which forms the front of the cab section. Air is supplied via the scuttle vents, which run across the body below the windscreen.

It's important that the plenum remains dry because it houses the ECU. This is mounted a few inches above the floor on the firewall face. Also vulnerable to flood water is the pollen filter, which is mounted over a large hatch on the nearside of the rear wall. If the lower edge of the filter gets wet, it soon starts to smell and this gets into the cab with the incoming air.

On Mark 1 models, there are two further rubber tubes which drain the upper plenum area. These are located on the upper front wings, near the bonnet hinges.

On Mark 2 models (and some late Mark 1s), the driver's side drain is plugged off. This is because the drain is actually too high for water to enter and is therefore redundant. The upper drain tubes are similar to the others and have a flattened nozzle, which directs water onto the back of the wheel arch liner. From here, it runs onto the ground.

Keeping an eye on this is very worthwhile, I myself was very lucky with my first ZT when the plenium under the ECU was filled with soil and had began to flood!

This guide below gives some handy hints on the best way of servicing and preventing any further issues. http://www.75ztcommunity.co.uk/plenum-spy-hole-mod-t3886.html?hilit=plenum#p35348

The sunroof drains can occasionally do the same thing.

http://www.75ztcommunity.co.uk/rain-sunroof-drainage-tubes-t5856.html

Failed reversing lights

Reversing light failure is nearly always due to a Â£5 switch which can be done in no time at all DIY. This guide explains everything in several simple photos and is not worth repeating in words.

http://www.75ztcommunity.co.uk/xpdfdocuments/engineandtechnical/Reverse_Light_Switch_Replace.pdf

Boot "machine gunning noise" and rear leaks

The first time this happens you will know it, the boot lock when opened sounds like a machine gun as the boot lock mechanism doesnt lift high enough off the lock. Again, prehaps after air bag light the most common fault on the cars.

A few simple twists of the black rubbers either side of the boot to raise the boot light alignment height will resolve this always unless the motor is faulty.

Rear light seals will usually be the fault of a boot leak and having nothing to door with the boot itself. Simply remove them from the car, and use some clear sealant around the seals to prevent this happening again.

Also the rear "atmosphere" vents in the boot can leak, this guide explains how to fix them in great detail.

http://www.75ztcommunity.co.uk/boot-vent-leaks-saloons.html

http://www.75ztcommunity.co.uk/boot-vent-leaks-ztt-and-tourer-mk1-and-mk2.html

Also in the tourer, check the seal around the rear window hasnt become dislodged or torn, this is a major cause of rear leaks in tourers along with rear light cluster clips that are broken off.

Steering alignment / snapped springs

Tyres often wear unevenly, especially at the rear. Some cars were supplied with misaligned suspension when new. Itâ€™s always a good idea to check rear tyre wear on early models, the best solution being to get a four-wheel alignment done. Front coil springs are also prone to breaking but the rears can also go.

When having a full wheel allignment done it has been discovered that the car needs to have a FULL tank of petrol else i will continue to drift slightly to the left!

In car Diagnostic Mode

Nice handy one this to test the dash is working fully, follow the simple guide and use the cluster test to ensure your dash and systems are functioning correctly!
Diagnostic Mode via the dash- Updated, Clarified and Simplified

http://www.75ztcommunity.co.uk/xpdfdocuments/Car_Interior/Trip_Computer_Diagnostics.pdf

BODY VARIANTS

At the start in 1998 the cars where produced at the Rover group plant in Cowley, Oxfordshire, UK and remained there until production switched to Longbridge, Birmingham, UK in early 2000.

The easiest way for you to spot if your car was produced in Cowley is along the bottom of the car which will be painted black the whole way round the car.

MG ROVER GROUP

REAR BUMPER FIT, LARGE CAR (MG ZT)
SYSTEM 3, ASSEMBLY A, LONGBRIDGE

BMR-1004-1711

These early Cowley cars have a tendency to rust slightly more as production methods where improved before assembly was changed to Longbridge. However this does not make them any less of a car but it is very worth paying extra attention to the cars especially as many of them will be at least ten years old now.

The 75 and ZT where produced in both Saloon form and Tourer form. Saloon cars where produced from 1998 until 2005, Tourer versions where produced from 2001.

NEW ROVER 75 TOURER
'CONNOISSEUR'

BMR-0104-1468

The MG ZT and MG ZT-T where both launched in early 2001 as part of the MG Rover rebranding, but many reports conclude the cars where secretly developed whilst BMW actually owned the company!

MG ZT-T AND MG ZT 160 1.8T

BMR-0902-633

MONOGRAM LAGOON SUPERTALLIC ZT-T FEATURES OPTIONAL ROOF BARS AND THE ZT SALOON OPTIONAL 'STRAIGHTS' ALLOY WHEELS AND BOOT LID SPOILER

THE BONNEVILLE MG ZT-T RUNS AT SPEEDS APPROACHING 200MPH AT THE FARNBOROUGH AIRSHOW 2004

BMR-0704-1677

During the Spring of 2004, the entire MG Rover range received a facelift. This included the 75 and ZT's.

Consisting of new headlights and revised front and rear bumpers, these cars are typically referred to as the "Mark 2" cars.

It should be noted that on the Rover 75 V8 received a unique grill, and was an optional extra often referred to as "The Premium Grill" as seen below.

It is very important to note that it is impossible to source the chrome surround on the premium bumper. Complete bumpers go for huge money on ebay and car breakers. (The club is working towards finding alternatives, including the Roewe 750 front grill which is not a direct swop). This was a factory option on all mk2 none V8 Rover 75's. The limo version featured the grill as standard.

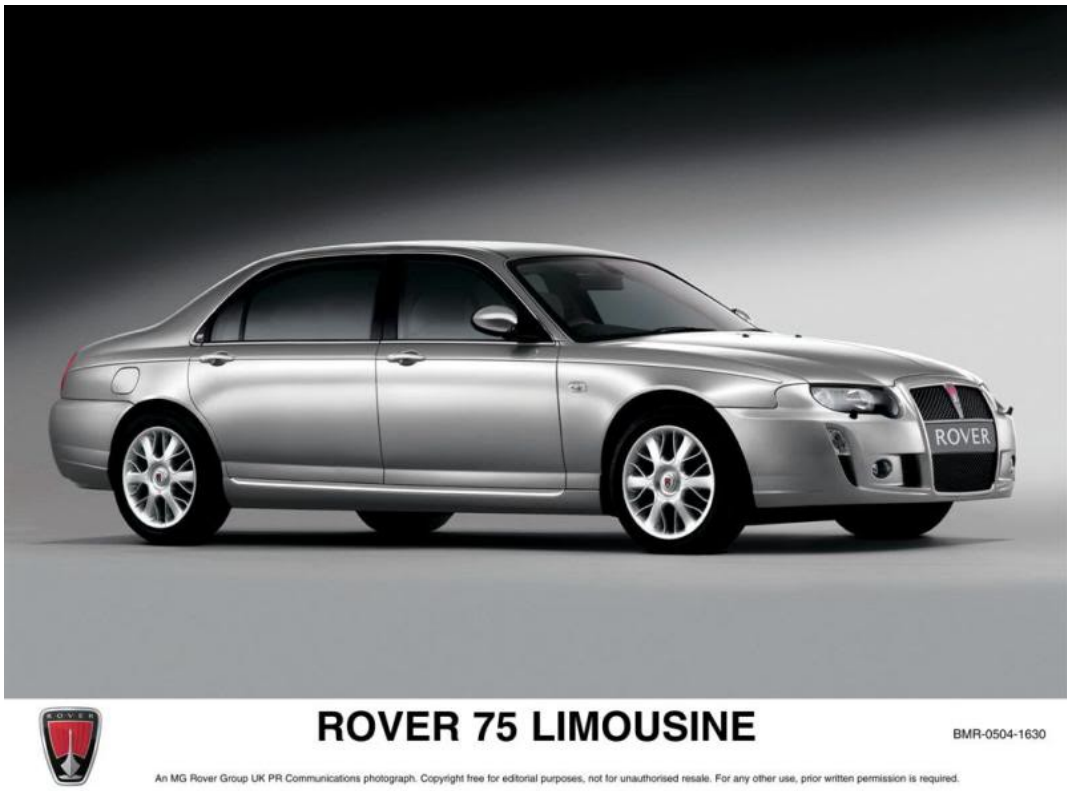
All "MK2" cars suffered from what looks like front bumper sag, but infact this is how how the car was designed to look with a visible gap between the bonnet and the bumper/lights. Some owners have modified the front brackets to aim the bumper up slightly. There are many threads on this so use the search function at the top of the forum.

Rover 75 LIMO

A long wheelbase Rover 75 Limousine also called Rover 75 Vanden Plas, about 200mm longer than the regular 75 and depending on customization the interior could be varied for whatever specification they choose. The photo below shows the difference in wheel base length.

Often these vehicles where used as Government cars, even the former Prime Minster Tony Blair used one and its not that uncommon to find they have been particially reinforced for bullet and explosion prevention! Always usedful in the modern day school run!

Below is the "mk2" revision of the limo, aka the Vanden Plas which received the "Premium Grill" despite not being a V8.



ROVER 75 LIMOUSINE BMR-0504-1632

This photo shows the typical stretched rear interior of the limo cars.

ROVER 75 VANDEN PLAS BMR-0902-667

All Limo's are front wheel drive only, a single V8 rear wheel drive limo was made, but only as a prototype.

The company's design team wanted to mark the first 100 years of the Rover marque with a stylish design that would sit confidently as the latest in the line of renowned Rovers like the P4, the handsome P5 coupe, the innovative P6 2000 model and the bold SD1 hatchback.

ROVER 75 COUPÉ CONCEPT BMR-1104-1736

ROVER 75 COUPÉ CONCEPT BMR-1104-1737

ROVER 75 COUPÉ CONCEPT

BMR-1104-1739

Never sold and never to be sold, from the windscreen back it was all custom work made using the old style metal work by hand.

This was realized in the form of the Rover 75 Coupe concept - a beautiful and elegant two-door expression of the stylish 75 Saloon. The concept's interior strongly focuses on Yew wood and Tan leather hide introducing the style of designer furniture into the automotive lounge, extending Rover's trademark for a welcoming interior.

Peter Stevens, Rover's design director says: "I want people to turn away for a moment from post modern brutalism and to enjoy the elegant and timeless lines of the Rover 75 Coupe Concept design. The true character of a Rover comes from its ability to present a cosseting environment with comfort and refinement being the high priorities, elements that should be expressed in the form and detailing of the exterior of the car.

"Heritage is a great strength for a marque as it gives you the terms of reference and something to build on for the future. That is exactly how we saw the challenge of presenting a Rover concept in its Centenary year."

The car went through an identity change being "MG" badged up with the upcoming sale of MG Rover to the various chinese companies at the time, they wished to show how flexible the design team could be so several photos show the car with MG badges and a MG ZT small boot spoiler.

BOOT SPACE

An important issue to raise is the boot space in the saloon and tourers.

Early saloon cars where reported NOT to have folding rear seats, and several owners have confirmed there are no obvious switches to fold the seats down however this is not common as 99% of the saloon cars have folding seats, this is something to check if you are buying an older car.

Its worth digging around for these "pull tugs" here around the seat area in general which may allow you to fold the seatdown.

The below photo shows a typical boot of the saloon, which is actually quite practical as you can fit two baby prams in it side by side and still have plenty of room for shopping etc.

A short coming in the saloons is the actually boot height is quite shallow which doesnt effect you on a daily basis, but something you should be aware of if you wish to carry a lot of suitcases. Infact with an optional H and K sound system, the rear boot height space in the saloon is reduced again.

Of these critisms, the 75/ZT actually has a MASSIVE boot for the car of its class, its hugely impressive. I myself personally have taken three Ikea full size bookshelves along with the weeks shop from Asda in the boot in a single go.

One rather nice feature of the Tourers is the ability to open the rear window without opening the boot itself. Handy should you wish to really fill the boot up with shopping and very popular with dog lovers! An optional Rover / MG Rover dog guard is available and is of extremely high quality.

Make sure when viewing a tourer to bring a bottle of still water with you and pour it around the window to ensure the rubber seals etc are correct as they can be difficult to correct if the car has been damaged. You may even find the current owner doesn't know the window opens!

COLOUR RANGE

ROVER 75 1.8T TOURER

POWERED BY A 150PS TURBOCHARGED K SERIES ENGINE

RGS-0702-566

Rover and later MG Rover offered a range of colour schemes on the car that at the time was hardly of equal for cars in the exective price range

ROVER 75 1.8T SALOON

POWERED BY A 150PS TURBOCHARGED K SERIES ENGINE

RGS-0702-567

However, some colours where more subtle than a yellow ZT

SILVER IS POPULAR, BUT MONOGRAM IS PERSONAL
MONOGRAM MOONSHINE CHROMESCENT WITH
IRRIDESCENT HOLOGRAPHIC PAINT EFFECT

BMR-0704-1674

NEW ROVER 75 V8

BMR-0204-1502

BODYKIT AND SPOILER OPTIONS

Disclaimer: This document is intended as a guide only. You assume all responsibility for any problems howsoever caused as a result of using these instructions. Neither 75ZT Community or the author of this document shall be held responsible for any losses or injury caused by the use of these instructions

Rover and MG Rover offered single range of spoiler and bodykit options for the 75 and ZT's. These where often optional extras and are not common on the majority of cars. I have included a photo of my own car here, the kit which I fitted seperate (note the MG7 tail lights where purchased through a trader "Radioguy" on this very forum, yet again another club member benefit!).

Note it has the large spoiler which was standard on all ZT+ models until the cars where changed to mk2's.

The single bodykit options for the cars where a set of side skirts/sill covers and rear "spats" which wraped around the rear bumper, you can clearly see them along the bottom areas of the car.
The skirts fitted all varients including all mk1 or mk2 and saloon/tourer (but not limo cars) but the rear spats where available in two types. One type was for use on the 75/ZT mk1 saloon (as seen on my car above), the other type could be used on mk2 cars and also mk1 tourers owning to them not reaching around the rear bumper as seen below.

Also on this silver car is the smaller spoiler fitted to the mk2 ZT's as standard. Some late mk1's also had this fitted.

Several owners have fitted them to other saloons across the range and some have even fitted both as seen below, creating a Sierra Cosworth Whale Tail effect!

No spoilers are available for the tourer owing to the rear window opening up, however some members have created subtle modified lip spoilers around the edge of the metal work.

One thing about the bodykits is that there are fibreglass replicas out there which are of varying quality so take that into consideration should you wish to buy one.

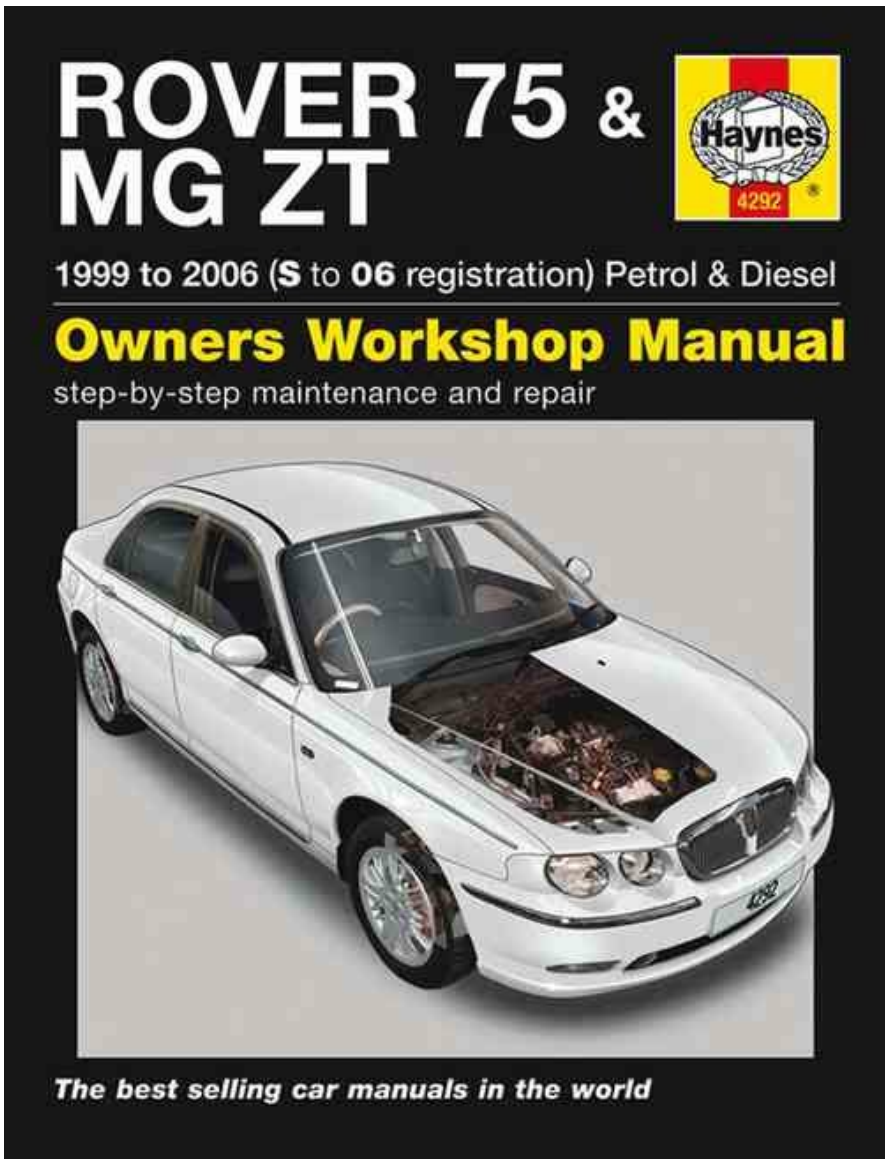
ENGINE VARIANTS

Below is a detailed list of information of the engine you are interested in and relating to it including average costs, service bills and what to look out for. Please scroll down to view the engines.

Stats for MPG, engine power and such are listed at the bottom based on a combination of multiple car sites providing such information from manufacture supplied sources and second hand car websites.

Long wheel base / Limo variants have their engine specifics listed at the very bottom of the list. Tourers typicially have zero significent real world effect on statistics etc.

All Rover 75 and MG ZT's are simple to work on, with only a few jobs requiring specialist kit, but normal servicing and such can easily be done DIY to save you money. It is recommended 100% that you purchase on of these Haynes books. Halfords sell them for about £18 however they go on Ebay for about £9 a book. A well worthwhile and essential reference.



DECODING AN ENGINE STAMP NUMBER AND LOCATION

When purchasing (or prehaps after) it can be worthwhile checking you engine stamp number, below is a complete guide (bar the V8 models) on how to simply decode it. Worth checking along with your VIN number.

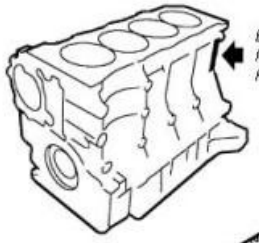
Engine Identification Number Location

1.8 Petrol Models: The number is stamped on the rear LH side of the K1.8 cylinder block.

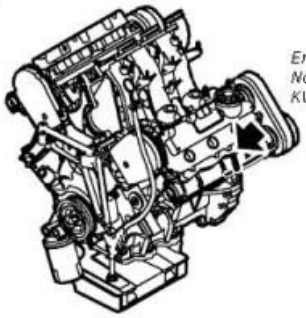
2.0 and 2.5 Petrol Models: The number is stamped on the rear LH side of the LH KV6 cylinder block.

Diesel Models: The number is stamped vertically into the flange between the engine casing and gearbox.

PREFIX	SERIAL NUMBER.	MODEL YEAR	ENGINE TYPE
18K4F	L2500001 ON	1999	1796cc S.O.H.C. Compression Ratio 10.5:1 Multi Point Fuel Injected Unleaded Petrol with Catalyst
20K4F	L2800001 ON	1999	1997cc V6 Compression Ratio 10.5:1 Multipoint Fuel Injected Unleaded Petrol with Catalyst
25K4F	L2400001 ON	1999	2497cc V6 Compression Ratio 10.5:1 Multi Point Fuel Injected Unleaded Petrol with Catalyst
204D2	0000001 ON	1999	1997cc Multi Point Fuel Injection Diesel with Catalyst



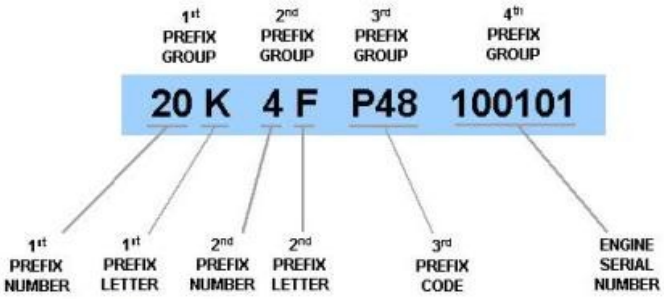
Engine Identification No. location on the K1.8 cylinder block



Engine Identification No. location on the KV6 cylinder block

Engine Identification Number Codes - 2003 MY

The engine number comprises a series of letters and numbers presenting in code the cubic capacity, the ancillaries fitted and the type of compression. The engine serial number is a unique number. Refer to the EPC for a complete listing of Engine Number codes. Always quote the prefixes with the engine serial number



1st PREFIX NUMBER	CUBIC CAPACITY
18	1800cc
20	2000cc
25	2500cc

1st PREFIX LETTER	ENGINE SERIES
K	K Series

2nd PREFIX NUMBER	NUMBER OF VALVES
4	16 Valves (4 per cyl)

2nd PREFIX LETTER	INJECTION & EMISSION
F	Multi Point Injection with Catalyst

3rd PREFIX CODE	INJECTION & EMISSION
P31	1800cc Man, Thrifted Catalyst
R61	1800cc Man, PRT Introduction
P32	1800cc Auto, Thrifted catalyst
R62	1800cc Auto, PRT Introduction
R22	1800cc Turbo Man, PRT
R23	1800cc Turbo Auto, PRT
P48	2000cc Man, Pencil Coils
P49	2000cc Auto, Pencil Coils
P50	2000cc Man, A/C, Pencil Coils
P51	2000cc Auto, A/C, Pencil Coils
L28	2000cc Service, Calinova O/C, Pencil Coils
P52	2000cc Service, Plate O/C, Pencil Coils
P53	2500cc Man, Pencil Coils, Non Air Assist Injectors
P54	2500cc Auto, Pencil Coils, Non Air Assist Injectors

3rd PREFIX CODE	INJECTION & EMISSION
P55	2500cc Man, A/C, Pencil Coils, Non Air Assist Injectors
P56	2500cc Man, A/C, Pencil Coils, Non Air Assist Injectors
L24	2500cc Service, Calinova O/C, Pencil Coils
P57	2500cc Service, Plate O/C, Pencil Coils
P58	2500cc Man, A/C, Pencil Coils, Non Air Assist Injectors
P02	2500cc Man, 190PS +40°C Service, A/C, Calinova O/C, Pencil Coils
P60	2500cc Man, 190PS +50°C Service, A/C, Pencil Coils
P59	2500cc Auto A/C 190PS, Pencil Coils, Non Air Assist Injectors
P53	2500cc Man 160PS, Pencil Coils, Non Air Assist Injectors
P55	2500cc Man A/C 160PS, Pencil Coils, Non Air Assist Injectors

PETROL engines

SECTION 09 - Overview and common faults for the 1.8 engines

SECTION 09-A - K Series 1.8 120 (4 cylinder 16 valve, none turbo with 120ps/116 bhp)
SECTION 09-B - K Series 1.8T 160 (4 cylinder 16 valve, Turbo with 160 ps/157 bhp)

SECTION 10 - Overview and common faults for the V6 petrol engines

SECTION 10-A - KV6 2.0 150 (6 cylinder 24 valve, none turbo with 150ps /147 bhp)
SECTION 10-B - KV6 2.5 160 (6 cylinder 24 valve, none turbo with 160ps /157 bhp)
SECTION 10-C - KV6 2.5 180 (6 cylinder 24 valve, none turbo with 180ps /177 bhp)
SECTION 10-D - KV6 2.5 190 (6 cylinder 24 valve, none turbo with 190ps /188 bhp)
SECTION 10-E - KV6 2.5 220s (6 cylinder 24 valve, supercharged with 224ps /220 bhp)

SECTION 11 - Ford Modular Engine 4.6 260 (8 cylinder 16 valve, none turbo with 260ps /255bhp)

DIESEL M47F (BMW Sourced unit)

SECTION 12 - Overview and common faults for the diesel engines

SECTION 12-A - M47R 115 bhp - Often badged CDT (4 cylinder 16 valve turbo charged engine with 115 ps / 111bhp)
SECTION 12-B -M47R 131 bhp - Often badged CDTi but this can vary!! (4 cylinder 16 valve turbo charged engine with 131 ps / 128bhp)

Section 13 - Limo / Long Wheelbased Car engine info

1.8 and 1.8T specific engine details / faults / common servicing costs

A history of the K series engine

The K-Series engine is a series of engines built by Powertrain Ltd, a sister company of MG Rover. The engine was built in two forms: a straight-four cylinder, available with SOHC (single cam) and DOHC (twin cam), ranging from a 1.1 L to 1.8 L.

The K-Series was introduced in 1988 by Rover Group as a powerplant for the Rover 200 car. It was revolutionary in that it was the first volume production implementation of the low pressure sand casting technique. This works by injecting liquid aluminium into an upturned sand mould from below.

In this way any oxide film always remains on the surface of the casting and is not stirred into the casting structure. This production technology overcame many of the inherent problems of casting aluminium components and consequently permitted lower casting wall thickness and higher strength to weight ratios.

However, the process required the use of heat treated LM25 material which gave the engines a reputation for being fragile. An engine overheat would often result in the material becoming annealed and rendering the components scrap.

The aluminium engine blocks were fitted with spun cast iron cylinder liners that were initially manufactured by GKN's Sheepbridge Stokes of Chesterfield, but replaced by spun cast iron liners made by Goetze after some seminal research conducted by Charles Bernstein at Longbridge, which proved influential even to Ducati for their race engines.

Unfortunately a large number of aftermarket and replacement engines, (the so called "VHPD"s" very high performance derivative as used in the 187 bhp lotus elise) were built with the old substandard GKNs by Minister, Lotus and PTP well after the Goetze liner's introduction to the production line in 2000.

Engine size and capacity history

The engine was introduced initially in 1.1 L single overhead cam and 1.4 L dual overhead cam versions. The engines were held together as a sandwich of components by long through-bolts which held the engine under compression, though this construction is not unknown in early lightweight fighter engines from the First World War.

It had also been used in motorcycle engines and Triumph Car's "Sabrina" race engine. As the Honda engines became obsolescent and were phased out, but well before the BMW takeover, an enlargement of the K Series design to 1.6 and 1.8 litres was carried out. This was done by using larger diameter cylinder liners and also increasing the stroke. The change required a block redesign with the removal of the cylinder block's top deck and a change from "wet" liners to "damp" liners.

The plastic throttle body fitted to the engine until 2001 was manufactured by the SU Carburettor company - they also included aluminium and larger sized bodies.

The two types of head that were bolted to the common four-cylinder block were designated K8 (8 valves) and K16 (16 valves). A later head design also incorporated a Rover-designed Variable Valve Control (VVC) unit (derived from an expired AP patent). This allowed more power to be developed without compromising low-speed torque and flexibility.

The VVC system constantly alters the inlet cam period, resulting in a remarkably flexible drive - the torque curve of a VVC K-series engine is virtually flat throughout the rev range and power climbs steadily with no fall-off whatsoever until the rev limiter kicks in at 7,200 rpm

The Rover 75 was never fitted with the VVC engine, instead receiving the turbo application instead.

The 1.8 Head Gasket problems and explanation in detail

Head gasket failure on the 1.8 and 1.8T engines typically occurs around 30,000 miles, and thus the majority of high mile 1.8/1.8T engines will almost certainly have had "a head gasket repair" done at some stage. If done correctly, then we have multiple members whose cars have done into the 100,000 of thousands of miles!!!

When purchasing a 1.8/1.8T ask if the head gasket was done. If it was done, ask for the receipts as often people cheat and simply pour a tank of "Radweld or K seal" into the engine coolant tank which will temporarily cure the car, often enough for you to have driven the car away and it fail a week or two later. Its a dirty trick in the second hand market, HOWEVER some people have reported it has worked to their advantage curing tiny leaks.

The K-Series engine has gained a reputation for head gasket trouble. This is due to a range of problems including build tolerances, reduced block face stiffness, casting quality and material and cooling system layout. A number of changes were made over the years to improve the condition.

Amongst the first of the changes was the introduction of steel head locating dowels. Early versions of the K Series engine had steel dowels, but these were loose fitting and used as an assembly aid. Plastic dowels were then introduced to prevent head face damage on the assembly line and also as a cost saving. This engine had wet liners and a solid block top deck and was not known for being prone to gasket failure. The plastic dowels were carried forward to the redesigned K series which was then available in 1600 and 1800 capacities by using damp liners and an open block design.

However, it became apparent that this engine had an issue with head gasket failure which was partly due to lack of stiffness in the head/block interface. To help reduce this shuffling, steel dowels were reintroduced, but with a tight fit to fix the head securely to the block face. This reduced one mode of head gasket failure caused by movement between the block and head faces, but was only partly successful because the dowels only helped in their local areas. The gasket itself was also subject to minor improvements to the sealing bead design over the years.

During its later years, the cooling system of some models was also modified by the introduction of a PRT (pressure release thermostat). This allowed increased coolant flow at high engine loads even before high temperatures were reached and reduced the thermal shock the engine saw when a conventional thermostat was first opened. This thermal shock would cause differential expansion across the gasket face causing relative movement between head and block.

A new design of head gasket has been available for several years from Land Rover which can be retro-fitted to all K-Series engines. This is of the MLS (multi layer steel) design. This has now been superseded by a new MLS design that is used in conjunction with higher tensile head bolts and strengthened oil rail (into which the bolts are screwed). A modified tightening method is also used with the new bolts. The effectiveness is yet to be proved.

Destined to be introduced with the Euro IV emissions compliant engine in late 2005 was the MLS gasket and strengthened oil rail. The aim of the latter is to improve engine rigidity. But this was never introduced by MG Rover Group as the company had gone bankrupt by the time of the planned launch.

The N-Series engine (basically the aforementioned Euro IV-compliant K-Series) in the MG TF relaunched by Nanjing Automotive in September 2008, has these modifications as standard.

Non Starting / Fuel Filter Syndrome (FFS) / Orange Clip

Common to ALL petrol cars. The fuel must be delivered at the correct pressure or it won't start. You can hear the petrol pumping up (priming) when you start the car with the key in the ignition.

Often the in-tank fuel filter will "separate" as its of a screw in design, simply the pressure will push it to unscrew. This can be prevented by fitting an orange clip. Part number WJC000230

The cars many ECUs checks delivery pressure. If the delivery of fuel to the engine and a untouched filter module without the orange clip isn't diagnosing FFS (nor indeed the lack of it) then a simple fuel pressure bleed caused by a fractionally slackened filter cap will ensure it doesn't start.

White Exhaust Smoke / Inlet Manifold gasket

This can usually be the most obvious sign from a cold engine of head gasket failure, especially when the engine is cold, BUT it can also mean something much simpler but also as concerning as in this case the white smoke wont be oily. Coolant or water vapour leaking from the inlet manifold. After the car reaches running temperature the smoke typically reduces to almost a small amount.

Unburnt fuel can be a cause of white smoke also. Fuelling problem will make smoke billow out and make it judder, and it becomes obvious car is only running on 3 cylinders at times.

The key difference between the Inlet Manifold Gasket failure and the Head Gasket failure (HGF), is the engine will run normally. Number 4 cylinder is a usual suspect for the gasket to leak coolant into. If it was HGF I would expect the cooling system to be pressurizing and the car would not be running right at all.

Don't use any inlet manifold gaskets that aren't genuine ones, always found them to go brittle with heat. The simplist thing is to replace the inlet gasket and have the coolant system bled and engine serviced.

1.8 Turbo specific issues

Not too many issues effecting the 1.8 Turbo specifically.

Overboosting/Underboosting

Obviously with the engine having a turbo fitted you can have issues, and they start around 2500 to 3000rpm, the hesitation is only around 2600 to 2800 under hard acceleration, sort of like a splutter in power then whoosh, your off!

The problem is typically the black vacume hose where it joins the turbo,, the rubber joining piece at the end can become oversized due to the heat of the turbo and surrounding area.

It has a spring clip around it to maintain the seal, this doesnt work allowing a loss of vacuum and wastegate problems leading to ignition cutting out (ECU safe-mode) hence the hesitation.

A new set of solenoid vacuum hoses, three of which to replace around £35 and you will be back to normal.

Rough running / M.A.F

If your 1.8 Turbo is running a little "lumpy" or "rough", with revs at idle searching in and around 750 to 900 plus up to 4500 rpm its great but then lacks instead of pulling to 6700rpm then your looking at a M.A.F failure (providing you have checked the hoses above into the turbo).

The arm between the vacuum actuator and the waste gate can seize where it pivots on the waste gate lever. This will cause an over boost, and usually will temporarily cut the ignition to protect the engine giving you a stall or a safe mode activation (where the car runs very slowly).

Again, a simple clean of the pivot and applied a high temp anti seize spray available from your local motorfactors will resolve this providing your actuator hasnt failed outright but the car would display an engine fault light if it does.

Additionally old spark plugs, failing spark leads an incorrect spark plug gapping can create the same or similar feeling.

General servicing costs and maintenance

So if all of that hasnt scared you off then heres the good news now, assuming you have covered all the regular issues listed then actual maintenance of the 1.8 engines is actually quite inexpensive providing you service it when you should. In fact its the cheapest car of the lot to service.

Depending on usage, a 12,000 mile service is perfectly acceptable, some do around 6000 miles if the car is used less frequently, but its up to yourself. Rover specificed 15,000 miles originally or once per year.

The basic oil filters, sparkplugs, engine filters and such are quite cheap, changing everything will cost you no more than £40

Use of the correct coolant is recommended so use O.A.T coolant, which is pink in colour. Save yourself over Halfords prices and buy none-diluted from your local Vauxhaul dealership. 5 litres will cost you about £22 maximum and when you mix it 50:50 gives you 10 litres of coolant.

Use a 10W/40 or 15W/40 oil meeting both ACEA A3 and ACEA B3:96 specifications, and having a viscosity band recommended for the temperature range of your locality.

K SERIES 1.8 120

Used in the Rover 75 1.8 and MG ZT 1.8 120

Engine technical details....

MANUAL gearbox

- Engine Type: K series, 4 cylinder, 16 valve DOHC
- Displacement: 1796 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 120bhp @ 5500rpm
- Torque: 160Nm @ 4000rpm
- Acceleration: 0-60mph in 10.9 secs
- Top Speed: 121 mph
- Fuel (urban): 26.6mpg
- Fuel (extra urban): 46.3mpg
- Fuel (combined): 36.2mpg
- Emissions: 184 g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load

seperate as many people discover!)

• Towing Weight: 1200kg
• Towing Weight, Unbraked: 750kg

AUTOMATIC gearbox

• Engine Type: K series, 4 cylinder, 16 valve DOHC
• Displacement: 1796 cc
• Bore Stroke: n/a
• Compression: 10.5:1
• Max Power: 120bhp @ 5500rpm
• Torque: 160Nm @ 4000rpm
• Acceleration: 0-60mph in 10.9 secs
• Top Speed: 121 mph
• Fuel (urban): 26.6mpg
• Fuel (extra urban): 46.3mpg
• Fuel (combined): 36.2mpg
• Emissions: 184 g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1390kg saloon / 1460kg tourer
• 85% kerb weight: 1181kg saloon / 1200kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1200kg
• Towing Weight, Un-braked: 750kg

Automatic

• Car kerb weight: 1425kg saloon / 1496kg tourer
• 85% kerb weight: 1211kg saloon / 1270kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1400kg
• Towing Weight, Un-braked: 750kg

Engine oil - K1.8 engine (normally aspirated)

Use a 10W/40 oil meeting specification ACEA A2:96 and having a viscosity band recommended for the temperature range of your locality.

Alternatively, a 10W/40 engine oil meeting specification ACEA A1:96 can be used, and this specification may improve fuel economy.

K SERIES 1.8T 160

As used in the Rover 75 1.8T 160 and the MG ZT 1.8T 160 (note turbo in bottom right of photo)

Engine technical details....

MANUAL gearbox

- Engine Type: Turbo charged K series, 4 cylinder, 16 valve DOHC
- Displacement: 1796 cc
- Bore Stroke: n/a
- Compression: 9.2:1
- Max Power: 154bhp @ 5500rpm
- Torque: 215Nm @ 2100rpm
- Acceleration: 0-60mph in 9.1 secs
- Top Speed: 130 mph
- Fuel (urban): 25.0mpg
- Fuel (extra urban): 46.3mpg
- Fuel (combined): 36.3mpg

• Emissions: 193 g/km

AUTOMATIC gearbox

• Engine Type: Turbo charged K series, 4 cylinder, 16 valve DOHC
• Displacement: 1796 cc
• Bore Stroke: n/a
• Compression: 9.2:1
• Max Power: 154bhp @ 5500rpm
• Torque: 215Nm @ 2100rpm
• Acceleration: 0-60mph in 9.7 secs
• Top Speed: 127 mph
• Fuel (urban): 22.1mpg
• Fuel (extra urban): 42.8mpg
• Fuel (combined): 31.7mpg
• Emissions: 214 g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1415kg saloon / 1475kg tourer
• 85% kerb weight: 1203kg saloon / 1254kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1450kg
• Towing Weight, Unbraked: 750kg

Automatic

• Car kerb weight: 1450kg saloon / 1510kg tourer
• 85% kerb weight: 1232kg saloon / 1283kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1450kg
• Towing Weight, Unbraked: 750kg

Engine oil - K1.8 turbo 154bhp/160ps

Use a 10W/40 oil meeting specification ACEA A3 and having a viscosity band recommended for the temperature range of your locality.

KV6 Buyers guide / problems, costs and general engine information overview

This guide covers the ESSENTIAL issues with KV6 engine in 2.0 150, 2.5 160, 2.5 177 2.5 180 and 2.5 190 outputs as the issues with them are all common regardless of power output or capacity size.

A history of the KV6

First introduced into the Rover 800 series the engine was designed and developed by Rover at Longbridge to replace the Honda 2.7l V6 engine which was about to become non-compliant with tightening emissions legislation.

The original unit was designed for low volume production and hand built but was later significantly redesigned to fit into the smaller Rover 75's bonnet, although performance remained similar and you could almost call them two separate engines.

At introduction, the engine enjoyed considerable technological advancement compared with its competition, most notably being the lightest and shortest v6 in its class. It has fully automatically tensioned timing drive belts and adaptive Siemens EMS2000 engine management. The fuelling and ignition timing are constantly varied to match the load on the engine to improve refinement.

The engine boasts Variable Geometry Induction, whereby air induction pipe lengths vary to optimize engine torque in response to different engine and road speeds (commonly refereed to as the inlet manifold and VIS motors), aiding refinement and efficiency. Although it bears the name of K Series, the engine has almost no components in common with the 4 cylinder version.

The V6 engine is fitted with four overhead camshafts driven by synchronous tooth belts. It has a single, long, serpentine belt at the front driving the inlet cams and also the coolant pump. The exhaust cams are driven by short link belts driven from the ends of the inlet cams at the rear of the engine. The system was a joint development between Dayco (belt supplier) and Rover. The rear link belts do not incorporate any tensioning device. Belt tension is maintained by very careful control of belt length and the pulley pair is pre-tensioned during fitting. The front belt drive is tensioned by a spring loaded tensioner pulley incorporating a hydraulic damping element.

An unusual feature of this system is that it incorporates "floating" inlet cam drive pulleys that are not directly keyed to the shafts. **This means that special setting tools are required to establish the cam timing before the pulley fixings are tightened.** This requirement is the result of the complexity of the cam drive train.

In addition to the length and thickness tolerance of the belts, the accuracy of the cam timing is also affected by the positional and diameter tolerance of each pulley and the thickness of each major engine casting. The result is that the required degree of timing accuracy could not otherwise be maintained and typically why the cost for the timing belts on the KV6 is so high.

One of the most immediately noticeable features of the KV6 is its distinctive, quietly growling engine note. Infact when MG-Rover when racing with the 2.0 ZS touring car, many commented n the engine having the most fantastic sound in touring cars since the days of the Ford RS500.

The difference in the 2.5 V6 160/180/190 power levels explained

Three "core" versions of the 2.5 quad-cam KV6 engine are offered in the range (the 2.0 24v V6 150 in Rover 75 only). For the ZT only 180 & 190 2.5-litre models, several special features have been engineered to achieve the enhanced power output and drive ability from these engines. The 190 V6 has 190Ps, and increased torque of 245Nm.

Note there are changes between the ZT 180 V6 auto, over the 2.5 V6 180 models used in the Rover 75 and MG ZT 180.

Beginning with the induction system, the ZT 190 air cleaner has an 80mm diameter intake duct in place of a 70mm duct, and a new intake diffuser. This provides a smoother airflow with less than half the usual pressure drop; it has also been tuned for a more sporting induction sound. Internal engine changes include a new inlet cam profile, advancing the inlet valve opening and improved porting.

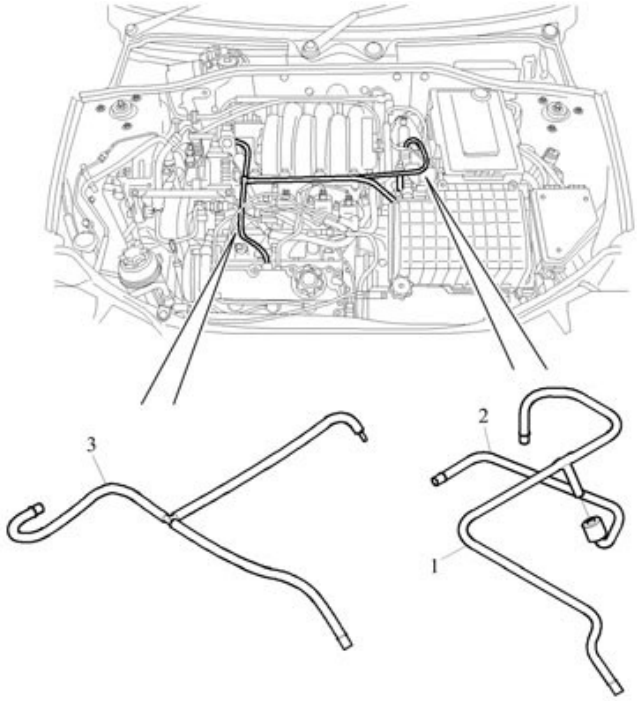
A further contribution to the performance boost comes from exhaust system on the 190 model, with 60mm diameter pipework in place of 57mm, new low-restriction metal-based starter and main catalysts and a modified rear silencer unit. This silencer has larger-bore internal pipes, twin straight tail pipes and a mechanical valve, which responds to exhaust pressure at around 4500rpm to by-pass the internal baffles.

The ZT 180 & 190 engines have specially designed MG throttle cams and engine ECU software to provide the right sports car feeling of responsiveness to the accelerator pedal, with a deliberate reduction of the normal throttle on/off damping. Also common to both ZT engines is an enhanced cooling system, with 20% greater cooling intake area, improved-flow radiator and top hose configurations and a new plate-type oil/water oil cooler replacing the oil/air heat exchanger.

A note should be made that the MG ZT 2.5 160 V6 is actually a standard Rover 2.5 177 V6 engine but has been deliberately restricted by MG Rover at the time. The difference in restriction is as follows.

1 - Exhaust - The exhaust systems bore diameter from the manifold back has been reduced by several milimeters down to 57mm like the 180 HOWEVER the rear back box on the 160 is much more restricted than the 180 and 190 exhausts.

2 - Induction - The OEM 160 V6 air intake has some "strangling" on the engine. The air intake system has a restricting trumpet in it in the air-box which obviously slows the engine air intake.



It should be noted that pipe
"3" often breaks at the T junction and should be replaced completely, or if your cheap like me, scrape out the inside of the plastic from the three pipes and use a copper T piece from your local B and Q. 22,000 miles later and mine's still fine.

Be careful when sourcing a replacement as people mis-sell the KV6 housing as suitable for both Freelander KV6 and 75/ZT KV6 which infact they are not, as the picture below shows. Note the CORRECT housing for our cars will be stamped with "PEM101050" as the part number and cost you around £30 new, or £60 for the complete kit with pipes which are worth doing also.

A job that you can do yourself, there are guides in the forum and HOW TO section, and should you not wish to, a mechanic would change no more than £100 to complete the job unless Thermostat has done damage, then the headgaskets would be replaced to be on the safe side.

Note this is not the common headgasket failure as like the 1.8 engines, but rather will occur when the thermostat has boiled the engines insides significantly.

When toping up the coolant system, you should use O.A.T coolant, which is pink. The silicate free, organic acid technology (OAT) provides superior engine protection and is compatible with all vehicle manufacturers' colours of OAT coolants.

This was the specification given by Rover and MG-Rover, and Halfords and such sell it. However your Vauxhaul dealership will also sell it 100% pure (to dilute 50:50 yourself) at a much cheaper price.

Inlet Manifold / VIS Motors

The final major issue with the KV6 engine after timing belts and thermostat is "The rattle of death" as some describe it, the rest of us describe it as a failed inlet manifold. The Inlet manifold controls the amount of air being let into the engine to vary to optimize engine torque, without it working correctly, the engine will feel very sluggish at all speeds.

This is the section at the top of your KV6 engine and removed looks like this.

Listen for a tappety noise from inlet manifold (black plastic bit at top of engine at rear) which will tell you if you entire manifold need replacing. You may here a small rattle on start up for maybe 15/20 seconds even if engine is cold or warm, that is perfectly normal and should be ignored, however when it continues and sounds like a bag of nails in a washer machine it will be obvious.

A video of the sound from youtube. http://www.youtube.com/watch?v=J31WoRypFxY

These inlet manifolds can not be repaired and much be replaced, it will sound like this if it has failed, sometimes it can sound like the entire engine is dying, but its a simple replacement job that would take a mechanic a few hours.

Replacement can range between £100 from a scrappy to £300-500 new depending where you source it and it is essential that the inlet manifold gasket is replaced and correct sealant else you will hear a slight hissing when the engine is idling after you reassemble.

With regards the VIS motors these can fail due to oil in the actuators of the motors, built up from the engine itself, a bad design flaw sadly. At 3500 rpm there should be a distinct surge in power, notable in 2nd/3rd gear especially, if theres not your VIS motors will need replacing most likely.

Second hand ones are around £30 and are a very easy fix for anyone, a few screws and your flying, literally. The difference to a car without operating VIS motors is significant.

General servicing costs and maintance

So if all of that hasn't scared you off then heres the good news now, assuming you have covered all the regular issues listed then actual maintenance of the KV6 engine is actually quite inexpensive providing you service it when you should.

Depending on usage, a 12,000 mile service is perfectly acceptable, some do around 6000 miles if the car is used less frequently, I myself do my own KV6 every 6 months regardless of millage.

The basic oil filters, engine filters and such are quite cheap and the dearest thing is actually the spark plugs. You must make sure you use IRIDIUM tipped spark plugs, a set of six will cost you around £40 but are good for around 60,000 miles minimum. Access to the rear bank of spark plugs is slightly awkward but not impossible and doesnt require the removal of the inlet manifold.

As mentioned in the Thermostat section, use of the correct coolant is recommended so use O.A.T coolant, which is pink in colour. Save yourself over Halfords prices and buy none-diluted from your local Vauxhaul dealership. 5 litres will cost you about £22 maximum and when you mix it 50:50 gives you 10 litres of coolant.

Various oil grades are required for different power outputs of the KV6, I have listed them with each engine in the specifics below to ensure no confusion arises.

General Engine information

The various technical specifics of each engine is listed below, please use it as a guide, note check the "8th" digit of your cars vin number to confirm your engine size and power output as there are few obvious signs as to which KV6 is fitted.

KV6 SERIES 2.0 150

Only used in the Rover 75 2.0 V6

The "8TH" VIN check digit for this engine installed in a Rover 75 is "K"

Engine technical details....

MANUAL gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 1997 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 147.9 @ 6000 rpm
- Torque: 184Nm @ 4000rpm
- Acceleration: 0-60mph in 9.6 secs
- Top Speed: 130 mph
- Fuel (urban): 20.3mpg
- Fuel (extra urban): 40.1mpg
- Fuel (combined): 29.5mpg
- Emissions: 228g/km

AUTOMATIC gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 1997 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 147.9 @ 6000 rpm
- Torque: 184Nm @ 4000rpm
- Acceleration: 0-60mph in 10.8 secs
- Top Speed: 127 mph
- Fuel (urban): 19.5mpg
- Fuel (extra urban): 36.0mpg
- Fuel (combined): 27.5mpg

• Emissions: 245g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1445kg saloon / 1535kg tourer
• 85% kerb weight: 1228kg saloon / 1304kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1400kg
• Towing Weight, Unbraked: 750kg

Automatic

• Car kerb weight: 1480kg saloon / 1570kg tourer
• 85% kerb weight: 1258kg saloon / 1334kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1400kg
• Towing Weight, Unbraked: 750kg

Engine oil - KV6 engine - 2.0 150 model

Use a 10W/40 oil meeting specification ACEA A2:96 and having a viscosity band recommended for the temperature range of your locality.

KV6 SERIES 2.5 160

Used only in the MG ZT 2.5 V6 160 in Manual gearbox only

The "8TH" VIN check digit for this engine installed in a MG ZT is "E"

Engine technical details....

MANUAL gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 2497 cc
- Bore Stroke: n/a
- Compression: 9.2:1
- Max Power: 157.8bhp @ 5500rpm
- Torque: 230 @ 4000rpm
- Acceleration: 0-60mph in 8.8 secs
- Top Speed: 131 mph
- Fuel (urban): 20.8mpg
- Fuel (extra urban): 40.4mpg
- Fuel (combined): 30.0mpg
- Emissions: 225 g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

- Car kerb weight: 1445kg saloon / 1535kg tourer
- 85% kerb weight: 1228kg saloon / 1304kg tourer
- Max Ball Weight: 100kg
- Towing Weight: 1450kg
- Towing Weight, Unbraked: 750kg

Engine oil - KV6 engine - 2.5 160

Use a 10W/40 oil meeting specification ACEA A2:96 and having a viscosity band recommended for the temperature range of your locality.

KV6 SERIES 2.5 180

As used in the Rover 75 2.5 V6 in manual and automatic, and the MG ZT 2.5 V6 180 which was Automatic gearbox only

The "8TH" VIN check digit for this engine installed in a Rover 75.MG ZT is "L"

Engine technical details....

MANUAL gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 2497 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 177bhp @ 6500 rpm
- Torque: 240Nm @ 4000rpm
- Acceleration: 0-60mph in 8.2 secs
- Top Speed: 137 mph
- Fuel (urban): 20.2mpg
- Fuel (extra urban): 40.4mpg
- Fuel (combined): 29.4mpg
- Emissions: 229g/km

AUTOMATIC gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 2497 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 177bhp @ 6500 rpm
- Torque: 240Nm @ 4000rpm
- Acceleration: 0-60mph in 11.0 secs
- Top Speed: 128 mph
- Fuel (urban): 17.9mpg
- Fuel (extra urban): 37.7mpg
- Fuel (combined): 26.9mpg

• Emissions: 249g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1445kg saloon / 1535kg tourer
• 85% kerb weight: 1228kg saloon / 1304kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Automatic

• Car kerb weight: 1480kg saloon / 1570kg tourer
• 85% kerb weight: 1258kg saloon / 1334kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Engine oil - KV6 engine - 2.5 177bhp model

Use a 10W/40 oil meeting specification ACEA A2:96 and having a viscosity band recommended for the temperature range of your locality.

KV6 SERIES 2.5 190

ONLY FOUND IN THE ZT/ZT-T 190 IN MANUAL GEARBOX FORMAT

The "8TH" VIN check digit for this engine installed in a MG ZT is "F"

Engine technical details....

MANUAL gearbox

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC
- Displacement: 2497 cc
- Bore Stroke: n/a
- Compression: 10.5:1
- Max Power: 187.4bhp @ 6300 rpm
- Torque: 257Nm @ 4000rpm
- Acceleration: 0-60mph in 7.7 secs
- Top Speed: 140 mph
- Fuel (urban): 19.6mpg
- Fuel (extra urban): 38.4mpg
- Fuel (combined): 28.4mpg
- Emissions: 249g/km

It should be noted the towing weights are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

- Car kerb weight: 1445kg saloon / 1535kg tourer
- 85% kerb weight: 1228kg saloon / 1304kg tourer
- Max Ball Weight: 100kg
- Towing Weight: 1600kg
- Towing Weight, Unbraked: 750kg

Engine oil - 2.5 KV6 engine - 190PS

Use a 10W/40 oil meeting specification ACEA A3 and having a viscosity band recommended for the temperature range of your locality.

KV6 SERIES 2.5 220S

ONLY FOUND IN THE AUSTRALIAN MARKET ZT/ZT-T 220S Installed as a 3rd party add on by Sprintex

FIRSTLY, IT SHOULD BE STATED THAT THIS CAR WAS NEVER SOLD IN THE UNITED KINGDOM OR IRELAND. And with good reason but we will get to that....

A $10,000 extra in July 2004, well Australian Dollar, which was about the same as about £6400 roughly in 2004 exchange rate. Based on the 180ps/177bhp engine (not the 190 strangely enough), the high efficiency, low-boost twin-screw type supercharger had been developed locally through Sprintex Superchargers based in Perth, Western Australia.

This conversion involves the replacement and inclusion of a number of components, including a a fabricated inlet manifold to replace the original unit, control ECU, boost bypass value, a secondary fuel injector, mounting brackets and of course the twin screw supercharger.

The low boost will help prolong the life of the engine..... or so they said. Multiple failures and recalls due to lack of fueling, not enough oil flowing correctly in the engine, additional oil sumps for the charger the list kept going on and on.

Basically MG-Rover never signed off on the engine in the UK but that doesnt mean there are not examples of it in ZS and ZT cars, but they are very rare and the cost is simply staggering compared to buying a V8 ZT for example.

Engine technical details....

- Engine Type: KV6, 6 cylinder, 24 valve, DOHC supercharged (twin screw)
- Displacement: 2497 cc
- Bore Stroke: n/a
- Compression: unknown
- Max Power: 220.9bhp @ 6500 rpm
- Torque: 288Nm @ 4100rpm
- Acceleration: 0-60mph in 7.1 secs
- Top Speed: 145 mph

- Fuel (urban): n/a
- Fuel (extra urban): n/a
- Fuel (combined): n/a
- Emissions: n/a

It should be noted the towing weights are unknown as the car was never tested for uk requirements.

FORD MODULAR 4.6 260

(aka the mustang unit used only in the Rover 75 V8 and the MG ZT V8)

Engine technical details....

Rover 75 V8 only had the AUTOMATIC gearbox

- Engine Type: Ford Modular Engine, 4.6 L 2-valve, SOHC V8
- Displacement: 4601 cc
- Bore Stroke: n/a
- Compression: unknown
- Max Power: 256bhp
- Torque: 409.4Nm @ 4000rpm
- Acceleration: 0-60mph in 7.0 secs

• Top Speed: 147 mph
• Fuel (urban): 15.4mpg
• Fuel (extra urban): 24.9mpg
• Fuel (combined): 22.1mpg
• Emissions: 319g/km

The MG ZT V8 only had the MANUAL gearbox

• Engine Type: Ford Modular Engine, 4.6 L 2-valve, SOHC V8
• Displacement: 4601 cc
• Bore Stroke: n/a
• Compression: unknown
• Max Power: 256bhp
• Torque: 409.4Nm @ 4000rpm
• Acceleration: 0-60mph in 6.3 secs
• Top Speed: 153 mph
• Fuel (urban): 16.7mpg
• Fuel (extra urban): 26.7mpg
• Fuel (combined): 23.1mpg
• Emissions: 319g/km

It should be noted the towing weights for the V8 are as follows (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1720kg saloon / 1770kg tourer
• 85% kerb weight: 1462kg saloon / 105kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Automatic

• Car kerb weight: 1680kg saloon / 1740kg tourer
• 85% kerb weight: 1428kg saloon / 1479kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Engine oil - Ford V8 engine - 4.6 260 bhp model

Use a 5W/30 oil meeting specification ACEA A3:96 and having a viscosity band recommended for the temperature range of your locality.

Some use 0W/30 also with good results depending on your budget.

Diesel M47R Buyers guide / problems, costs and general engine information overview

This guide covers the ESSENTIAL issues with M47R diesel engine in 2.0 115 and 131 outputs as the issues with them are all common regardless of power output.

A history of the M47R

You will always hear people saying that the Rover 75 /MG ZT has a BMW engine, well thats only true if it has a diesel engine in the car. The 2.0 litre diesel unit was BMW's common rail motor, designated M47R.

M47R used in the 75/ZT was was based on the early 1998 - 2001 BMW "M47D20" diesel engine except mildly de-tuned compared to the power outputs that BMW had.

Whilst it had the same core engine block it had many parts redesigned for the front wheel drive gearbox and transverse fitting into the engine bay.

For example, in the BMW 320d's of the time, the engine was notoriously unreliable, yet the diesel 75/ZT version suffered none of the common problems. Chief among the BMW 320d cars problems was a 'swirl flap' mechanism employed within the inlet manifold. These consist of a number of butterfly valves within each individual inlet tract. Unfortunately these flaps are secured to an actuating rod via 2 small screws.

When this happens they can end up being drawn into the respective cylinder causing significant damage to both piston, cylinder head and valves. If unlucky further damage can be caused to the turbo if the screw then makes it's way through the exhaust valve into the manifold and subsequently into the turbo.

So much for the "ultimate driving machine" and yet another example of peoples foolishness that assuming certain brands are better cars by the badge.

Back to the M47R fitted to the 75/ZT, the engine was available in two power outputs (115 bhp and 131bhp details covered below) and does not suffer the kind of service and maintenance bills that the KV6 has, however there are common faults to watch out for and they have been listed below.

M.P.G

Arguably the main reason for purchasing a diesel 75/ZT would be the fuel economy that the car can produce. Listed at the bottom of this is all the "official" MPG figures and stats for all the engines, in various powers with the various gearbox types.

It is safe to say that you will comfortably get a minimum of 40 MPG out of your diesel engined car. Now do not panic, I said a minimum. More realistic for everyday driving is a solid 50mpg with the automatic gearbox and a 55ish MPG for the manual gearbox.

Again driving style s the biggest factor but engine condition is essential on the engines for keeping the MPG up, and the common faults (listed below the Power Output section) will help explain what is wrong if your MPG figures are perhaps not so good as you hoped.

Power Outputs 115/131bhp

As both the 115 and 131 engines are totally identical bar the electronic control mapping (the ECU), they will be treated as a single engine in this section specific to them and specific faults to watch for.

Cars are badged as CDT and CDTI but that does not mean a CDT is 115 or a CDTI is a 131bhp engine. The 8th Chassis number should be "H" but that doesnt change for either power output.

Any X-part dealership with a T4 Rover Diagnostics machine can change the ECU map for you. If you have the remap it should have a sticker on the B pillar on the drivers side of the car about a third of the way up.

This is not always guaranteed however, so check the logbook as it will state 115 or 131. If you wish to upgrade your 115 to a 131 (which is highly recemmended by all owners), it will cost you £199 plus an hours labour at around £35.

This remap is sometimes referred to as "the X power remap" and was a Rover / MG optional extra and should not cause you any problems with your insurance once declared as they simply see you car as being a 131 model instead of the 115 model.

More power is available from tuning the diesel engines, up to 170ish bhp with various modifications and searching the forum will help you find guides on parts and fitting and costs.

Common faults of the Diesel M47R engines

Oil leak at radiator

A annoyance but a common fault as it will happen to every car at some stage, when the intercooler "o" rings fail and they do all too often then there is always an oily mess at the front passenger side under the bonnet. It is hours work maximum job to replace them and fortunately there are upgraded "viton o rings" that can be purchased. For maybe 100 users that comment on this leak, only 1 would need an inter cooler to be replaced and thats usually when they have neglected it for a very long time!

Cam chain rattle

The diesel engine uses a cam chain, rather than a timing belt mechanism. Cam chains usually do not require replacement unless they become loose and noisy.

If there a rattle noise (like nails in a washer machine) when the engine is ticking down in the driver's side of the engine bay then more than likely this is the issue and then it is likely the cam chain has stretched.

The cam chain is inside the engine and replacement is very labour intensive as the chain was designed to last the life of the engine. This is not a "common fault" as such, but it is perhaps the first most easiest fault to diagnose when you first examine the car.

Sluggish at low revs

People used to say diesels where slow, this is very untrue of a healthy 75/ZT diesel engine. Providing quick and brisk acceleration that would embarrass most boy racers!

Typically you wil find that if the engine is sluggish from lows revs around 1250RPM in all gears then it is likely a simple cause. The MAF (mass air flow sensor) is past its sell by date and will need replacing, this can be expensive depending where you purchase a replacement.

The best way to test this is to disconnect the MAF and then start to drive the car, you will find the power increases immediately and that will be your solution. You should not however drive the ca like this for any distance as it may cause serious engine damage if left disconnected continuously.

Prices of £130 wouldnt be unheard of, which is shocking when you can buy similar ones from ebay much cheaper. A lot of people simply remove it, and clean is, and refit it!

The alternative is a MAF from another car with a MAFAM compensator. This forum is filled with discussion about the matter and anyone who does it will recommend it.

Excessive Black Smoke / Poor MPG

Again, as the cars warm and when you accelerate, you might notice a small whisp of black smoke. This is normal, however you may notice a trail of smoke under heavy acceleration and this is usually a warning sign that either the MAF has failed (as above), or is over fueling the engine (again, clean or replace).

Also, the Exhaust Gas Recycling valve (EGR valve) after a few years of driving is likely to be restricted due to being blocked by sooty and oil vapour and deposits blocking the airflow. The EGR needs cleaning or replacing or bypassing.

The benefits of bypassing vary, as it means its zero maintenance in the future, and some owners report the cars idol gentler. Again, ask opinions on the forums and where to purchase the by pass.

Dip Stick test

A simple test that can show a engine on its way out. When the engine is running, does oil spit out of the top of the dipstick pipe when the dipstick is removed?

If yes, you have a problem that could be serious. The PCV (positive crank case ventilation valve aka oil filter) hasnt been changed in time with the last service, or with recent services and needs sorting asap.

Do not attempt to clean the filter, it must be replaced and everytime an oil change is done after that.

If this is left unattended for long periods serious engine damage can occur. A blocked PCV valve will cause the oil to be expelled out of the dipstick tube when the engine is running and this can cause serious engine damage.

Fuel pumps

There are two fuel pumps on the diesel cars, the inner one (which is below the passenger rear seat, you hear it buzz when you put the key into the ignition to start the car), and the under bonnet pump, under the

car bonnet obviously.

These seem to just wear out over time, millage reports are inconsistent but costs of replacing them are not sadly.

If the in tank pump can't be heard to have a quiet buzz above the rear seat it is likely the in tank pump has failed, this causes the under bonnet pump to fail as it has to do all the work to pump the fuel. The under bonnet pump will make a large amount of buzzing ad noise hen it is doing the work of both pumps and thats the sign its also on its way out.

You can simply check both the pumps using this method given by Jules our resident expert on everything!

There's no need to lift the rear seat to hear the intank pump as most people think.
Disconnect the under bonnet pump (if one fitted) by pressing tab on the 2 wire plug which just pulls away then.
This isolates the front pump so there is no confusion between which pump you are listening to.
Providing the surrounding noise level isn't too great, open the fuel flap and stick your ear around the filler neck.
The Intank pump can be heard quite clearly for 50 seconds then switches off (Ignition ON engine not running)

Same 50 seconds test applies to underbonnet pump also after it had been re-connected

Diesel Thermostat

Simply the diesel engine runs best when up at full temperature (eg on a long motorway drive, or puling a caravan), and short driving/inner city driving wont allow the engine to get up to correct temperature to get your MPG to the best. Many report between 6 to 8 miles before the engine is up to full working temps.

Without boring you with science, it is simpler to explain that the diesel engine is very efficient at keeping cool. Too efficient unfortunately, this has lead to many diesel cars suffering a thermostat failure (it getting stuck open or stuck closed).

If the thermostat is closed, then there is no water going to the radiator, and it dosen't matter how good or bad the radiator is. The only cooling you will have comes from the heater matrix, if it is open, and from cooling around the engine as well as from heat lost in the exhaust.

Obviously, a stuck thermostat in an open position will make matters worse. As you then have an amount of water being cooled because of the radiator.

One simple solution to this is actually the OEM full burning heater, (which can be remote controlled) which will preheat a diesel engine for you for a few minutes before you begin your journey. This is especially useful in the winter as not only is your car defrosted from the heater being active, but the car is nice and warm on the inside.

The downside of this, is a hit on your MPG but only as much as you use it.

Correctly reading the oil dipstick

A false LOW reading seems to be obtained whenever the dipstick is left in place after running the car and returning home. Even reading the dipstick the morning after with the engine now completely cold, the first time the stick is

extracted will give a false LOW.

On wiping and re-inserting immediately afterwards , a correct FULL reading will be obtained. Also, If the dipstick is taken out and left on top of the engine whilst in the garage, then on reinserting a correct FULL reading will be obtained. Similarly ANY reading taken after first removing the dipstick and re-wiping will be CORRECT.

General servicing costs and maintenance

So if all of that hasnt scared you off then heres the good news now, assuming you have covered all the regular issues listed then actual maintenance of the diesel engine is actually quite inexpensive providing you service it when you should.

Depending on usage, a 12,000 mile service is perfectly acceptable, some do around 6000 miles if the car is used less frequently, but its up to yourself.

The basic oil filters, engine filters and such are quite cheap, changing everything will cost you no more than £50 and the dearest thing is actually the glow plugs which are £20 ish for all four.

Use of the correct coolant is recommended so use O.A.T coolant, which is pink in colour. Save yourself over Halfords prices and buy none-diluted from your local Vauxhaul dealership. 5 litres will cost you about £22 maximum and when you mix it 50:50 gives you 10 litres of coolant.

Use a 10W/40 or 15W/40 oil meeting both ACEA A3 and ACEA B3:96 specifications, and having a viscosity band recommended for the temperature range of your locality.

Additionally, many owners have reports that especially when they top up their diesel engine with some 2 stroke oil into the FUEL TANK with your diesel (roughly 1ml for every litre, or 50ml per tank full roughly) the car behaves and starts much easier. Perhaps a refection of the high sulfur levels in modern diesel for sale on the forecourt.

DIESEL M47R

(Above, photo shows engine minus Fuel Burning Heater, Below, photo shows heater installed beside battery tray to the right side of the engine)

Engine technical details 115bhp model engine and MANUAL gearbox

- Engine Type: M47R, 4 cylinder, 16 valve DOHC
- Displacement: 1951 cc
- Bore Stroke: n/a
- Compression: 18.0:1
- Max Power: 116bhp @ 4000rpm
- Torque: 260Nm @ 2000rpm
- Acceleration: 0-60mph in 11.0 secs
- Top Speed: 120 mph
- Fuel (urban): 36.5mpg
- Fuel (extra urban): 60.7mpg
- Fuel (combined): 48.8mpg
- Emissions: 163 g/km

Engine technical details 115bhp model with AUTOMATIC gearbox

- Engine Type: M47R, 4 cylinder, 16 valve DOHC
- Displacement: 1951 cc
- Bore Stroke: n/a
- Compression: 18.0:1
- Max Power: 116bhp @ 4000rpm
- Torque: 260Nm @ 2000rpm
- Acceleration: 0-60mph in 12.3 secs
- Top Speed: 118 mph
- Fuel (urban): 28.3mpg
- Fuel (extra urban): 54.7mpg
- Fuel (combined): 40.9mpg
- Emissions: 190g/km

It should be noted the towing weights are as follows for all diesel and gearbox variants (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

- Car kerb weight: 1485kg saloon / 1560kg tourer
- 85% kerb weight: 1262kg saloon / 1326kg tourer
- Max Ball Weight: 100kg
- Towing Weight: 1600kg
- Towing Weight, Unbraked: 750kg

Automatic

- Car kerb weight: 1520kg saloon / 1590kg tourer
- 85% kerb weight: 1292kg saloon / 1351kg tourer
- Max Ball Weight: 100kg
- Towing Weight: 1600kg
- Towing Weight, Unbraked: 750kg

Engine oil - Diesel M47R engine

Use a 10W/40 or 15W/40 oil meeting both ACEA A3 and ACEA B3:96 specifications, and having a viscosity band recommended for the temperature range of your locality.

DIESEL M47R 131 bhp

Above, photo shows engine minus Fuel Burning Heater, Below, photo shows heater installed beside battery tray to the right side of the engine)

Engine technical details 131 bhp model with MANUAL gearbox

- Engine Type: M47R, 4 cylinder, 16 valve DOHC
- Displacement: 1951 cc
- Bore Stroke: n/a
- Compression: 18.0:1
- Max Power: 131bhp @ 3500rpm
- Torque: 300 Nm @ 1900rpm
- Acceleration: 0-60mph in 10.3 secs
- Top Speed: 120 mph
- Fuel (urban): 35.0mpg
- Fuel (extra urban): 63.6mpg
- Fuel (combined): 48.8mpg
- Emissions: 163 g/km

Engine technical details 131 bhp model with AUTOMATIC gearbox

- Engine Type: M47R, 4 cylinder, 16 valve DOHC
- Displacement: 1951 cc
- Bore Stroke: n/a
- Compression: 18.0:1
- Max Power: 131bhp @ 3500rpm
- Torque: 300 Nm @ 1900rpm
- Acceleration: 0-60mph in 11.0 secs
- Top Speed: 118 mph
- Fuel (urban): 28.3mpg
- Fuel (extra urban): 54.7mpg
- Fuel (combined): 40.9mpg
- Emissions: 190g/km

It should be noted the towing weights are as follows for all diesel and gearbox variants (these include the trailer you are towing and load, and not the load seperate as many people discover!)

Manual

• Car kerb weight: 1485kg saloon / 1560kg tourer
• 85% kerb weight: 1262kg saloon / 1326kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Automatic

• Car kerb weight: 1520kg saloon / 1590kg tourer
• 85% kerb weight: 1292kg saloon / 1351kg tourer
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

As a side note, I dare say towing with the 131 would enjoy better MPG than the 115, so the x-power remap would almost certainly pay for itself in no time.

Engine oil - Diesel M47R engine

Use a 10W/40 or 15W/40 oil meeting both ACEA A3 and ACEA B3:96 specifications, and having a viscosity band recommended for the temperature range of your locality.

LIMOS / LONG WHEELS BASE / VALDEN PLAS

It should be noted that the long wheel base cars (Refered to as LWB from now on) used the 2.5 177 V6 and the 2.0 131 bhp diesel engine unit. Because of the additional weight, they have slightly different figures and I have included them below seperate. These again where sourced from various second hand car books and websites giving what the manufacture claimed.

Diesel LWB engines

Engine details 131 bhp model with MANUAL gearbox

• Engine Type: M47R, 4 cylinder, 16 valve DOHC
• Displacement: 1951 cc
• Bore Stroke: n/a
• Compression: 18.0:1
• Max Power: 131bhp @ 3500rpm
• Torque: 300 Nm @ 1900rpm
• Acceleration: 0-60mph in 10.9 secs
• Top Speed: 120 mph
• Fuel (urban): 31.6mpg
• Fuel (extra urban): 61.1mpg
• Fuel (combined): 46.1mpg
• Emissions: 163 g/km

• Car kerb weight: 1560kg
• 85% kerb weight: 1326kg
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

Engine details 131 bhp model with AUTOMATIC gearbox

• Engine Type: M47R, 4 cylinder, 16 valve DOHC
• Displacement: 1951 cc
• Bore Stroke: n/a

• Compression: 18.0:1
• Max Power: 131bhp @ 3500rpm
• Torque: 300 Nm @ 1900rpm
• Acceleration: 0-60mph in 11.0 secs
• Top Speed: 118 mph
• Fuel (urban): 27.3mpg
• Fuel (extra urban): 52.7mpg
• Fuel (combined): 38.9mpg
• Emissions: 190g/km

• Car kerb weight: 1590kg
• 85% kerb weight: 1351kg
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

PETROL LWB engines

2.5 180 V6 with AUTOMATIC gearbox

• Engine Type: KV6, 6 cylinder, 24 valve, DOHC
• Displacement: 2497 cc
• Bore Stroke: n/a
• Compression: 10.5:1
• Max Power: 177bhp @ 6500 rpm
• Torque: 240Nm @ 4000rpm
• Acceleration: 0-60mph in 11.0 secs
• Top Speed: 128 mph
• Fuel (urban): 15.9mpg
• Fuel (extra urban): 33.7mpg
• Fuel (combined): 24.9mpg
• Emissions: 249g/km

• Car kerb weight: 1570kg
• 85% kerb weight: 1334kg
• Max Ball Weight: 100kg
• Towing Weight: 1600kg
• Towing Weight, Unbraked: 750kg

TRANSMISSION VARIANTS

Transmissions on all front wheel drive models (all bar V8 models) were either the Getrag 283 5-speed manual, supplied from the company's new facility in Bari, Italy, or the JATCO 5-speed automatic unit - one of the first transverse engine deployments made with this feature.

Add clutch prices for range. Flywheel info

Automatic gear box notes

ECU's / Faulty fuse

Most gearbox ECU faults can be cleared by taking fuse 4 out of the engine fusebox, and leaving the gearbox disconnected for a few hours, then reinserting the fuse. This will revert the ECU back to default settings and often cures silly problems.

The ECU in the front passenger footwell, and sometimes this can die for age, wear or water damage if you are

unfortunate. Easy to replace, but possibly expensive depending on your source.

Additionally there are numerous sensors, both outside and inside the gearbox itself, any of which can cause the ECU to malfunction. My experience of the Auto box was the ECU will default to 4th gear for drive in a limp home mode.

All faults are logged in the ECU, so a proper garage can download the fault codes and find what has gone wrong. Again this will cost you maybe £30 on computer diagnostics machine.

"Petrol smell" after test drive

This usually means very bad news. You check the car with no signs of a fuel leak then, I would suggest you will most likely find there was some gearbox fluid on top of the box which looks like it has been dripping onto the exhaust system.

What happens is the torque converter cracks and the fliuid leaks into the reverse gear so the car just sits there and refuses to move eventually.

A torque converter new is huge money (circa £1500) and because of this the auto boxes command good value in scrap yards and so on as if the torque converter dies completely it will usually scrap the box. Something to be very wary off when purchasing an automatic car.

This is not a "common fault" as such, but as the cars get older is becoming more and more frequent, especially on neglected cars with poor service history.

Gearbox selector failure

There is a cable link from the gear selector to the gearbox, should you be unable to select any gears this may be disturbed and is not a expensive fix.

Additionally, more common, the inhibitor switch on top of the gearbox, which tells the ECU what gear has been selcted. This is a muliti position switch, with contacts which may be dirty or broken. This is also fed from a fuse in the glovebox area which may have gone and should be checked first before any further investigations.

Jumping out of gear

Typicially suffers in 3rd changing to 4th gear and then pops back to 3rd gear. Low fluid level (needs checking when hot and with engine running) are again a common fault for this or if the car has been standing unused for a while.

EG, on a dealer's forecourt, and the valves get a bit sticky. Likely to be cured by some hard driving, up and down the box with good use of kickdown.

Servicing - very important

MGR service shedules indicate autobox transmission oils should be changed every 4yrs/60K miles. The box is a "sealed for life unit" and this can create its own unique costs. Should someone service the gearbox NEVER have the car idling whilst changing the gearbox oil.

The one and ONLY fluid for the Jatco box is Texaco N402/ATF402. Part No. VYK00040 from Xpart or LNR402 from Land Rover. Xpart price is £20.70 / 5 Litre (+VAT) and the change will require about 4.5 litres. It is impossible to drain all 6-6.5 litres due to the nature of the unit and design.

Manual gearbox notes

MG ZT 190 gearbox

It should be noted that final gearing (eg manual 5th gear) in the MG ZT 190 is different to the rest of the range to allow for a higher top speed, thus the gear box is unique to them and commands a premium in the second hand market compared to the other V6 gearboxes.

Topping up fluids

The clutch system is "sealed for life" a part of the BMW design the car, however its an an extremely awkward place, up behind the dash above the clutch pedal. The brake fluid reservoir is also there.

Often this has caused premature failure of clutches due to wear on the plate for it not being fully engaged or disengaged when changing gear.

Clutch and Flywheel replacement

This is where it gets scary again (but nothing compared to the price of a ten year old VW golf diesel for example!) and often why the cars are scrapped. Should you be changing your clutch on a high mile car (90,000 miles and onwards is the average failure rate, but this depends on the cars life, I had 130kout of my first clutch on my first ZT V6), then changing your dual mass flywheel is advised to save you future costs.

The dual mass flywheel was fitted to our cars to prevent engine vibration (so say modern car designers) and there isnt a single mass conversion for our cars like other manufactures sadly which would reduce costs significantly.

A complete kit for the cars costs roughly below as a complete kit (including slave cylinder and master cylinder), plus six hours of labour from a decent mechanic.

1.8 Petrol / 1.8 Turbo Petrol / 2.0 v6 Petrol / 2.5 v6 Petrol / 2.0 Diesel- £250 ish for a complete clutch kit, and usually £300 ish for the flywheel.

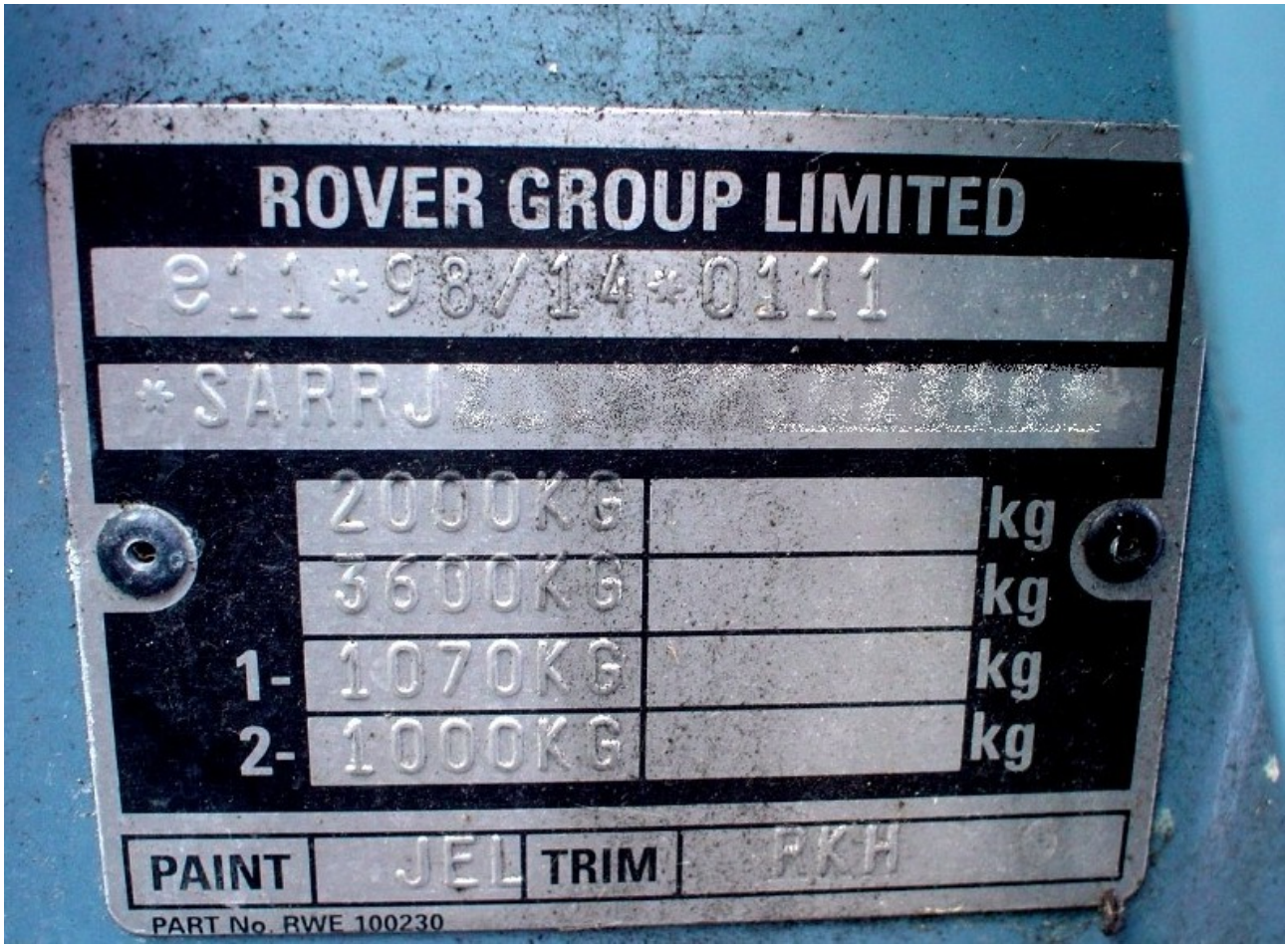
Note there are three clutch types, one for the 1.8 none turbo, one for the 2.0 diesel, and another that covers the entire V6 range.

"PROJECT DRIVE"

As someone who may purchase a 75 and or ZT then this section for cars built after Rover became MG-Rover is essential reading, especially the younger the car. Note that Rover 75 cars older than January 2001 are the only ones not affected by this money saving scheme. Ever single MG ZT (all of them) and Rover 75 after Jan 2001 was effected.

The easiest way to spot if your car is effected is by the VIN plate on the car.

If your plate was like this then your car is Rover Group pre-project drive...



If it is like this then its a MG Rover car and most likely suffered cost cutting....

A short history...

Project drive was a massive cost cutting and standardizing program began by MG Rover, after it was bought by the Phoenix four. MG Rover as a company was formed when BMW sold the car-making and engine manufacturing assets of the original Rover Group to the Phoenix Consortium in 2000.

MG Rover was formed from the parts of the former Rover Group volume car production business which BMW sold off in 2000 due to constant losses and a declining market share. BMW had acquired the Rover Group from British Aerospace in 1994 and had since sold the Land Rover business to Ford, and split-off the MINI business as a new BMW subsidiary based in Cowley.

MG Rover took control of the remainder of the former Rover Group volume car business, which was consolidated at the Longbridge plant.

When BMW sold off its interests, MG Rover was bought for a nominal £10 in May 2000 by a specially-assembled group of businessmen known as the Phoenix Consortium. The consortium was headed by ex-Rover Chief Executive John Towers.

When Phoenix Consortium took over, their first loss for the last eight months of 2000 were reported to be around £400m. By 2004, the company had reduced the losses to around £80m but never made a profit.

MG Rover's best year for car sales was their first full year of business, in 2001 — when they sold over 170,000 cars. In

the year of 2004, their sales had declined to around 120,000.

The company eventually ceased trading on 8 April 2005, with debts of over £1.4 billion.

A brief overview and key points

Some say the quality was reduced, some say it actually improved it in the later facelift/mk2 models, individual owners all have their opinions on project drive.

Simple things like in saloon, the rear light bulb access panel was removed and the carpet was not cut, the wing mirrors of the cars where changed to match the 25/45 and cigarette lighters where changed.

Much more noticeable where things like in Rover 75's the rear wood dash was replaced with a cheaper plastic dash, or the fuel burning heater was removed and no longer standard in diesel cars.

Its whenever things like the 1.8 and 2.0 petrol Rover 75's where then sold WITHOUT an antiroll bar at the rear or the rear brakes where changed from vented to solid and so on, thats when the quality and general feel of these cars began to drop slightly.

Now many of these are very simple retro fits, and adding project drive features to your car is a very popular past time in the club, so feel free to ask any questions!!

However when purchasing a car after January 2001, look up when it was built and registered, you may find yourself better off buying a car a month or two newer should you be wanting specific options as standard.

INTERIOR SPECIFICATIONS

Both the 75 and ZT are an extremely comfortable place to be! The retro styling and comfortable seating arrangements make each journey to the shops or a trip across europe equally enjoyable.

The Rover 75 has a typically wood style range, ranging from real wood, to fake laminated plastic effect wood whilst the ZT has a more sports car feel with painted effects and semi bucket style seats.

It is not uncommon for owners to swop them over to mix and match specifications or to upgrade them.

Rear leg room in these cars is often critised heavily, and again, was no doubt part of BMW's plan to ensure the 75/ZT didnt effect 3 series sales at the time.

The car is perfectly comfortable for 4 adults on long journeys, however 3 adults in the rear is not especially comfortable due to the large transmission tunnel that comes the length of the car and makes feet placing of the middle passenger slightly uncomfortable. It should be noted however that 3 children in the rear is NOT a problem thus making the 75 and ZT a perfect family car.

The interior never changed in the car whenever the cars where facelifted (eg the mk2 cars), so all cars feel and look the same on the inside, however the specification and materials vary greatly across the range. Only small difference in the mk2 Rover 75's was on the steering wheel airbag, which was changed from a badge shaped in the traditional rover shape badge, to a circular one similar to the ZT. this is show below.

Classic, Club and Connoisseur are the typical ranges. Each range also has a S.E. version, which stands for Special Equipment which usually ment optional extras such as Xenons or Sunroof or a Personal Line interior, which consisted of different colours not offered as standard due to expense.

These following optional extras could be added when purchasing the car new also, and its not unusualy to find them fitted to a lower spec car.

Cruise Control
Traction Control
Electric Sunroof
Sat Nav (Hi-line inc TV & Low-line)
Dipping Rear View Mirror
Parking Aid
Powerwash Headlights
Hi-line Instrumentation (Message Centre Display)
Symphony Radio/cassette Upgrade inc 6 CD Changer
Harmon Kardon Speaker Upgrade inc Subwoofer

Dash board, there are two variants of the dash clocks, commonly refered to ask the I.P.K. pack. The top of the range is a digital display showing faults, MPG, average speed and such.

The basic IPK shows faults, lights and switches etc. Below is the basic I.P.K. pack, spotting the digital dash I.P.K in cars is very easy as it does not look like this and also on the light switch gear on the left is a button with a small picture of a computer on it.

Interior materials.

There has been a VAST selection of materials available for both the 75 and the ZT regarding specification of interior colours and materials. You could even order "personal line" interiors which are very rare indeed and command a premium in the second hand market

Both cars where available with such a range that it would be impossible to describe them all, however a club member "Reebs" has pretty much managed to gather up the entire list of colours for both cars and has added the information.

There was a huge range of options and coulors for interriors under the monogram programme.

Making an insurance claim / Buying a write off

An interesting point to raise is how many cat C/D Rover 75's and MG ZT's there are.

Now Cat C/D write offs mean the car is too expensive to be put back on the road for repairs, however as many owners in the club have discovered something as small a smashed rear bumper only will have the insurance company writing the car off totally.

Case in point a car with a V8 premium grill. Because you can not buy the chrome surround part new, the insurance company might write the car off. For the sake of a £50 piece of fake chrome plastic!

So before you phone the insurance company for a small bump, it is well worth seing if you can source a second hand repair. However some insurance companies will work with you on this if you are persistant.

Points to remember when buying a write off are **Cat A and B are scheduled for destruction and should never be on the roads again.**

C - Repairable salvage. Generally applies to older vehicles. Can be sold for repair but must now have Vehicle Identification Inspection. If the cars repairs pass it will be issued a VIC pass certificate (which will be validated against the DVLA record) Recorded at DVLA & HPI.

D - Repairable salvage. Minimal damage sometimes stolen and found after claim has been paid, or cost of repair combined with difficulty obtaining new parts to enable a swift repair. Recorded with HPI.

It should be noted when a vehicle has passed the VIC, the result will be stored on computer by the DVLA (Or DVLA NI for Irish buyers). The person who took the vehicle for the VIC will be given a certificate to show that the vehicle has been through the identity check and has passed. A vehicle can be sold with a VIC pass certificate (the authenticity can be checked with VOSA on 0870 6060 440). The certificate is proof that the vehicle has passed, although should be checked before purchase.

The check is designed to confirm as far as possible the identity of the vehicle and check for signs of repaired accident damage. If VOSA cannot confirm the vehicle's identity, it will fail the check. VOSA will also tell the police if the vehicle's identity appears to have been altered in any way. This doesn't mean that you will automatically be in trouble with the police! It is part of the system for discouraging criminals from passing off stolen vehicles as repaired vehicles.

From 7 April 2003, the registration document of any vehicle that has passed a VIC will be marked to confirm that the vehicle has been accident damaged and / or substantially repaired. It will also confirm the date when VOSA checked it.

Again a simple HPI check will give you all the details http://www.HPIcheck.com and they stand over their work with an industry standard warrenty on cars that slip through their network which is very very few!

Dont be affraid of buying a Cat C or D. Several members have bought cars that where destroyed and repaired them to be perfectly safe and suitable cars when done correctly.

Should you be concerned about the repairs, ask the buyer for a for the car to be put throught a VOSA test station so it can undergo a VIC. Before taking your car to be checked, you will need to pay a fee in advance.

On receipt of the fee VOSA will book an appointment for you and tell you where and when you should take your car to be checked. You will also need to give certain information about your car to VOSA before the check takes place. This will allow them to confirm that the information you have given matches with their records.

If the owner of the repaired car is not willing to do this, walk away as simply, the car isnt repaired to standard.