BRITISH LEYLAND

Press Release

British Leyland Motor Corporation Limited
Public Relations Dept., Berkeley Square House, Berkeley Square, London W1X 6DL Tel: 01-499 6050 Telex: 22498

Not to be published until Wednesday 15th August 1973

MGB GT V8

British Leyland announces today a new version of the MGB GT which will be fitted with the Rover lightweight 3.5 litre V8 engine giving the Corporation's most popular sports car almost twice the power and torque of the existing model.

The new 120 mph-plus MGB GT V8 moves further into the high performance levels of the sports car market. It offers a unique combination of timeless good looks, high geared and effortless long distance travel, superb road-holding and handling. It is a thoroughbred Grand Touring car for the enthusiast who demands performance without having to work for it.

The new V8 is the same dual purpose vehicle as its 1.8 litre four cylinder sister. Its comfortable interior sacrifices nothing to high speed control and the big 'third door' at the back swings high to accommodate a small mountain of luggage.

A study by the Corporation's marketing men of the past five years of the sports car market identified three important facts. Popular sports cars, updated as necessary, usually stay in production a very long time compared with family cars. Sporty coupes with ranges structured to give a wide choice of trims and engines have taken a large slice of the sports car market. There is a trend towards sports cars with engines above 2.5 litres capacity.

It was also seen that there is a sparsely occupied niche between low-price sports cars like the MG Midget and the ultra high performance exotics from small specialist makers. The MGB GT V8 is intended to compete in this increasingly important performance sub-sector of the sports and luxury coupe markets. Its makers believe it exactly fits the market they identified. It offers a winning combination of classic sports car styling, outstanding performance and handling, appealing interior and equipment. None of the sporty coupes can match it.

A big plus for the V8 engine installation is that it was engineered in detail by specialists with an intimate understanding of the basic design. Modifications have been properly planned and carried out. Steering, suspension, brakes, the main body structure, have all received careful attention since the first studies were carried out at Abingdon in the Summer of 1971.

The MGB GT V8 is an exciting installment in the long MG saga which began in a corner of an Oxford garage 50 years ago. Its introduction emphasizes that MG, one of the most successful of all thoroughbreds, has a great performance future.

(a)

Editorial Comments:

For MG enthusiasts, what you see above is an important - almost sacred - historical document! It's the introduction of the original five-part press release for the "MGB GT V8" model. In this edition of the newsletter we're publishing the complete text of the press release along with "Part One" of a large collection of supporting documents and remembrances gathered by MGB GT V8 owner and long-time historian Ken Smith.

Ken is a recording industry marketing executive turned automotive journalist. By making many friends at the Abingdon works, Ken eventually gained excellent access to the factory and was able to document production in photos through the late sixties and into the seventies. These photos were ultimately gathered into the excellent little book "Aspects of Abingdon".

In the early eighties Ken left the recording industry and became Marketing Manager of the MG Owners Club in Cambridge, where he oversaw growth of the club from 19,000 to over 40,000 members in 18 months. At the same time he began contributing articles to MG related magazines including "Safety Fast", "MG Enthusiast", and "Abingdon Classics". For North American enthusiasts he's probably especially well known as the founding editor of "MGB Driver" and of "Classic MG" magazines. He's also the Executive Editor of "British Motoring" magazine (formerly called "Moss Motoring").

With so much horsepower of his own, why would Ken entrust a whole book's worth of irreplaceable notes and photos to The British V8 Newsletter? Well, we share with Ken a strong interest in preserving this sort of information and with making it as easily accessible as possible. This fascinating story should not be kept secret. Ken actually provided far too much MGB GT V8 information for one issue of our Newsletter, so we'll be spreading it out over several issues.

Ken Smith's damask red 1974 MGB GT V8

Disclaimer: The "editorial comments" were written by Curtis Jacobson. Views expressed are those of the author, and are provided without warrantee or guarantee. Apply at your own risk.

This article is part of a set of FIVE! If you enjoyed this article, check out:

- MGB GT V8 Press Release - "Description of the Car"
- MGB GT V8 Press Release - "Development of the Body and the Engine"
- MGB GT V8 Press Release - "Grandest Tourer - Latest of a Line"
- MGB GT V8 Press Release - "Technical Specifications"

BRITISH LEYLAND

Press Release

British Leyland Motor Corporation Limited

Public Relations Dept., Berkeley Square House, Berkeley Square, London W1X 6DL Tel: 01-499 6050 Telex: 22498

Not to be published until Wednesday 15th August 1973

MGB GT V8

DESCRIPTION OF THE CAR

Introduced in 1965, the MGB fastback coupe, with its third door offering access to the rear interior of the body, has a compact, robust and stiff unitary structure. It is now offered in 3.5 litre V8 form as an option to the well proved 1.8 litre B-series four cylinder engined version. Both these cars share rack and pinion steering, coil spring and unequal length wishbone independent front suspension, and a beam rear axle on half elliptic leaf springs, strengthened in the V8 to cope with almost double torque and power output.

The body structure meets worldwide regulations for safety and survival in accidents, while padded fascias, safety switches, anti-burst locks, lights and other fittings meet both U.S. Federal and European Economic Community regulations. The steering wheel is fully padded.

Equipment is complete and includes a concise complement of clear instruments, deep bucket seats and a large carpeted area at the rear capable of accommodating small children or a great deal of luggage. The big tail door swings high to give easy access to this area.

3.5 LITRE ENGINE

Similar in many ways to the lightweight 3.5 litre unit installed by Rover 3500S and 3500 since 1968, the V8 engine is tailored to the MGB GT installation by converting the penthouse carburetter manifold to one in which the carburetters are mounted at the rear of the engine. The other major change is to an AC Delco alternator. Free flow exhaust are also specified.

Light alloy for the stiff block and for the heads make the basic V8 some 40 lbs lighter than the 1.8 litre four cylinder, which continues in the type, but with the inevitable complexity and weight of the ancillary equipment now essential to meet noise, emission and safety regulations, the total weight goes up to a little more than that of the 1.8 litre unit. Most of the extra weight is on the front wheels, the ratio from front to rear being 49.4/50.6% compared with the 47.8/52.2% of the four cylinder.

The SU HIF 6 (horizontal integral float chamber) carburetters provide stable carburetion under all conditions of hard cornering, acceleration and braking. They are installed at the rear of the engine on a specially designed low-line manifold evolved by the long-time tuning wizards at MG to give dual benefits of greatly reduced temperature scatter from one cylinder to another, compared with the original penthouse manifold, and at the same time to make it possible to avoid the need for a 'power bulge' on the smooth contours of the bonnet. Neat bi-metallic valves are arranged to draw in warm air for the carburetters from sleeves on the exhaust manifolds, then to take in cooler air when the engine is warm.

The short-stroke, big bore engine has five crankshaft bearings and the inclined overhead valves are actuated by hydraulic lifters and rockers from the central camshaft. The compression ratio is 8.25:1, maximum bhp (DIN) is 137 at 5,000 rpm; torque is 193 lb ft at 2,900 rpm.

MECHANICAL REFINEMENT

Detail modifications have been carried out to the all-synchromesh C-type gearbox, transmission and rear axle. The

gearbox casing has been redesigned to accept a larger clutch to match the substantial power increase of the V8 engine. As the torque is almost doubled compared with the four cylinder version, the intermediate gear ratios have been raised to meet the different output curve as well as to reduce the torque load into the box. The axle ratio is 3.07:1 as against 3.91:1 of the 1.8 litre version.

The clutch withdrawal race is now a ballrace instead of the more customary carbon bush, a design refinement initially found on the British Leyland transverse engine Maxi range.

Installing the larger engine, which fully fills the engine bay, meant changes to the bulkhead and slight modifications to the inner wheel arches to clear the exhaust manifolds. There was a minor modification to the front crossmember to make space for ancillaries.

To control the greatly increased torque, the rear half elliptic springs are substantially stiffer and heavier coil springs are specified at the front. The dampers are unchanged.

STRONGEST WHEELS

New Dunlop 5J wheels with ventilated cast alloy centres riveted to chromed steel rims are fitted with 175 HR x 14 tyres. The Abingdon engineers believe these are the strongest wheels they have ever fitted. In the laboratory rig testing, up to 600,000 load reversals were required. In this case the batch was taken off after 3 million reversals and a single wheel, kept on for interest's sake, was still going strong at six million load reversals.

QUIET COOLING

There is a larger radiator, equipped with two thermostatically controlled electric fans to reduce fan noise and power absorption. An oil radiator is also provided.

From the driver's seat the view is much the same as on the smaller engined version, except that on right hand drive models sold in the United Kingdom, 80mm speedometers and tachometers replace the four inch instruments normally installed. A collapsible steering column, adopted in the interests of greater safety is the reason for the difference.

FULLY EQUIPPED

Features to be specified as standard on the MGB GT V8 will include overdrive on top gear, brake servo, cast alloy special wheels, door mounted mirror, tinted window glasses, and the electrically operated cooling fans.

(b)

At the British V8 Newsletter, we don't currently have access to the photo negatives, proofs, or artist renderings that probably accompanied the original text of the MGB GT V8 press release. We can only speculate on what sort of photography might have been included. Two selections are included below.

The 1973 MGB GT V8 that carries license plate "HOH 901L" (series number 0118) belongs to Mike Dunlop, but we understand that originally this car was used as one of the main press demonstration and photography vehicles. (Our two photographs of it, shown here, date from July 1983 and were taken by Ken Smith at a "V8 Register" meet.) One thing that's interesting and unusual about this car is its paint color: "Limeflower" (not the more popular and widely known "Harvest Gold"). It does show up great in photos!

Disclaimer: This last two paragraphs were written by Curtis Jacobson. Views expressed are those of the author, and are provided without warrantee or guarantee. Apply at your own risk.

This article is part of a set of FIVE! If you enjoyed this article, check out:

- MGB GT V8 Press Release - Introduction
- MGB GT V8 Press Release - "Development of the Body and the Engine"
- MGB GT V8 Press Release - "Grandest Tourer - Latest of a Line"
- MGB GT V8 Press Release - "Technical Specifications"

Not to be published until Wednesday 15th August 1973

MGB GT V8

DEVELOPMENT OF THE BODY AND THE ENGINE

The engine and the body structure of the new MGB GT V8 were both seen by the public in 1965. In the Spring Rover engineers showed to a few selected journalists a 3 litre saloon with a new type of light alloy V8 engine installed and the new MGB GT was unveiled at the London Motor Show of 1965 as a new Grand Touring car.

THE ENGINE

Technology these days is international and Rover did not hesitate to look across the Atlantic when, in the early 'sixties they were looking for a new powerplant to take their range into the 'seventies. The engine they chose had the merits of lightness and compactness, but needed development to meet European needs. Despite the robust five bearing crankshaft and the excellent breathing possibilities inherent to the layout, engine speeds over 4,800 rpm showed up stresses in the pistons and the valve gear.

Manufacturing technology at the Rover plant was not geared to the methods of construction used by the engine's original designers and new methods of thin-wall aluminum casting had to be evolved to make it. A development programme was put in hand to develop appropriate methods of construction and to bring the engine to European standards of output and engine speed.

The original engines developed 150bhp gross at 4,400 rpm and by the middle of 1967 Rovers had installed twin carburetters, reduced the compression ratio slightly and achieved 160 bhp gross. By the time the Rover 3500 appeared in production in 1968, power was up to 184 bhp gross at 5,200 rpm with outstanding reliability and very long life.

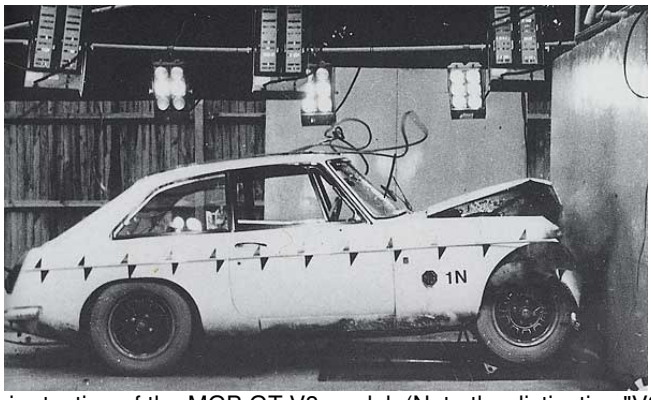
New pistons, and different materials for the valve train as well as for the bearing inserts and for the crankshaft, had been evolved during the search for these improvements.

As installed in the MGB GT V8, the unit has few changes. The most notable are the repositioned carburetters and the alternator. With increasingly tough emission and pollution regulations now rigorously applied in many parts of the world, MG engineers were concerned to make certain that their new engine complied with all possible requirements. A reduction in compression ratio, which is now 8.25:1, is a direct result of this concern. The 137bhp now claimed for the engine is measured by methods comparable to those applied in the DIN rating.

THE STYLING

The good looks of the MGB GT body made an immediate impression when the model was launched in October 1965. Evolved from the MGB at Abingdon, it was refined by Pininfarina stylists, consultants to MG, who gave the car its timeless appearance. This new model became accepted as undeniably the best looking of a visually related trio which included the Mini and the Austin 1100/1300. It has been found necessary to make only very few amendments to improve the appearance over the years, but the USA Safety Act of 1966 and the Clean Air Act of two years later involved an extended and costly programme to evolve structures and equipment capable of meeting the provisions of these new regulations in a very important market.

(c)



30mph barrier testing of the MGB GT V8 model. (Note the distinctive "V8" wheels.)

Editorial Comments:

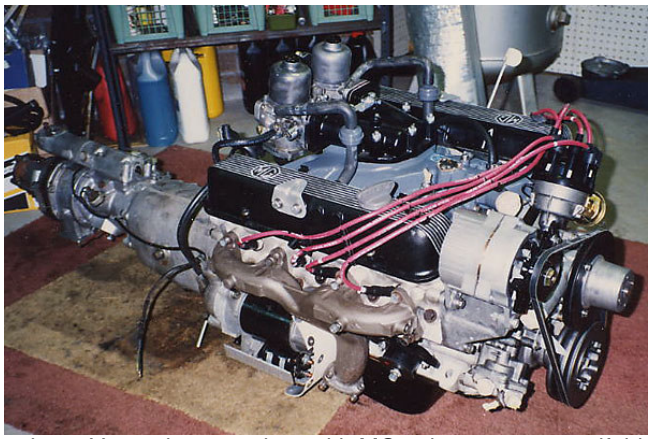
Without doubt, part three of the five part press release is the weakest link in that chain. What committee wrote this? Consider the engine section: of course the writers didn't want to say anything bad about Rover or anything good about General Motors, but they missed a fine opportunity by failing to note that the aluminum V8 engine in this new sports car already had a spectacular racing history, having competed in the Indy 500 and having won outright (albeit with substantial modification) two Grand Prix championships. They chose instead to imply misleadingly that GM had only been able to get 150bhp gross out of the engine, when in fact GM had offered many variants of the engine right up to 215hp (with a turbocharger, in Oldsmobile "JetFire" trim.) On the other hand, Rover engineers had detuned the engine to just 137bhp DIN (and 8.25:1 compression) for the Range Rover and MGB GT V8.

The "Styling" section is especially odd. Why would anyone compare MGB GT's elegant Pininfarina styling to the Mini or the Austin 1100 / 1300? Even more bizarre, why whine so pathetically about the USA Safety Act of 1966 or the USA Clean Air Act - especially in this section? (Neither act had anything at all to do with the styling of the 1973 MGB GT V8.)

Ironically, this section ends by describing the U.S. as "a very important market". This is ironic because the decision had already been made by British Leyland management that the MGB GT V8 would never be offered in North America! In effect, this left the door wide open for sales of the Datsun 240Z and then 260Z (with their inline 6 engines) to grow unchecked by British competition. The Ford Mustang II, which started production in 1974, wasn't available with a V8 engine in its first model year. When the oil embargo hit (on October 17, 1973), and panicked Americans started trading-in their muscle cars, MG was unprepared to capitalize on the surprisingly good gas mileage of the MGB GT V8.

Tom Studer's left-hand-drive MGB GT V8. (Notice the Swiss license plates.)
This is one of only seven left-hand-drive MGB GT V8s built by MG at Abingdon

before British Leyland shut down development of the North American variant.



Ken Smith's aluminum V8 engine complete with MG valve covers, manifolds, and gearbox. Notice that MG used a Delco (GM) alternator. As with the Rover 3500S, which was already being sold in North America, GM would have been paid a nice royalty for every MGB GT V8 sold here. Components like the Delco alternator would also have favored GM's bottom line.

Ron Hall's MGB GT V8, photographed in 1981 at Lido Mansion in California.
This is one of about twenty factory MGB GT V8s that immigrated to the U.S.A.

Disclaimer: The "editorial comments" and photo captions were written by Curtis Jacobson. Views expressed are those of the author, and are provided without warrantee or guarantee. Apply at your own risk.

This article is part of a set of FIVE! If you enjoyed this article, check out:

- MGB GT V8 Press Release - Introduction
- MGB GT V8 Press Release - "Description of the Car"
- MGB GT V8 Press Release - "Grandest Tourer - Latest of a Line"
- MGB GT V8 Press Release - "Technical Specifications"

Rick Ingram - Pieces of Eight!
P.O.Box 588
St.Joseph, IL 61873
mowog1@aol.com

ORDER FORM

Bonnet Struts: A pair of gas struts can now raise your bonnet effortlessly to an incredible 80 degrees! Struts give full access to the engine compartment, *support the bonnet on both sides,* and keep it level instead of letting it droop on one side. To close the bonnet, just pull it down gently and let the gas struts ease it down onto the catch. It's that easy! (Note: this kit is specifically designed for MGB cars with steel, not aluminum, bonnets.)

Boot Struts: The trunk strut kit lifts the boot lid to the normal height, but with two struts to support it on both sides and keep it level. The really big advantage of gas struts is that there's no danger of damaging the boot lid by closing it before remembering to release a prop-catch. The price of our gas strut kit is less than having a bent boot lid repaired.

GT Hatch Struts: What about MGB-GT hatchbacks? We have a great kit for that too! Press the release button and the hatch rises on its own. To close, just push down. Installation is simple, with only four holes to drill. It only takes 20 to 30 minutes.

Bonnet (Hood) Strut Kit ..... $US 60.00/set
Boot Lid (Trunk Lid) Kit ..... $US 60.00/set
GT Rear Hatch Kit ..... $US 72.00/set

Add $US 7 for shipping and handling per each kit. (plus $US 2 per kit if paying by PayPal.)
All strut sets come with mounting hardware and illustrated instructions for easy installation.

NAME: _____ E-Mail: _____

ADDRESS: _____

CITY/STATE/ZIP: _____ Phone: (_____) _____

YEAR/MODEL of MG _____

#_____qty - Bonnet Strut Kit @ $US 60 + $US 7 shipping/handling (total $US 67)

#_____qty - Bootlid Strut Kit @ $US 60 + $US 7 shipping/handling (total $US 67)

#_____qty - GT Rear Hatch Kit @ $US 72 + $US 7 shipping/handling (total $US 79)

Amount Enclosed: _____ (Payable to *Rick Ingram – Pieces of Eight!*)

PayPal, Personal cheque, or cashier's cheque only at this time!
Please add $2.00 per kit if you are using PayPal.

BRITISH LEYLAND

Press Release

British Leyland Motor Corporation Limited
Public Relations Dept., Berkeley Square House, Berkeley Square, London W1X 6DL Tel: 01-499 6050 Telex: 22498

Not to be published until Wednesday 15th August 1973

MGB GT V8

GRANDEST TOURER - LATEST OF A LINE

The new MGB GT V8, with its lightweight 3.5 litre V8 engine and exceptionally high overall gearing, is the latest in a series of grand tourers to bear the MG octagon symbol. If it was the great international racing and record breaking successes over four decades that established MG as one of the greatest of sports car marques, it was with high speed tourers that the story began.

THE 'TWENTIES

Back in the early 'twenties, Cecil Kimber was a bright young Morris Garages manager mildly tuning and restyling the staid Bullnose Morrises of the day. He eagerly seized on the opportunity presented to him in 1924 when Morris introduced a new, long-wheelbase Morris Oxford. He took the chassis and made small but important alterations to produce the MG 14/28; the springs were flattened, the brakes and dampers were improved, the steering was raked down, the engine persuaded to give a little more power and on this much improved basis he mounted a superb polished light alloy four-seater open body set off by contrasting dark red or blue wings and matching button-pleated leather upholstery. It was a stunning outfit with its sloping windscreen and shiny wheel discs and it was a brisk seller at a realistic 375 pounds.

THE 'THIRTIES

In the early 'thirties, MG toyed with touring cars with such confections as the 1100cc L-type Magna, but the preoccupation at that time was the full-blooded sports models, and it was not until the 1935 Motor Show that a new type of MG touring car was introduced. With a specification much closer to other models in the Nuffield Group than previous MGs, the SA had by the 1936 Show emerged as a smoothly styled long bonneted 2.3 litre touring car on classic lines and with an 80 mph maximum. Like many touring cars of the era it was on the heavy side, but offered considerable comfort and silence and, like the old 14/28, it was exceptional value for the money. It represented formidable opposition to William Lyons' somewhat similar SS Jaguars.

THE 'FORTIES

In a company as devoted to the principle of design progress as was MG, it was only to be expected that this first foray would be improved upon, and in 1938 the 2.6 litre WA appeared as a similarly styled saloon with characteristic tiny double rear windows. To match the larger engine there were improvements to the chassis, the axles and to the brakes and the car possessed an ability to cover long distances at satisfyingly high average speeds.

MAGNETTE

The war intervened and the success of the MG Midgets in world markets left little scope for touring cars until in 1954 the compact and neatly styled MG ZA Magnette saloon appeared. Powered by a redoubtable 1.5 litre B-series engine, the Magnette was a comfortable and acceptable four-seater saloon which proved unexpectedly suitable for competition work by virtues of the capabilities of its powerplant. Many enthusiasts mourned its passing as the last of the true MGs.

MGA AND MGB

But another true MG series was hot on its heels. The MGA of 1955 was the first of a new generation of sporting models. It was followed by the fixed head coupe which derived from it in 1956 which was, in turn, followed by the MGB in 1962 which, itself, was supplemented by the MGB GT in 1965.

With a handsome and robust grand touring body which had received the attentions of the Italian stylist Pininfarina, the MGB GT is a thoroughly practical touring car, offering a 90 mph cruising speed and good fuel economy. It has dual purpose character; the practical layout of the body with its big rear door gives access to the whole interior and the 95 bhp engine proves equally happy pottering about on shopping trips or hurrying along on international motorways.

MGB GT V8

But nothing is so good that it can't be improved and the car's structure is so robust that it permits a much greater performance to be achieved. In 1971 the men at Abingdon took a hard look at that lightweight V8 and went to work. The new car is the satisfying fruit of their labours.

(d)

A "V8 Register" meet in August 1983

The V8 Register Display as Silverstone in 2002

This article is part of a set of FIVE! If you enjoyed this article, check out:

- MGB GT V8 Press Release - Introduction
- MGB GT V8 Press Release - "Description of the Car"
- MGB GT V8 Press Release - "Development of the Body and the Engine"
- MGB GT V8 Press Release - "Technical Specifications"

Not to be published until Wednesday 15th August 1973

MGB GT V8

TECHNICAL SPECIFICATIONS

ENGINE

Capacity	-	3528.08 cc
No. of cylinders	-	8, 2 banks of 4 @ 90 degrees
Bore	-	3.5 ins (88.9mm)
Stroke	-	2.8 ins (71.12mm)
Compression ratio	-	8.25:1
BHP @ Rev/Min (DIN)	-	137 @ 5,000
Torque @ Rev/Min (DIN)	-	193 lb ft @ 2,900
Air Cleaner	-	Twin paper elements
Firing Order	-	1, 8, 4, 3, 6, 5, 7, 2
Crankcase Ventilation	-	Sealed breathing system

FUEL SYSTEM

Tank Capacity	-	12 galls (54 litres)
Fuel Pump	-	SU electric
Fuel Filtration	-	Fuel filter on bulkhead
Grade of Fuel	-	97 RON min. (4 star)
Location of Fuel Tank	-	Under luggage compartment floor
Carburetter type	-	Twin SU HIF6

TRANSMISSION

Clutch Type	-	Borg & Beck diaphragm spring
Diameter of Plate	-	9.5 ins.
Actuation	-	Hydraulically operated by pendant pedal
Gearbox Type	-	4 speed all synchromesh, with reverse
Gearshift	-	Direct control centrally mounted on floor

GEAR RATIOS

Gear	Gearbox Ratio	Final Drive Ratio	Overall Ratio
1st	3.138	3.071	9.637
2nd	1.974	3.071	6.062

3rd	1.259	3.071	3.866
4th	1.000	3.071	3.071
Overdrive	0.820	3.071	2.518
Reverse	2.819	3.071	8.657

FINAL DRIVE

Type	-	Open propeller shaft to rear axle
Universal Joints	-	Two Hardy Spicer needle roller UJs
Rear Axle	-	Hypoid. Three quarter floating.

OVERDRIVE

Type	-	On top gear, Laycock Type LH fitted between gearbox and propeller shaft

LUBRICATION

Type	-	Pressure lubrication on main bearings, big ends, camshaft bearings, hydraulic tappets, connecting rods and rocker shaft. Leak lubrication to push rods, timing chain and sprockets, valve stems, distributor drive. Splash feed to cylinder walls, small ends. Oil mist to valves and rockers.
Oil Pump	-	Gear type
Oil Pump Drive	-	Gear from camshaft
Pressure Relief Valve Setting	-	33 lb/in^2
Filtration	-	Full flow
Oil Filter	-	Disposable unit
Location	-	RH side wing valance
Oil Cooler	-	9 row
Capacity of Engine Oil	-	9 pints, including filter
Gearbox	-	Splash feed gears operating in oil
Capacity of Gearbox Oil	-	6.5 pints (dry fill, including OD)
		(90 EP oil), 6 pints refill including OD
Final Drive	-	Splash feed (crown wheel operation in oil)
Capacity of Final Drive	-	1.8 pints (SAE90 Heavy Duty Oil) from dry.
		Refill 1.5 pints.

PERFORMANCE (Figures obtained by Engineering)

Gear	MPH
1st	39
2nd	62
3rd	97
4th	121.8

Road speed per 1000 rpm a) 4th gear 23.4 mph
b) Overdrive 28.5 mph

Acceleration (2 Up)

MPH	KPH	TIME IN SECS		
		In top gear	In 2nd gear	In 3rd gear
20-40	32-64	8.55	3.45	6.35
30-50	48-80	7.65	3.4	5.60
40-60	64-97	7.75	4.3	5.75
50-70	80-112	8.55	-	6.45

Through Gears

MPH	KPH	SECS
0-30	0-48	3.0
0-40	0-64	4.6
0-50	0-80	6.5
0-60	0-97	8.25
0-70	0-112	12.0
0-80	0-129	15.2
0-90	0-144	20.05
0-100	0-160	26.55
0-110	0-176	38.30

Standing Quarter Mile - 16.45

FUEL CONSUMPTION

(Steady running on 20 miles of Motorway)

MPH	MPG in 4th	In Overdrive
30	33	34
40	32	34
50	30	32
60	27.5	30
70	25.6	27.5
80	21.90	24.5
90	19.0	21.25
100	16.9	20

SUSPENSION-FRONT

Independent with coil springs and lower wishbone mounted on a crossmember assembly. Lever type dampers with double levers carry top end of swivel pin. Anti-roll bar.

SUSPENSION-REAR

Tube type axle with three quarter floating drive shafts. Rubber mounted semi-elliptic leaf springs. Spring shackles are fitted with rubber bushes. Lever type dampers fitted.

BRAKES

MASTER - Servo assisted

FRONT

Type - Lockheed hydraulic

		Hydraulically operated by pendant pedal
Description	-	Disc brakes with fixed caliper
Diameter of disc	-	10.7 ins.
Diameter of wheel cylinder	-	2.125 ins.
Swept frictional area/brakes	-	3.19 ins.^{2}
Automatic adjustment		

REAR

Description	-	Hydraulically operated drum brakes with leading and trailing shoes.
Diameter of drum	-	10 ins.
Diameter of wheel cylinder	-	0.8 ins.
Total Swept Area/Brake	-	106.82 ins.^{2}
Shoe Width	-	1.7 ins.
One brake adjuster per backplate		
Area of Lining	-	33.6 ins.^{2}/brake

HANDBRAKE	-	Mounted on right hand side of floor tunnel between seats. Operated on rear wheels via single cable to compensator and single cable to each brake backplate.

STEERING

Type	-	Rack and pinion with collapsible column
Ratio	-	16.417:1 overall effective ratio
Steering column	-	Anti-penetration with universal joint
Steering wheel diameter	-	15.5 ins.
Number of turns lock-to-lock	-	2.93
Steering box oil capacity	-	8.0oz (Hypoid 90 or Hypoid 80)
Turning circle	-	Right Lock - 33 ft 1 in Left Lock - 34 ft 0 in

BODY CHASSIS CONSTRUCTION

All steel unitary contstruction - two door, two seater, four light GT body with 'Lift up' tailgate.

WHEELS

Type	-	Cast aluminum with chromed steel rims. Wheel center chrome finisher w/ MG motif.
Size	-	5J
Fixing	-	4 stud

TYRES

Type	-	Radial ply
Size	-	175HR - 14

WEIGHT

Kerbside	-	2427 lbs

COOLING SYSTEM

Type	-	Closed pressurized system w/expansion tank
Pressure	-	15 lb/in^2
Fan	-	Two thermostatically controlled Electrically operated plastic fans w/ 4 blades
Radiator	-	Cross-flow front mounted
	-	4 row 12 gills/inch Brass tubes, copper gills.
Capacity	-	16 pints (including heater)
Thermostat	-	Operating at 82° C (home market)
	-	Fan thermostat - 90° C

ELECTRICAL CHARGING SYSTEM

Type	-	12V system, negative earth
Battery	-	Two 6V batteries connected in series (11 plates each battery) 67 amp hr at 20 hr rate
Voltage Control	-	Incorporated in alternator
Generator	-	AC Delco 43 amp alternator

IGNITION

Coil	-	16C6 ballast type
Sparking plugs	-	Champion L92Y (0.035in gap)
Distributor	-	Lucas 35D8 with automatic advance and retard device

LIGHTING

Headlamps	-	Double dipping sealed beam 2 lamps 12V 75/50W
Sidelamps	-	12V 5W
Flashing Indicators (front)	-	12V 21W
Tail lights	-	2 lamps 12V 5W
Stop lights	-	2 lamps 12V 21W
Flashing indicators (rear)	-	2 lamps 12V 21W
Rear number plate light	-	2 lamps 12V 5W
Reversing lights	-	Two, automatically actuated 12V 21W
Hazard Warning Lights	-	21W
Interior Courtesy Light	-	Mounted in centre console - switches on front doors.
Roof light at rear	-	Operated by tailgate
Instrument lighting	-	Green (controlled by rheostat switch)

ANCILLARIES

Windscreen wiper	-	Twin blade, self parking, two speed, matt black switches on LH column stalk
Windscreen washers	-	Electrically operated by LH stalk
Horn	-	Twin windtone - operated by horn push on wheel centre.
Starter Motor	-	Lucas 3M100 pre-engaged

Headlamp flasher	-	RH column stalk with headlamp dip
Ignition/Starter Switch	-	Incorporated in steering column lock
Warning Lights	-	Ignition, indicators, headlamp main beam and heated backlight
Gauges and Instruments	-	Water temp, fuel gauge, speedometer with odometer, oil pressure, impulse tachometer and trip mileage recorder.
Switches	-	Rocker type for fan, side and headlamps. Heated backlight.
	-	Rheostat switch for green instrument illumination.
Heater	-	Fresh air type with two speed fan and face level ventilation.
Cigar lighter	-	Mounted on console.
Column stalks	-	LH: windscreen washers, two speed wipers, overdrive control.
	-	RH: indicators, headlamp flash, main beam

INTERIOR BODY FINISH

Type of Windows	-	Front wind-down and opening quarter lights
	-	Rear opening rear side windows
Type of Window Winders	-	Safety plastic regulator handles (manual)
Type of Door Handles	-	Recessed safety type
Type of Door Lock	-	Anti-burst
Seating layout - front	-	Two rake adjusting front seats with break back catches
Seating layout - rear	-	Occasional folding (for larger luggage area)
Glovebox	-	Passenger side - lockable, also hinged centre arm rest
Driving mirror	-	Framed safety dipping rear view mirror
Floor covering	-	Rubber mats of floor
	-	Carpets over gearbox tunnel
Luggage compartment cover	-	Carpet
Sunvisors	-	Two (vanity mirror passenger side)
Seat belt mounting	-	Front seats
Seat belts	-	Inertia type (front only)
Ashtrays	-	Front mounted centrally in front of centre arm rest
Sundym glass all around		
Headlining/trim	-	Unsupported grey PVC
Upholstery	-	Full width nylon seat faces
Arm rest	-	Hinged between front seats
Steering wheel	-	Black vynyde rimmed alloy with imitation slots in spokes
Arm rests/door pulls	-	fitted to each door
Map pocket	-	Mounted passenger-side footwell
Gear Lever Knob	-	Simulated leather with gearchange pattern
Gear Lever Gaiter	-	Leathercloth
Handbrake Grip		
Head Restraints on Seats		
Heated Backlight		
Face Level Vents	-	Directional vane type at centre of fascia

EXTERIOR BODY FINISH

Bonnet opened by	-	Interior release
Bonnet supported by	-	Telescopic stay
Tailgate	-	Lift-up supported by spring assistors
Tailgate lock	-	Press button opened with key - slam type
Spare wheel	-	Housed in luggage compartment
Door handles	-	lock on each front door
Bumpers	-	Full width with rubber faced overriders front and rear.
Chrome exhaust pipe trim		
Grille	-	Black ABS injection moulded
Badges	-	Traditional MG badge mounted on central grille bar.
	-	"MG" motif with "BGT" mounted on right hand side of tailgate.
	-	British Leyland house badge mounted on passenger side front wing.
	-	Distinctive "V8" badge for grille, tailgate, and passenger side front wing.
Chrome side strip full length		
Exterior mirrors	-	Two on doors
Tools	-	Toolbag, jack, wheelbrace
Laminated windscreen	-	

DIMENSIONS

Height (unladen)	-	49.96"
Width	-	59.94"
Length	-	154.75"
Ground Clearance (laden)	-	4.25"
Track - front	-	49"
Track - rear	-	49.25
Wheelbase	-	91.125"
Cubic capacity of luggage compartment	-	9.6 ft^3

VEHICLE WEIGHTS

Max. allowable front axle weight	-	1279 lbs
Max. allowable rear axle weight	-	1594 lbs
* Net Vehicle dry weight	-	2339 lbs
Net Vehicle Weight Kerbside (including fuel, tools, oil, and water)	-	2427 lbs
Payload	-	450 lbs
Max towing weight		1680 lbs
Max roof rack load		50 lbs

* with spare wheel, tool kit and oil, less petrol and water.

OPTIONAL EXTRAS

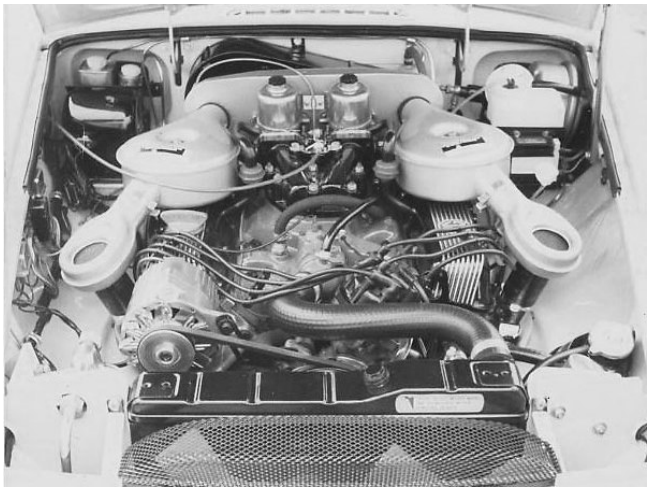
Fog and spot lamps
Radio

OPTIONAL EXTRAS FOR EXPORT

Fog and spot lamps

The performance and fuel consumption figures, specifications and detailed dimensions in these Press Releases are taken from pre-production vehicles and are subject to the usual variances which can occur in volume production.

(e)



This article is part of a set of FIVE! If you enjoyed this article, check out:
- MGB GT V8 Press Release - Introduction
- MGB GT V8 Press Release - "Description of the Car"
- MGB GT V8 Press Release - "Development of the Body and the Engine"
- MGB GT V8 Press Release - "Grandest Tourer - Latest of a Line"

British V8: Newsletter Photo Gallery Web Forum Meetings Contact Info Web-Rings Site Map

MGB GT V8 Original Magazine Ad

as published in British V8 Newsletter, Volume XV Issue 3, December 2007
This advertisement appeared in "Autocar" magazine, in the issue dated August 16, 1973.

If you've just bought a Reliant Scimitar GTE, a Datsun 240Z or an Alfa Romeo 2000 GTV, this will ruin your day.

- At 124 mph, the new MG is practically the fastest thing on four wheels up to £3000.
- It does 0-60 in a brief 8.25 seconds and reaches its legal cruising speed in 12 seconds
- It has a light alloy 3.5 litre V8 engine which gives 137 b.h.p. at 5000 r.p.m., and 193 lb. ft. of torque at 2900 r.p.m.
- The lightness of the engine, the uprated suspension and wide radial ply tyres give the V8 outstanding handling characteristics.
- It has a Laycock overdrive, brake servo, alloy wheels, twin electric cooling fans, tinted windows, head restraints and MG pedigree.
- All as standard.

The new 124 mph MGB GT V8

Price: £2085.42 including car tax and V.A.T., number plates, seat belts and delivery charges extra.
Performance figures obtained by British Leyland engineers.

Reborn Company LLC

Innovative Solutions

Since 1998, Evan Amaya and his staff at Reborn Company LLC have specialized in service, repair and restoration of both English sports cars and Land Rover four-wheel-drive vehicles. The two vocations have resulted in a unique and complementary skill set. The Reborn team provides expert support for MGB conversion to Rover V8 power!

Reborn Company has a good-natured can-do attitude. Bring them a challenge and they'll find a solution that suits your need, schedule, and budget. Over twenty MGB restorations have been completed to date, with proud owners all along the East Coast.

Introducing: Reborn's "Big Brake" Kit

This unique kit features new replacement hubs, so no rotor spacers or adapters are required. Quality Honda Accord rotors are utilized, so replacement parts are cost effective and readily available. Top-of-the-line Wilwood calipers and pads complete the package. For bolt-on safety, this kit is for you!

Take a moment & have a detailed look at Evan's work!
Evan Amaya's Rover V8 Powered MGB

Reborn's New Location

Reborn Company LLC
Evan Amaya, proprietor
405 N. Washington St.
Shelby, NC 28150

telephone: (704) 480-5544
e-mail: rebornco@carolina.rr.com
www.rebornco.com

Reborn Company LLC is a Member of
The British Motor Trade Association

Now with more room, Reborn Company hass expanded its automobile and parts importing businesses. In addition to MG and Rover repair/restoration, Reborn Company provides Land Rover models that aren't otherwise available in the U.S.

British V8 Conversions Newsletter Meetings Photo Gallery Contact Info Web-Rings Site Map

Telephone:
KIDLINGTON 4343 (S.T.D. 08675)
Telex: 83401 - 2
My Ref:
Your Ref:

THAMES VALLEY POLICE,
CHIEF CONSTABLE'S OFFICE,
KIDLINGTON,
OXFORD, OX5 2NX.

MGB GT V8... Police Chase Cars!

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

8-11-1984

Mr. Ken Smith

Early reply, not typed, forgive the spelling, typing takes another week here.

During the early seventies we introduced three MGB GT's into our fleet to perform the role of "plain enforcement cars", in short being plain in color (i.e. not white and with no police markings). These cars could be used to good effect to apprehend persistent speeders, those well in excess of the speed limit on motorways.

During 1974 we replaced these cars with three BGT V8s. Each of those cars gave first class service for 90,000 miles (each) at which time we sold them for around £200 less than we paid for them. Two are still in use by MG enthusiasts.

The police equipment used in these cars included Police Radio, two-tone horns concealed behind the front grille, two flashing blue lights set back into the front grille, fire extinguisher, portable "slow" signs and warning lights, tape measure, 6 red & white cones, crow bar, and a police sign fitted on the rear floor just under the tailgate window so arranged that when the police driver pulled a cord fixed to the roof close to his right shoulder the sign would lift up to show through the rear window and illuminate with the words "POLICE" and "STOP" (in red).

Some of the world's fastest production cars have seen this sign in action at speeds well in excess of 100 MPH.

Had it not been for the demise of MG at Abingdon we would still be using these now. To detect an ex-police MGB GT V8 look for the tell-tale small holes in the headlining at the driver's side roof where the self tap screws were fitted to support the rear window sign pull cord.

Yours faithfully,
David Willcox
Force Transport Officer

Editor's Note: this letter has been carefully transcribed from an original handwritten note, written in blue pen on police letterhead. We transcribed the letter to make it accessible to more readers.

An Actual MGB GT V8 Unmarked Police Car (Photo by Ken Smith.)


The Thames Valley Police now occupy a large station on the original site of MG's factory at Abingdon.
(Photo by Peter Mittler. Incidentally, Peter is co-chairman of MG2010. Make plans NOW to attend!)

This article is part of a set of two! If you enjoyed this article, check out: "Police Review"

POLICE
REVIEW The professional weekly journal of the British Police
POLICE REVIEW PUBLISHING COMPANY LIMITED
Reg. No. 133929
Registered office
14 St. Cross Street
London EC1N 8FE
England
Tel: 01-242 1432/3

Police Review: MG "B" GT V-8

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Police Review".
This article originally appeared in their August 17, 1973 issue.

road test report by W. R. Taylor

Pursuit or enforcement cars of the two-seater variety are slowly gaining in popularity and probably the majority of cars of this type that are in service with Police Forces are MG "B" GTs. This car combines a businesslike appearance with a reasonable performance, and is capable of carrying a surprising amount of equipment. Now, announced this week, we have a new model, which should make this one of the finest enforcement cars available - the MG "B" GT V-8.

External appearance is unchanged except for the cast aluminum wheels and the V-8 motif on the grille and rear panel. Under the bonnet lies the 3.5 litre Rover V-8 engine, basically the version used in the Range Rover and fitted with a low compression head this allowing the use of 3-star fuel. To permit the existing MG bonnet to be used the carburetor layout is altered to place it near the bulkhead, but, in spite of the tight fit, items needing regular attention are reasonable accessible. The performance is exceptionally good, though because of the quietness and smoothness of the unit this is not appreciated. Acceleration is vivid, but there is no "kick-in-the-back" and the power coupled with well-chosen gearing gives first-class top-gear flexibility - the car will accelerate smoothly, and continuously, from 18 m.p.h. in overdrive top.

The ratios of the gearbox offer a really worthwhile range of speed in each gear. The gearbox is basically that used in the MG "C" buy Laycock overdrive on top gear is fitted as standard - and is necessary. One problem that exists with this car is that the tachometer must be watch closely when accelerating hard as it's not too difficult to over-rev the engine due to its quietness. I'm glad that British Leyland decided against using the Rover "S" gearbox on this car as it's just not up to the type of work it would get and the "C" gearbox has a nice short "gate" that permits very fast changes if desired.

British Leyland have followed through with all the components on this car and have rated the suspension - and brakes - to the performance. The suspension gives a firm but not a harsh ride and is free from pitch and choppiness on practically all surfaces. The standard of ride is very high for the type of car. This suspension, coupled with the rack and pinion steering and the radial tyres, gave the MG "B" GT V-8 exemplary handling and roadholding even on wet roads. The steering is not heavy and offers good feel and precision and is quick to respond to the demands of the driver.

Lockheed brakes are used, discs at the front and drums at the rear, and have vacuum servo-assistance. The brakes have a fine positive feel about them that add to confidence and their power certainly matches the performance of the car. They maintained their good standard of efficiency throughout the test and there was no measurable fade after the fade test.

Getting in and out of the GT C-8 is no more difficult or easier than the MG "B" GT, or any other car of this type, but a worthwhile improvement in the seating is immediately noticed. The new seats are very comfortable and answer many of the complaints of the past; a good eight-hour stint at the wheel was not particularly tiring. Control layout as far as the gear lever, pedals, and steering wheel were concerned was quite good and the switches for the Police equipment were handy. But the remaining switches for the standard equipment of the car seem to have been scattered around without much thought. The handbrake position close to the driver's seat is not particularly easy to use but this would be cured by the use of a "fly off" type. Some of the important warning lamps are partially obscured from the driver by the lower edge of the instrument panel, while the use of a white warning lamp for the heated rear window is almost dazzling at night. There is no convenient interior light to allow the crew to write in a natural position.

The rear tailgate opens upwards, and in so doing, obscures the beacon. The large aperture that is left permits easy access to the rear floor and the equipment. The carpeted rear floor, supplemented by the back of the occasional seat being folded down, provides a surprisingly large area for carrying cones, signs and the like. A further advantage is that equipment stowed at the front end of this floor is also easily reached from the driving compartment.

The test car was equipped with a roof sign surmounted by a beacon and the sign was of a triangular shape with the "V" pointing forwards. During the test the opportunity was taken to remove the sign and beacon and go through the entire data procedure again. It was perhaps unfortunate that during the period I had the car there was little or no wind and, certainly, both sets of test data were obtained with other designs - top speed was unchanged and the difference in the acceleration times were so small that it could

virtually have been time lost in the gear change so, at least, on this car and under those conditions, the roof sign had no detrimental effect on performance.

Comment: This car is very difficult to fault; it goes well, stops well, and handles well in the dry and the wet. It is so perfect for police work it could have been designed specifically for the job.

Recommendation: Traffic, with particular emphasis on enforcement.

Abridged specification

Engine: Eight cylinders in two banks of four, set in 90 degree "V" formation, 3,528cc. Compression ration 8.25:1 delivering 137 b.h.p. (DIN) at 5,000 r.p.m. Twin S.U. HIF6 carburettors, S.U. electric fuel pump.

Transmission: Four-speed gearbox with synchromesh on all forward gears and Laycock-type LH overdrive operating on top gear. 9.6 in. diameter single dry plate diaphragm clutch hydraulically operated. Floor-mounted gear lever, direct acting. Three-quarter floating rear axle with hypoid final drive with ratio of 3.070:1.

Brakes: Lockheed hydraulic with vacuum servo-assistance. Front, 10.7 in. diameter discs. Rear, 10 in. diameter drums with one leading and one trailing shoe. Handbrake operates rear drums through mechanical linkage.

Suspension: Front, independent with coil springs and lower wishbones mounted to a cross-member assembly with lever-type shock absorbers with double levers to carry the top end of the swivel pin. Anti-roll bar. Rear, tube type axle with three-quarter floating drive shafts, rubber mounted semi-elliptic springs. Lever-type shock absorbers.

Steering: Rack and pinion.

Tyres: 175HR-14 radial.

Battery: 2 x 6 volt connected in series, 67 amp/hr. Alternator standard.

Measurements: Wheelbase, 7 ft. 6.5 in. Track, front 4 ft. 1in. rear 4 ft. 1.25in. Length 12ft 10.25in. Width with driver's door fully open, 7 ft. 8in. Minimum width required for driver to get out of car, 6 ft. 9in. Turning circle 33ft. 6in. Kerb weight, 2,427 lb.

Equipment on test car: Rood sign with beacon on top of it. The sign was triangular with the "V" to the front with "Police" on each side of the "V". The rear part of the sign was divided to show "Police" and "Stop". Signs and cones. First aid box. Police equipment switch panel. Certified speedometer. Heavy duty rear springs.

Road Test Data

Weather during test period: Both wet and dry with occasional very light breeze. Temperatures, 8-16 deg. C.

Performance tests on dry tarmacadam dual carriageway. Brake tests on dry concrete carriageway.

Maximum speed in gears (at 5,200 r.p.m.): 1st, 40 m.p.h.; 2nd, 60 m.p.h.; 3rd, 94 m.p.h.; top, 120 m.p.h.; overdrive top, 123 m.p.h.

Acceleration through the gears (mean of four runs): 0-30 m.p.h. in 3.2 sec.; 0-40 m.p.h. in 4.7 sec.; 0-50 m.p.h. in 6.8 sec.; 0-60 m.p.h. in 9 sec.; 0-70 m.p.h. in 11.7 sec.; 0-80 m.p.h. in 15.1 sec.

Acceleration in gears (mean of four runs) in seconds:

	3rd	Top	Overdrive
20-40 m.p.h.	5.2	7.1	9.4
30-50 m.p.h.	5.3	7.6	9.2
40-60 m.p.h.	5.3	8.1	9.7
50-70 m.p.h.	5.5	6.8	9.3
60-80 m.p.h.	6.1	7.6	10.2

Overall fuel consumption under simulated operating conditions: Town patrol work, 12.5 m.p.g. Town and rural control work. 17.6 m.p.g. Rural patrol work, 25.4 m.p.g. High speed and motorway, 20.9 m.p.g.

Overall fuel consumption for entire test period, 19.9 m.p.g.

Instrument correction: Speedometer at 30 m.p.h., accurate. Speedometer at 60 m.p.h. 1 per cent fast. Distance recorder, accurate.

Brakes: Footbrake at 30 m.p.h., 88 per cent. Handbrake at 20 m.p.h., 37 per cent. Steering: Turns of steering wheel between locks, 2.25.

Price: £2293.96.

In the original publication of this article, Police Review included two photographs of their test car. One photograph was a driver's-side three-quarter-view shot that included the police roof sign and beacon. The car's registration plate number was visible: "GOF 88L". A second photograph was taken from behind the car, looking into the cargo area through the lifted tailgate. Various equipment, including traffic cones, were viewable. From this camera angle, the roof beacon was also fully visible through the tailgate glass.

Our copy of the article is a faded black-and-white photocopy, and the photos aren't very clear. Dear reader, if you have a photo of an MGB GT V8 police car, please share it with us!

In the meantime, we hope you enjoy the following photos...

British V8 file photo of a 1972 MGB GT which belonged to the Sussex Police Force (photographer unknown)

A white MGB GT V8 braves the "test hill" at the historic Brooklands race track. (Photo by Ken Smith.)
Note: the test hill at Brooklands is historically interesting. It was put into service in 1909. This steep, 352", one-lane, concrete strip was used by England's early car builders for testing climbing and braking ability.

An MGB GT V8 remembered...

(transcribed from the original handwritten letter from John Dupont to Ken Smith, dated 15-8-1983)

I still find it hard to believe that the day the MGB GT V8 was announced - 15th. August 1973 - at least one fifth of what would prove to be the total production had been made. My V8's chassis number is 534.

I collected my car on 7th. September 1973 and what a wonderful feeling it was driving it home. However I was soon to

return to Earth as when running the car in, the internals of the speedo broke up. Worse was to follow, as I was flagged down and told that the brake lights were flashing on and off. Having put these two items to right I was driving in West Sussex - petrol rationing had just come into force - when a white MGB in full Police regalia indicated for me to pull in. Remembering that a 50 m.p.h. speed limit was in force I thought I was going to be booked for speeding. "The speedo must be faulty Officer" seemed like a weak excuse.

However, they wanted to look at the car - their first sighting of an MGB GT V8. The police driver said would I mind if some of his colleagues saw it as well. I said no I wouldn't mind and the next thing police cars were arriving from all directions!! In fact a mini concourse with bonnets up.

In conclusion the V8 is a great car.

John Dupont.

This article is part of a set of two! If you enjoyed this article, check out: "Police Report"

British V8: Newsletter Photo Gallery Web Forum Meetings Contact Info Web-Rings Site Map

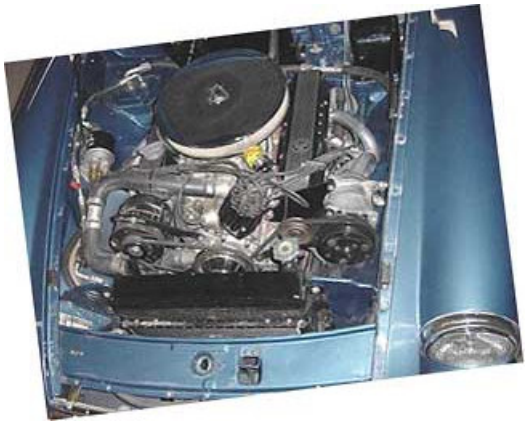
All British Car Repair

John Mangles, "The MG Doc" to his customers, specializes in mechanical, body repair, & restoration of vintage British cars - especially MG's!

John's well-established shop, All British Car Repair, can handle all your needs from simple tune-ups to full-blown concours restorations. John has also completed several MGB V8 conversions, plus one conversion he completed in partnership with "Father of the MGB-V8" Ken Costello.

John's own MGA V8 is one of the most distinctive high-class conversions you will find anywhere. Trust John for outstanding craftsmanship and customer service!

simple engine repairs to extensive modifications



both traditional & modern body repair methods

formerly known as Hi-Tech Collision & Repair,
"All British Car Repair" is a Charter Member of
The British Motor Trade Association.

frame-off concours restorations to custom trim

Please take a moment and have a detailed look at John's work: John Mangles' Buick V8 Powered MGA

All British Car Repair
John Mangles, "The MG Doc"
2618 Woodson Road
(located in the Overland area)
St. Louis, MO 63114

telephone: (314) 426-1600
e-mail: mgdoc@sbcglobal.net
www.themgdoc.com

Autocar
Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS, Tel: 01-661 3500, Telex: 892084 BISPRS G
To contact the writer please telephone 01-661

Auto Test: MGB GT V8

MG Elegance, Rover Smoothness

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Autocar".
This article originally appeared in their issue for the week ending August 16, 1973.

Effective combination of proven MGB GT and superb Rover 3500 V8. Good performance with remarkable economy. Smooth fuss-free engine with good torque but little engine noise. Perennial MGB faults. Too expensive.

Few cars have been more of an open secret than the MGB GT V8. From the moment that supplies of the Rover V8 engine to Ken Costello were stopped, it was clear that British Leyland themselves were intending to do a similar exercise.

There is a considerable market all over Europe and America for a smart Grand Touring car with comfortable space for two people and their luggage, or for two and their small children or their dogs, and such cars as the Reliant Scimitar GTE and the Lotus Elan +2 have sold well as a result. It must also have worried British Leyland that they were not represented in the "big" sports car range by the Austin Morris Division, following the termination of the Austin Healey 3000, and the unfortunate public response to the MGC that led to its early demise. As we said when the MGC was first tested, if there were no MGB by which to measure it, the MGC would not have been considered such a bad car, and so it is heartening to see that British Leyland are again prepared to capitalize on the excellent name of "MG" and to try again.

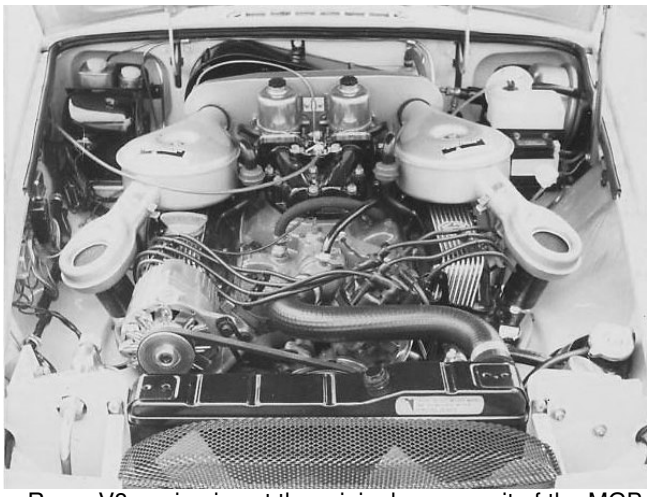
The elegant Pininfarina-inspired lines are unaffected by the change in power unit, revised manifolding avoiding the need for a re-shaping of the bonnet. The familiar MG insignia on the radiator has returned to its previous position at the top centre of the grille surround, while the surround itself has returned to the shape and size that it was before the 1971 revisions.

The combination of the timeless lines of the Pininfarina-influenced MGB GT and the smoothness of the lightweight 3,528cc Rover V8 engine ought, on paper anyway, to make for an excellent high performance sporting coupe. If the end product falls short in any way, it is in the unfortunate perpetuation of the dated features of the MGB. Such shortcomings as excessive wind noise, a harsh ride, and heavy steering may be forgiven in an out-and-out sports car, but they have no place in a GT car costing over £2000. More unfortunate still is the fact that such shortcomings are accentuated by the superb smoothness and relative quietness of the excellent Rover V8 engine, which it must be admitted goes most of the way to making up for the less likeable facets of the car.

In terms of performance, the Rover engine has moved the MGB GT V8 up into the realms of the fastest European sports cars as it is capable of well over 120mph and its acceleration both through and in the gears is excellent. Acceleration from rest to 90mph in under 20 seconds, and a standing quarter mile time of 16.4 seconds are both very good, and the effortless way in which the quiet V8 accelerates from as low as 10mph in top gear is impressive. In direct top-gear, each 20mph increment from 10 to 80mph takes less than 8 seconds, while it takes only 10.3 seconds to get from 80 to 100mph.

To provide this sort of performance, while paying attention to European Emission Regulations, British Leyland use a version of the

V8 engine that has most in common with the Range Rover, utilizing the same low-compression pistons in both engines. To allow for a sufficiently low carburetor height, the manifold is changed from the penthouse design of the Rover 3500 and Range Rover, and a cast manifold is used, whose inlet tracts point towards the back of the engine enabling the carburetors to be positioned close to the bulkhead, where there is more available space.



There is little to show that the Rover V8 engine is not the original power unit of the MGB GT V8, as the installation is neat and well planned. The electrical service items such as fuses and relays are all positioned on the offside of the bay, while the radiator header tank and screen washer reservoir are on the nearside. The reservoirs for clutch and brake hydraulic circuits are positioned high up behind the pedal box, but their proximity to the angle of bulkhead and bonnet makes it difficult to see the fluid level. (Photo by Ken Smith. Used by permission.)

The gearbox derives from the MGC all-synchromesh unit that was introduced on all MGBs in 1967. As used on the MGB GT V8, only the casing is changed to allow the use of a 9.5 inch diameter clutch, while the internal ratios are higher than those of the 4 cylinder car to suit the increased power and torque of the much larger engine. The ratios are well chosen, allowing up to 40mph in 1st gear, and 100mph in third gear. Although 2nd gear gives up to 60mph, it is spaced a little too close to 1st gear and would benefit from being a little higher.

Overdrive operates on top gear only and is geared up to give 28.5mph/1000rpm. While this may seem to indicate a strictly "overdrive" gearing, it is surprising how often it can be engaged, even around town, so torquey is the V8 engine. Engagement of the overdrive is by the lefthand of two fingertip stalks, and while the unit disengages sweetly enough when the lever is pushed away from the wheel rim, engagement is lazy and unduly speed-conscious, taking longer to engage at low speeds than high, as the inhibitors sort themselves out, and decide whether or not overdrive can be engaged.

One of the nicest features of the car is the complete absence of any snatch, vibration, or harshness from the drive-line. From full throttle to overrun, there is little sign of the considerable torque reversals that are taking place, and this contributes greatly to the pleasure of driving the car. As this feature is present to a lesser degree in the Rover 3500S it is probably due in part to the V8 engine, but the very short propshaft must help considerably in this.

There are absolutely no dramas involved in starting the car, either cold or hot. Under cold-start conditions, the manual mixture enrichment needs to be used sparingly, and can be pushed home within the first mile. In fact, the car runs smoothly without the need for enrichment long before the heater starts to give much appreciated warmth.

Despite a good angle of attack, the clutch effort is inordinately high, and operating it becomes a tiring exercise in town. Perhaps this is more noticeable as the full movement must be used to avoid any grating on engaging the gears. It is essential to use the full movement of the clutch when engaging reverse, as the gears continue to spin for a long time, and it is often quicker to stop them by engaging first gear. The gearchange is also appreciably heavier if the full travel of the clutch is not utilized.

The brakes are excellent, progressive and capable of producing a 1g stop at only 65lb pedal load; the accelerated fade tests revealed only a slight tendency for the pedal load to increase as the brakes became hot, and only on the 10th application from 70mph did they begin to show any loss of performance, and that only slight.

All the MGBs are commendably tractable, and very easy cars to drive. They can all be pottered gently without the need for critical use of gearchange points, and the V8 version distinguishes itself by being even more free of fuss than its smaller-engined brothers. Never before has a sports car in this class been as flexible and forgiving and so easy to drive smoothly, but then again never before has such a smooth engine been offered beneath an MG bonnet.

What is remarkable is that this marked increase in performance and flexibility is accomplished at little cost in fuel economy. Compared with the last MGB GT that we tested two years ago, the V8 gave 23.4 mpg overall, compared with 23.7mpg overall for the smaller-engined car. While it would be possible to get a slightly better "touring" performance from the four cylinder car, this is partially offset by the fact that the Rover V8 engine can run on three star fuel, while the four cylinder engine requires five star, and we would expect that the same driver on the same journeys would get very similar figures in the two cars. When the considerable difference in performance is taken into account, this is a quite outstanding achievement.

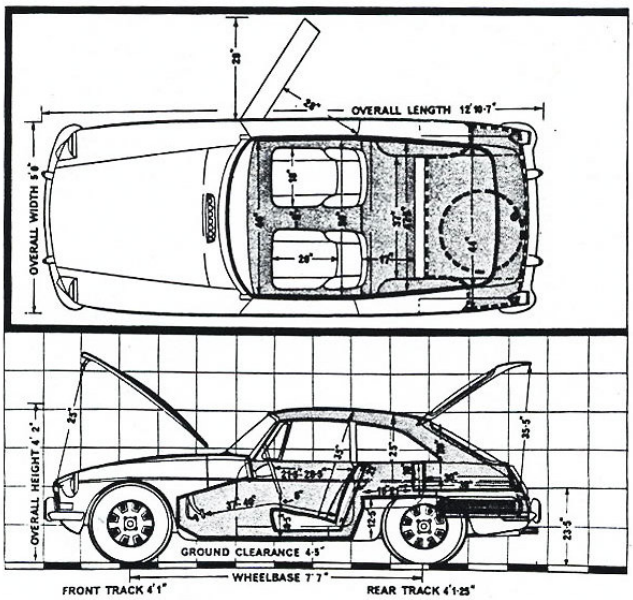
Ride and Handling

To cope with the 75 per cent increase in torque that the V8 has brought, the spring rates have been increased at the rear. There is a small balancing increase at the front that goes unnoticed, but the harder rear springs have turned the ride from hard to harsh, compared to the earlier MGB. This excessive rear end roll stiffness contributes to power oversteer that is in conflict with the natural understeering characteristics of the car. This is not a problem on long sweeping fast bends, but at lower speeds hard acceleration can produce a disconcerting imbalance as the transition from understeer to oversteer takes place. Further evidence of the imbalanced nature of car appears when one is forced to lift-off in the middle of a corner that has been entered at too high a speed to allow power oversteer to be induced. If the lift-off is sudden, the car tightens its line quite abruptly, necessitating rapid steering correction. Considering how very predictable the normal MGB is, and how predictable the Costello MGB V8 is, it would seem that the work on the rear suspension has not produced the desired results. It must not be assumed that the foregoing ascribes a serious degree of raggedness to the handling but since the MGB GT V8 must put down half as much power again as the four cylinder car and at the higher potential cornering speeds that the excellent Goodyear G800 tyres allow, it would inspire more confidence if the handling was more progressive. Extremely strong castor action contributes considerably to excellent straight line stability. It also makes for good resistance to side winds, but means fairly heavy steering effort.

Interior comfort and fittings

Many young families would consider the MGB GT V8 an ideal car for parents and children up to seven or eight. With the children on the back seat, there is still sufficient room behind for a great deal of luggage, and if the children are to be left at home, the rear seat can be folded forward, further increasing the available load space, and leaving room for such bulky items as school trunks or pram bases. Access to the luggage space is gained through the large rear door that swings well out of the way, and is retained in the open position by two sturdy self supporting struts. The spare wheel is housed below the floor of the load space, and is properly secured by a large wing nut. The area around the spare wheel can be used to stow tools and oddments that would otherwise be on display in the luggage area.

In the remainder of the car, stowage space is limited to a small glove locker (which, as we have said many times, is infuriating as it can only be opened and closed by the key, which is inevitably on the key ring, where it belongs.) and to a lift-up glove locker between the seats whose aptly described by its title. There is also a useful map pocket on the passenger's side, but this is out of reach, especially when static seat belts are being worn.

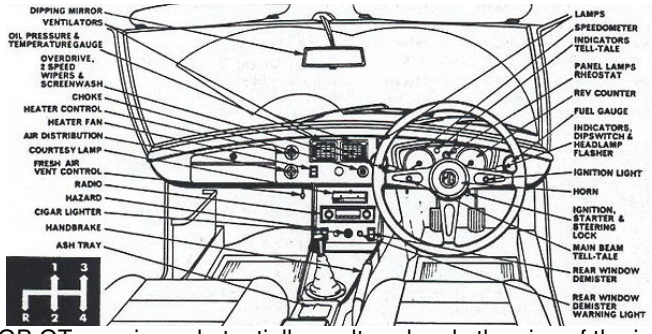


The rear seats are really only suitable for children up to about eight, although no doubt older children would put up with discomfort for the thrill of being driven in the car. The rear seat cushions are retained by "lift the dot" fasteners, and when released allow the rear seat back to swing down onto the rear seat. - A surprising amount of luggage can be fitted into the load area, and the two wells behind the rear wheel arches are particularly useful for stowage. A pram base will not quite fit crossways between the wheel arches, and will not fit longways if the rear seat is in the raised position.

All the seats now have nylon facings on their wearing surfaces, and both the front seats can be reclined. Adjustment of the front seats is generous and drivers of all sizes can be accommodated. The backs of the front seats do, however, lack lumbar support and

leave a space below the small of the back that can lead to some discomfort. The seat backs are high and well-shaped, providing good shoulder support, and the gripping nature of the brushed nylon material helps to provide good lateral support. The backs of the seat recline, but only to approximately 45 degrees at which angle they come up against the rear seats.

For the driver, the seating position relative to the controls is good, the gear lever falling comfortably to hand, and the relationship of shoulder position to the small leather-covered steering wheel enables a near straight arm posture to be enjoyed. Shorter drivers do, however, tend to sit quite low in the car, making visibility of the front corners difficult.



The roomy interior of the MGB GT remains substantially unaltered, only the size of the instruments and calibration of the speedometer to 140mph indicate the presence of the V8 engine beneath the bonnet. Unfortunately, the opportunity has not been taken to level up the pedals and therefore it is still not possible to heel-and-toe.

The remainder of the interior appointments are in line with the normal MGB GT, with the exception of the speedometer and rev counter, which are the same small size as the American market cars. This is dictated by the larger shroud made necessary by the additional finger tip switch for the overdrive.

Living with the MGB GT V8

Static seat belts at £15.85 including VAT were the only optional extra on our MGB GT V8, and so the price of £2293.96 had only the normal items of vehicle license/delivery charge (including VAT) of £18.70 and number plates of £5.00 to give an on-the-road price of £2352.43. The MGB GT V8 package includes all the items that are available as options on the normal MGB GT. Included among these heated rear window, tinted windows, servo brakes, head restraints, and of course the overdrive unit.

There should be few problems involved in getting nationwide service for the car, as Laycare now extends to all British Leyland dealers, and this ensures fixed charges for routine servicing anywhere in the country, and also ensures that there are technicians capable of servicing the Rover V8 engine at all MG dealers. The cost of replacement parts is expected to be similar to those for existing MG parts, while prices for the Rover engine should not be excessive.

Routine servicing is recommended every 6,000 miles, while a "safety check" service is recommended every 3,000 miles if the car is used under dusty or arduous conditions. Access to items requiring routine maintenance is good beneath the big aluminium bonnet, and a typically thoughtful feature is a plastic grip on the dipstick, which remains cool. The engine has a no-loss cooling system, and it is essential to check this while the engine is cool.

The electrical circuits are protected by four fuses in a fusebox, while there are two additional inline fuses to protect the heater fan motor and the hazard warning flasher unit.

The spare wheel lives below the floor of the rear luggage compartment from which all luggage must be removed in the event of a puncture. However, as the spare is inside the car, it stays clean and dry, although it must be released from its stowed position and turned over for its pressure to be checked.

The rear compartment of the test car became saturated with water during the course of the test period. At first, poor sealing around the tailgate was suspected, but as the water only gets in when the car is on the move, we would suspect that the grommet around the petrol filler cap was not a good fit. This problem has been noticed with previous MGBs, and attention to this seal at the early stages is advised.

There are no tools supplied with the car apart from a jack and wheelbrace which are stowed in a substantial soft bag in the space occupied by the spare wheel. There is one jacking point on each side of the car, and the jack has a good crank action, raising the car quickly.

Conclusions

To put the MGB GT V8 into perspective in the new market that British Leyland are entering, it must be compared with a number of cars that have already carved a niche for themselves. For instance, there is the Reliant Scimitar GTE at £2,439 or £2480 with overdrive, the Datsun 240Z at £2535, the Lotus Elan +2 S130 at £2789 and of course the Triumph Stag at £2533, while the Ford Capri 3000 GXL compares favorably at only £1824.

To hope to sell well against this powerful competition, the MGB GT V8 has to rely heavily on its excellent smooth power unit, for in

most respects of appointment and comfort it does not score over the opposition. In terms of handling the MGB GT V8 scores over all but the Datsun and the Lotus Elan +2, while in terms of ride, it must be rated at the back of the field. In view of the fact that the development costs cannot have been high, it is difficult to understand how a £500 differential can be justified between the MGB GT V8 and an MGB GT with the four cylinder engine, and the same optional equipment. Undoubtedly the car will sell well on the MG name alone, but it is a fiercely competitive area that the MGB GT V8 has stepped into, and if it succeeds, it will be mainly due to the excellent Rover V8 engine for which praise cannot be too high.

Motor
Surrey House, 1 Throwley Way
Sutton, Surrey SM1 4QQ
Telephone: 01-643 8040
Telex: 946564 BISPRS G

Road Test: MGB GT V8

For : smooth, flexible engine; well-chosen gear ratios and overdrive; roomy for two; good visibility.

Against : poor low-speed ride; haphazard instruments and controls; dated decor; high wind noise at speed; rather expensive.

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Motor".
This article originally appeared in their issue for the week ending August 25, 1973.

Telling British Leyland what they ought to do has become a national pastime, and one of the most common demands (from Motor among others) as well as one of the mostly widely forecast events has been the marriage of the popular MGB GT body with Rover's 3.5 litre V8 engine. The two together seemed natural, especially after Ken Costello had shown the idea to be practical.

Why then the delay? The answer is basically twofold. First British Leyland have to observe all the fine print in the regulations of the countries where the BV8 will be sold, a burden Mr. Costello does not share. It is interesting to note that the BV8 will not be sold in the States - the cost of Type Approval would presumably be prohibitive. Secondly, and possibly more important, buyers expect different standards when buying a modified car compared with a production model - and quite rightly too. They might forgive shortcomings in a modified car from a small specialist which they would find unacceptable from a large manufacturer.

With a two-year gestation period behind it, the BV8 has been a long time coming. And it really is something of an enigma. Does one judge it as an uprated BGT or as an entirely new car? On price it is firmly in the latter category, being expensive for a car which is basically over 10 years old and which up to now has been in the £1600 class, even though it more than holds its own in the performance stakes. So familiar though, are the BGT and the Rover V8 that one tends to regard the V8 as an old friend transformed - and what a transformation it is too.


Ken Smith's MGB GT V8 (damask red / car number 1214)

Initial impressions are always illuminating, and among Motor's often cynical staff the reaction was quite enthusiastic. The BGT has always been regarded as a very attractive car; what it lacked, among other things, was performance and mechanical refinement. Even in its relatively de-tuned (one should say de-toxed) state the Rover engine certainly answers these two criticisms and gives the car a new lease on life. In most respects the combination is first class, combining the American idea of a large engine and straightforward suspension with European standards of compactness, steering and handling. The body itself is very strong - it was used as a base for one of the special cars sent to America recently as an example of British efforts on the safety front - so it did not

require much strengthening to take either the extra power or to meet the now fairly rigid crash barrier tests of the EEC countries. The engine itself is no heavier than the B-Series it replaces, but the ancillaries are: the weight penalty is therefore only slight. As a corollary the suspension changes only had to take the increased torque into account.

So appealing is the BV8 package that when the failings start to show themselves there is a sense of disappointment. Remembering that the car costs a hefty £2300, the ride, especially at low speeds, can only be described as poor, almost unacceptably so. Loud wind noise at anything above a modest cruising speed takes all the enjoyment out of the car on long runs and the dashboard layout is rather crude and austere, despite new fingertip switches and the introduction of face-level air vents (in 1972). Considering how much more expensive the BV8 is, one would have thought that British Leyland could have come up with a more modern, not to say ergonomic layout.

In its price class the BV8 has some pretty strong competition. The Reliant Scimitar GTE has more usable internal space, is more attractive internally and rides better; the same can be said for the Datsun 240Z; and the roomier Capri 3000GT has a better ride if not handling. The Lotus +2S 130 (admittedly for a lot more money) provides similar performance with much superior standards of road-holding, handling and ride.

As a poor man's Aston Martin V8, the new MG has a certain charm but we feel that modernization inside, even more performance (which might reasonably be expected from a 3 ½ litre 2-seater) and a smoother ride could have made it a worthy alternative to the Aston.

PERFORMANCE (4 of 5 stars)

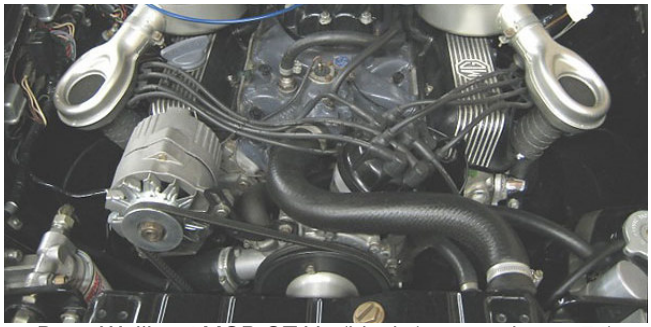
To comply with the EEC emission regulations MG have opted for the low compression (8.25:1) variant of the Rover V8 with modifications. Relocation of the SU carburetters via a forked spacer manifold is claimed to give a slight increase in mid-range torque, but the main purpose of the move was to fit the carburetters under the standard bonnet. With a quoted output of 137bhp (DIN) at only 5000rpm the 3528 all alloy ohv engine displays the characteristic of its American ancestry in being relatively large and lightly stressed. Pump-up of the hydraulic tappets sets the upper rev limit at a lowly 5200rpm or thereabouts, so the engine is certainly not over-exerting itself.

Considered as a 3 ½ litre sports car, the performance may be a little disappointing; it is nothing like as quick as the original 3.8 litre E-type for instance. When compared with others in its price class, however, the BV8's performance is very respectable indeed, and is considerably better than that of the standard BGT. Only the Morgan Plus 8 and the now discontinued Lotus Elan Sprint are faster to 60mph from a standing start, and only the Morgan (with the same engine and a lighter body) is anywhere near on top gear performance.

What the bald figures cannot convey is the utter smoothness, the refinement and the lack of drama with which the unit performs, and the delightful surge when accelerating hard aided by the excellent engine-gearbox match which makes full performance easy to use. It would be difficult to make a rought car when going from a four to a V8, but the general opinion is that MG have done a thoroughly professional job properly engineered - and it shows.

As you'd expect, the flexibility is remarkable, and 1000rpm in top gear is quite usable in traffic, the car waffling away steadily with the characteristic V8 burble.

Starting (during the warm weather of our test) was immediate with a little choke, and warm-up rapid - the electric fans only came on when sitting for fairly lengthy periods in traffic jams. Idling was unobtrusive with only occasional lumpiness (again in jams) cured by a quick blip of the accelerator. Throttle action contributed to the overall smoothness, being light and progressive.



Dave Wellings' MGB GT V8 (black / car number 0974)

Economy (3 of 5 stars)

The overall consumption of just under 20mpg is similar to that of other cars in the same price/performance class, but it can be achieved on 94 RON (three star) petrol, a bonus for those who travel abroad, particularly in Germany where the lead content (the anti-knock ingredient) in petrol is low. The engine ran quite happily on this grade with no sign of pinking or run-on. With a 12-gallon tank the range is about 240 miles - barely acceptable for a long run overseas. Oil consumption of 1000 miles per pint is more acceptable.

Transmission (4 of 5 stars)

The gearbox is a derivative of that used in the BGT, but with MGC ratios and modified bell housing to fit the V8 and its starter. Lever movements are short, precise, and very positive if a little stiff and notchy, but the latter characteristic should wear off with mileage - our demonstrator arrived with 1400 miles on the clock. The synchromesh was almost unbeatable but baulked snatched changes. Overdrive is standard, but only on top. There was quite a long delay before it came in too, but canceling was instantaneous, and the slight jerk could be eliminated by blipping the throttle or by dipping the clutch. The smooth and progressive clutch helps to make the engine and gearbox a good match without any really undesirable traits. Although clutch pedal load is higher than normal at 38lbs it does not feel too heavy - possibly a function of a good seat/pedal relationship.

Intermediate speeds of 39, 61, and 96mph show the ratios to be reasonably spaced. At no time was the box noisy, nor was there any vibration, and tramp could be induced only during the most severe standing starts.

Handling (3 of 5 stars)

To fit the engine it was necessary to move the steering rack forward slightly, making the steering lighter yet still direct and precise with a reassuring feel. Not that, by Lotus standards, is it light; parking calls for considerable effort and it appears to get heavier with lock.

Just to remind you, the MGB was introduced in 1962, and the BGT in 1965. This fact probably more than any other explains the ride/roadholding/handling compromise of the BV8. The completely conventional layout it uses can still be made to work well, but only with proper location of the live rear axle which is still suspended on simple leaf springs. And of course a properly designed fully independent suspension would give much better results.

Even so, the MG sets fairly high standards. The basic handling characteristic is understeer, since most of the roll stiffness is at the front; this may also account for the high level of traction at the rear in the dry. Power-on cornering can cause the tail to drift out so that when pressed the handling eventually changes to oversteer. Initial tyre break-away occurs at quite moderate cornering forces, and the ultimate cornering force is not exceptionally high. Where the GT V8 scores, and scores heavily too, is in its astonishing controllability and responsiveness - the oversteer can be used, and is great fun. In engineering terms the handling can be described as "fail-safe," being virtually self-correcting when the car gets out of line. Roll is hardly noticeable and has no direct effect on handling. In the wet the characteristics are accentuated somewhat, but the forgiving fail-safe capability still applies. The only time it gets a little uncomfortable is at speed on undulating surfaces, perhaps because of a trace of rear end steering.

Although the GT V8 appears to be undisturbed by sidewinds, overtaking trucks on a motorway can cause a deviation from the straight and narrow, a problem with most cars.

Brakes (3 of 5 stars)

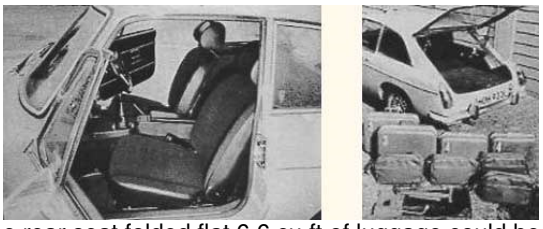
To cope with the increased performance the brakes have larger calipers and thicker discs, and a servo is standard. Dual circuits are available only on those models for export to countries requiring them; in other words British buyers don't get this safety feature.

The brakes were quite reassuring with barely noticeably fade at the top end of 20 half "g" stops, pulling up squarely on each occasion, although towards the end of the test there was quite a bad judder and some smell, with snatch when coming to rest. After the fade test, it felt as if "square drums" were fitted: with a steady pedal pressure there was a rhythmic binding roughly proportional to wheel speed. Only one application of the brakes was necessary to restore them to normal after soakingin a watersplash.

The servo did not inspire much enthusiasm. Although nicely progressive (lack of progression often a fault with servos) the action was slightly inconsistent, and there was a degree of "self servoing" whereby, with the same pedal pressure, the braking force increased with decreasing speed - or, to put it another way, pedal pressure had to be reduced to maintain the same deceleration. With these minor reservations, the brakes behaved quite acceptably.

Accomodation (4 of 5 stars)

Let's kill a myth once and for all: the plus-2 part of the BGT is to al intents non-existent, the padded shelf behind the driver providing neither head nor leg room, and sitting sideways is excruciating. Considered as a two seater (and we've star graded it as such) there is a useful amount of luggage space (for a sports car) with 5.2 cu. ft. when the rear "seat" back is up or 6.6 cu. ft. with it folded. Loading is easy via the large lift-up door and a flat floor at the same level as the sill. There is a lockable glovebox on the passenger side, a map pocket in the passenger's footwell, and a narrow armrest cum hinged box between the seat. Insertion of the wider V8 has fortunately not meant any noticeable decrease in foot space, nor does any heat seep through from the exhaust pipes.



Above: with the rear seat folded flat 6.6 cu ft of luggage could be accomodated

Ride Comfort (2 of 5 stars)

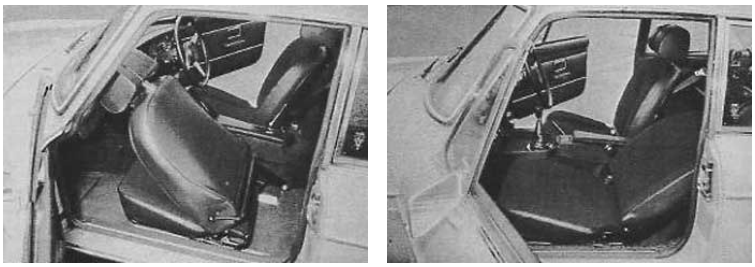
The almost vintage nature of the suspension really shows up at low speeds, the ride being harsh and lumpy even on relatively smooth surfaces. On rough roads ride deterioration is yet more marked and can only be described as uncomfortable in the extreme - you steer around bumps when possible.

On the positive side, however, the ride improves with speed, notably on smoother (motorway type) roads, settling down to a taut rather than tight motion without any float - really quite pleasant. One feels, though, that increasing the rear spring stiffness to control the higher torque has conflicted with ride - and ride has lost out. And this in spite of a one inch increase in spring length at the front yet keeping to the same rates for both springs and anti-roll bar.

Tyre thump was not particularly prominent, while low frequency pitch and bounce are naturally almost non-existent.

Driver Comfort (3 of 5 stars)

All who tried the car found the seats comfortable, with plenty of fore and aft movement and rake adjustment; when set up to suit the individual driver the head restraint could be used as well to give a very relaxing position.

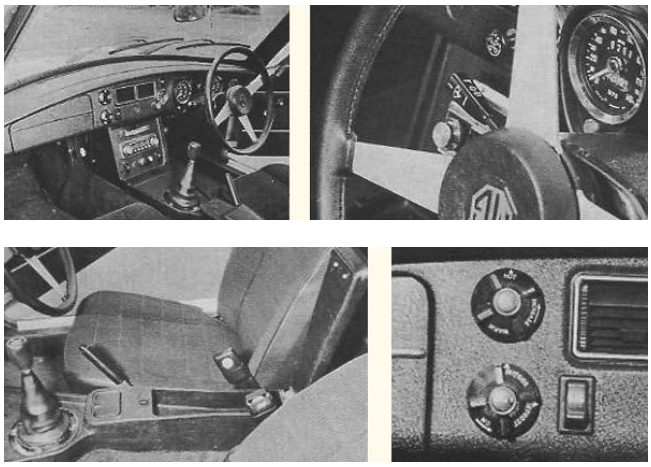


Above: the attractive seats could be adjusted both fore and aft and for rake, are well shaped, and are very comfortable

All the major controls fall, as they say, naturally to hand. The brake pedal/accelerator relationship seems to have been altered at last, and heel-and-toeing in now possible if not particularly easy - a definite improvement on the BGT.

The minor control layout - knobs, buttons and so on - is in a real Jekyll-and-Hyde situation. Excellent stalk controls on the steering column operated the indicators/dip/flasher (right) and the wash/wipe/overdrive (left) - opinion on the latter was somewhat divided, some drivers feeling that the stalk had too much to do. The rest of the (mainly rocker type) switches are scattered around wherever

there seems to be space, with the headlamp master switch almost hidden by the steering wheel rim, the heater controls over on the passenger side, and the hazard warning and rear screen switches and the cigar lighter at the bottom of the console, neatly obstructed by the gear lever. In general, the irritating trivialities outweigh the good points after a while.



Above: (1) the fascia is uninspiring, being a mixture of old & new,
(2) the overdrive switch is neatly built into the wiper stalk,
(3) a handy if narrow armrest / box,
(4) the archaic heater controls.

As on several other BL cars, to remove the key it must be pushed in, and at the same time a small button just underneath depressed. Once the knack was acquired it is easy - but heaven help women drivers with long fingernails!

The inertial reel belts are comfortable, neither binding nor chafing.

Visibility (4 of 5 stars)

Although you sit lower in the car than is usual these days, there is no sense of claustrophobia due to the large glass area of the Sundym glass; visibility is excellent all round with no real blind spots thanks to the (dipping) interior mirror and the door-mounted wing mirrors.

On high beam the headlights are very good, powerful, and with a wide if fuzz-edged beam. Dip, on the other hand, seemed to have the power of an undersized glow worm, and was inadequate for anything over about 30mph. The reversing light is standard and parking simplified by the front wings which are proud of the bonnet line; the rear bumper is only a few inches beyond the opening rear tailgate.

Instruments (2 of 5 stars)

One supposes that in the interests of metrication the instrument dial diameters were reduced from 4in. (about 100mm) to mean little 80mm ones, a retrograde step. Otherwise all is as before: unexceptional. For the price - and considering some of the delightful layouts on other BLMC models - the whole of the dashboard, and come to that, the whole of the interior, could have been updated and modernized. To its credit, there is no reflection and the lighting could be controlled by a knob on the dashboard. Full brightness is still not very powerful.

Heating and Ventilation (2 of 5 stars)

We had no opportunity to test the heater during the time we had the car since it coincided with fairly warm weather. Which is probably just as well since the heater controls can only be described as antediluvian. The top rotary knob which controls the temperatures was stiff and reluctant to turn off: the lower one did not seem to serve any useful purpose at all, since there was very little difference between the "interior" and "defrost" (and that word indicates just how old the controls are - from the Austin A60 in fact) settings. The fan was reasonably quiet.

The two center vents provided a reasonable flow so long as the rear three-quarter windows are open, and so long as the car is in motion. There is no fan boost. They also, if pointed downwards, scattered cigarette ash throughout the interior if one had the temerity to use the ashtray. Not one of the better points of the car.

Noise (2 of 5 stars)

Perhaps the worst feature of the BV8 is wind noise. At 60mph it is noisy, at 70 it is very noisy; and above this speed it makes fast

runs a misery, and a radio a mockery, hence only two stars. Almost every pane of glass except windscreen and rear window contributes to the general level. This is all the more disappointing since the engine and transmission are remarkably quiet even at high revs, when a muted induction roar is the most prominent sound. This aspect alone rather spoils the car as a trans-Continental express for which it would be otherwise well suited. At lesser speeds, especially around town, we'd upgrade the car to four stars.

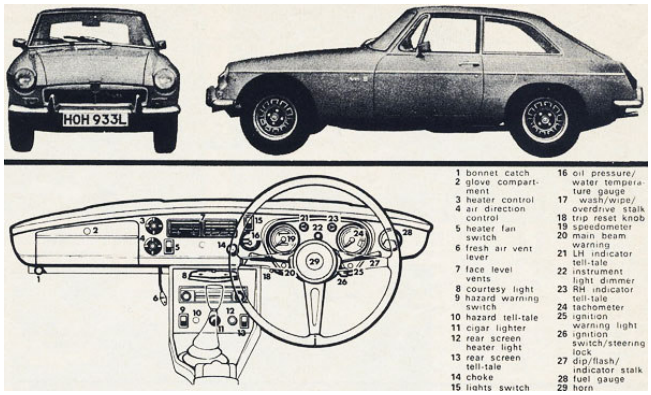
Perhaps out model was still prototypical since it suffered from various other noises as well. Accelerating in first, and gently at that, produced a zing in the steering column which seemed to be produced by the engine twisting under torque and allowing the exhaust pipe to touch the column. The electric fans, alleged to be quieter and smoother than the belt-driven type, in fact rumbled loudly when operating and in addition shook the car! There was also a temporary squeak from the clutch release bearing which, however, disappeared after a while.

Fittings and Finish (3 of 5 stars)

Aesthetically the interior is a strange mixture of the old and the new, with cloth covered seats, a moulded console, and "everything fake" modern steering wheel and air vents contrasting with the haphazard scattering of the controls, the black crinkle finish of the dashboard (complete with a pointless stray chrome strip across the glovebox) and the generally late-Fifties dash layout.

The tunnel covering is reasonably plush-looking carpet with rubber floor mats, and the whole of the luggage space is carpeted well if a little loosely. The rear "seat" is cloth covered to match the front seats, in this case in an attractive shade of dark blue. Fit and finish in general was quite good.

The list of standard equipment is fairly comprehensive, and included Sundym glass, matt black arms for the two-speed wipers, a heated rear window, a cigar lighter, a dipping rear view mirror and overdrive, to name only some.

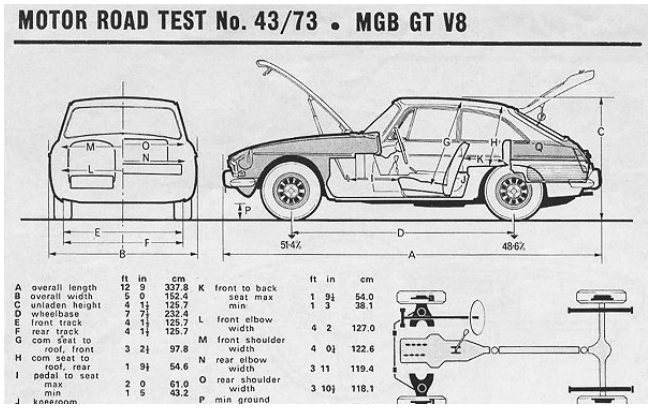


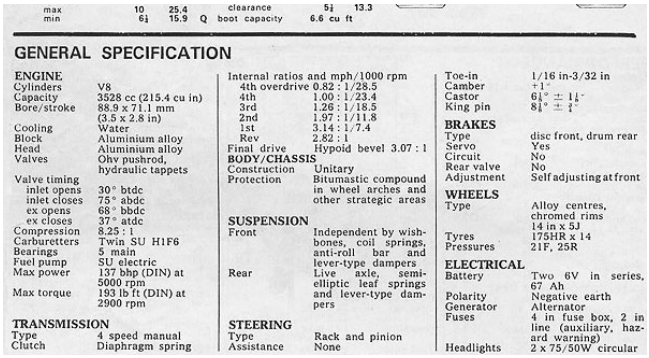
In Service

The bonnet opening knob is buried above the passenger's shin; once open the accessibility is surprisingly good, with only the plugs hidden within the convolutions of the exhaust pipe. Removal of the air cleaners, though, should make them easier to reach. The amount of space around the engine is also quite surprising - no shoe horn job this, even if one or two clearances are a bit tight. The quality of the engine is pure Rover, as is to be expected, which does rather show up the MG (ie Austin/Morris) bits that surround it.

The spare wheel lives in a depression under the carpet in the back, while the pathetic tool kit (jack and wheelbrace) are housed in what appears to be a tatty bit of old carpet. Battery topping up is a real chore, the two six volt batteries sitting under the back seat, which has to be removed, along with an additional panel, before they are accessible.

Underbody protection consists of the basic electrophoretically applied paint and a bitumastic compound in the wheel arches and in other strategic areas. The well deserved reputation MGs have for longevity would seem to make this model a suitable candidate for one of the proprietary rust prevention systems.





max 10 25.4 clearance 5½ 13.3
min 6½ 15.9 Q boot capacity 6.6 cu ft

GENERAL SPECIFICATION

ENGINE
Cylinders V8
Capacity 3528 cc (215.4 cu in)
Bore/stroke 88.9 x 71.1 mm (3.5 x 2.8 in)
Cooling Water
Block Aluminium alloy
Head Aluminium alloy
Valves Ohv pushrod, hydraulic tappets
Valve timing
inlet opens 30° btdc
inlet closes 75° abdc
ex opens 68° bbdc
ex closes 37° atdc
Compression 8.25 : 1
Carburetters Twin SU H1F6
Bearings 5 main
Fuel pump SU electric
Max power 137 bhp (DIN) at 5000 rpm
Max torque 193 lb ft (DIN) at 2900 rpm

TRANSMISSION
Type 4 speed manual
Clutch Diaphragm spring
Internal ratios and mph/1000 rpm
4th overdrive 0.82 : 1/28.5
4th 1.00 : 1/23.4
3rd 1.26 : 1/18.5
2nd 1.97 : 1/11.8
1st 3.14 : 1/7.4
Rev 2.82 : 1
Final drive Hypoid bevel 3.07 : 1

BODY/CHASSIS
Construction Unitary
Protection Bitumastic compound in wheel arches and other strategic areas

SUSPENSION
Front Independent by wishbones, coil springs, anti-roll bar and lever-type dampers
Rear Live axle, semi-elliptic leaf springs and lever-type dampers

STEERING
Type Rack and pinion
Assistance None
Toe-in 1/16 in-3/32 in
Camber +1°
Castor 6¼° ± 1¼°
King pin 8¼° ± ¼°

BRAKES
Type disc front, drum rear
Servo Yes
Circuit No
Rear valve No
Adjustment Self adjusting at front

WHEELS
Type Alloy centres, chromed rims 14 in x 5J
Tyres 175HR x 14
Pressures 21F, 25R

ELECTRICAL
Battery Two 6V in series, 67 Ah
Polarity Negative earth
Generator Alternator
Fuses 4 in fuse box, 2 in line (auxiliary, hazard warning)
Headlights 2 x 75/50W circular

Comparisons

	Capacity	Price	Max	0-60	30-50	Overall	Touring	Length	Width	Weight	Boot
	cc	£	mph	sec	sec	mpg	mpg	ft in	ft in	cwt	cu ft
MGB GT V8	3528	2309	**125.3**	7.7	6.2	19.8	25.7	12' 9.0"	5' 0.0"	21.2	6.6
Ford Capri 3000 GT	2994	1651	119.5	8.6	7.7	19.4	24.7	14' 1.0"	5' 5.0"	21.1	7.8
Lotus Elan +2S (4spd)	1558	2708	121.0	7.7	8.5	21.0	26.1	14' 0.5"	5' 3.5"	16.8	4.2
Lotus Elan Sprint	1558	2436	121.0	6.7	7.8	22.2	30.5	12' 1.25"	4' 8.0"	13.6	3.1
Datsun 240Z	2392	2535	125.1	8.3	9.0	25.7	31.2	13' 7.0"	5' 4.0"	20.3	11.4
Morgan Plus 8	3528	1966	125.0	6.7	4.8	20.3	22.2	12' 9.0"	4' 9.75"	17.2	4.4
Reliant Scimitar GTE	2994	2480	113.2	10.2	7.9	19.2	27.9	14' 2.25"	5' 5.0"	22.7	-
Triumph Stag	2997	2533	116.5	9.7	7.6	20.9	25.5	14' 6.75"	5' 3.5"	25.9	3.6
MGB GT	1798	1547	107.6	11.6	8.8	27.4	33.0	12' 9.0"	5' 0.0"	20.1	6.6

When Motor originally published this article, they illustrated it with fourteen black-and-white photos of a light-colored MGB GT V8 bearing registration plate "HOH 933L". We've included ten of those original photos here, plus two newer color photos of Ken Smith's damask red MGB GT V8 and one photo of Dave Wellings' immaculate engine bay.

Motor
Surrey House, 1 Throwley Way
Sutton, Surrey SM1 4QQ
Telephone: 01-643 8040
Telex: 946564 BISPRS G

New Targets for the Old Firm

Philip Turner talks to MG's Chief, Leslie Lambourne

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Motor".
This article originally appeared in their issue for the week ending August 18, 1973.

Just to survive is no mean feat for any car company, for the dead outnumber the living by several hundred to one. When British Leyland was formed in January 1968, MG were in a vulnerable position. For their parent company, BMC, had in effect been taken over by their chief rivals in the sports car field, Triumph. Moreover, the new American safety regulations were playing havoc with their production and costs, and in consequence with profitability as a whole.

So when Leslie Lambourne took over the management of the Abingdon factory in 1969, he instituted a prolonged drive for efficiency and effectiveness. He argued that MG would not be judged on sentiment, but on a strict economic basis and it had to become too efficient to close.

This philosophy was supported by everybody who worked at MG, from the shop floor to a carefully selected management and supervisory team, and today, five years later, MG are building and selling more cars than ever before. Survival has been assured by a present reputation as well as a past history.

It has not been easy. Many of the great names at Abingdon who had given their lives and very considerable expertise to the company withdrew somewhat thankfully from this new struggle, and with them went the personality cult which had added so much colour to the Abingdon scene ever since the early days of Cecil Kimber. The closing of the competition department also emphasized the down-to-earth nature of the struggle that now faced the company. Fortunately, Leslie Lambourne was no newcomer to MG, for he had joined the company some ten years previously. He had completed his production engineering apprenticeship at Cowley and had then graduated from the job of process planning engineer to that of assistant to the works manager. After three years of involvement in production problems at the vast Cowley plant, his posting to MG came as something of a shock. Before actually taking up his new appointment as supplies manager, he paid a visit to Abingdon to see what went on there. Lambourne admits now that he had a quiet chuckle when he saw this rural factory with the cars being assembled on wheeled trollies instead of on a proper assembly line. It was such a contrast to anything he had seen before, but in his own words: "I came to scoff but remained to wonder, and the place has fascinated me ever since."

Kevin Richards' 1974 MGB GT V8 (photo by Kevin Richards, 2007)

He is now firmly of the opinion that the Abingdon way of building sports cars is ideally suited to their sort of specialized production. The jobs are inevitably repetitive but long time cycles and static work stations help to provide a higher degree of job satisfaction than

is possible in larger plants. Everyone has a bigger part to play in making each car and the compact size of the plant makes it all a very personal set-up.

Careful planning has resulted in a staggeringly high weekly production from what at first sight hardly seems like a factory capable of building cars in fair quantity. In one record-breaking week before the war when all those concerned packed over 80 working hours into the week they built 57 cars, and thought the limit of human endeavor had been attained. By the end of the 1950's, Abingdon were building 1,000 cars a week. Today they build 1,500 a week, around 1,000 MGBs and 500 Midgets, and they don't often stop unless somebody else stops them.

What of the future? The MGB first went into production in 1962, but is in greater demand than ever in MG's chief market, the United States, where some owners now have their eighth successive B. The main problem at Abingdon is building enough cars to meet the insatiable demands of their American dealers. There is, therefore, no great pressure to embark on the vast expense of tooling up for a new car, for even the advent of the very successful Japanese Datsun 240Z in the U.S. market does not appear to have hit MG sales. Moreover, says Lambourne, suppose we do decide to do a new car. If you start with a clean sheet of paper and design a two-seater front-engined open sports car it will end up looking very like a B.

Of course, everyone expects MG to go to a mid-engined sports car but although they have built a very successful prototype, MG chief designer Roy Brocklehurst is by no means convinced that this is the right layout. Most of the pressure for a mid-engined sports car comes from the fact that all racing cars are mid-engined these days. It makes sense to put the engine behind the driver in a single seater racing car for the width of the driver's body decides the width of the car. The engine can therefore be tucked in behind him leaving room in the nose for his legs and feet. But a mid-engined sports car offers no corresponding advantages and has many drawbacks, such as noise in the cockpit, the fact that in crash tests the weight of the engine is at the back behind the driver, and the difficulty of providing adequate luggage space. All these problems can be solved in exotic sports cars built in relatively small numbers, but are far more difficult to solve in a sports car produced in a fair quantity.

So it seems probable that the MGB in various forms will be with us for some time yet. Thanks to the originally very strong design, it has met all the American safety requirements with very few modifications. The most pressing problem now facing the Abingdon design office is the regulation stating that passive restraint must be provided in all 1975 model cars shipped to America. Intensive development and testing has shown that air bags can be made to work in an open car, and in fact in this type of car are easier to achieve than any passive restraints in the form of seat belts applied automatically when the doors close. Not that they like the idea of air bags. Experience has shown that air bags are not immune from failure to inflate, and when driving with one fitted there is always the nagging thought that it might suddenly go off and inflate of its own accord. What they desperately hope at MG is that opinion in the USA will swing around to making the wearing of seat belts compulsory, for this, they feel, is by far the best answer to the passive restraint problems.

With the MGB GT V8 the MG range acquires a potentially very successful new model. It will, however, be sold only on the home market, for the supply of Rover V8 engines is not sufficient to enable the new model to be exported in large numbers. The fear is that if only a small quantity is shipped to the United States, then the result could well be many cancelled orders for the B by potential owners hoping to obtain one of the scarce V8s. The upshot would be a fall in total MG sales. If, however, the reception in Britain for the new V8 is so favorable that the production of V8 engines has in any case to be expanded to meet demand, then eventually the new car may be sold overseas as well.

It is finding the correct solution to these and other problems that occupy most of the waking hours of the people of Abingdon, but they so obviously enjoy what they are doing that one is left with the impression that they will find the answers.

When Motor originally published this article, they illustrated it with one photograph of a light-colored MGB GT V8 taking a left hand turn at speed. The car's registration plate number read: "HOH 933L". We've substituted a newer, clearer photo because our copy of the original (a black-and-white photocopy) wasn't suitable. If you can help us locate the original photo, please contact us!

Founded 1924
MOTOR SPORT
MOTOR SPORT (Magazine) LIMITED Registered LONDON 292070
Editorial and Advertisement Offices
P.O. Box 35
STANDARD HOUSE
BONHILL STREET
LONDON EC2A 4DA
Tel: 01-628 4741 Telex 888602 MONEWS G

Road Test

The M.G.-B GT V8

Six years too late, comfortable seating, poor ride, excessive wind noise, fast and economical.

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Motor Sport".
This article originally appeared in their October 1973 issue.

There are those who say that certain sectors of the British motor industry would have been in a better state had the formation of the British Leyland Motor Corporation never occurred. Possibly, but in another respect it might have been an advantage if the merger had occurred a couple of years earlier than it did in 1968. The Motor Show of 1967 saw the introduction by the MG Car Company Ltd., then part of British Motor Holdings (the old BMC plus Jaguar-Daimler) of an ill-conceived and ill-received version of the M.G.-B fitted with a seven-main-bearing, reduced power version of the four-bearing six-cylinder engine which had powered the excellent Austin-Healey 3000. On the Rover stand at the same Show, the Solihull company, part of the Leyland Motor Corporation along with Triumph, introduced an outstanding 3.5-litre V8 engine into the familiar 3-litre bodyshell.

Within a matter of months that enormous merger took place in which Rover and MG plus their existing connections found themselves under the one corporate hat of the British Leyland Motor Corporation. Among the many inheritances to which the then Sir Donald Stokes succeeded were this unpopular M.G.-C and Rover's light alloy V8. The M.G.-C was stifled in late 1969 after 4,542 roadsters and 4,457 GT's had been manufactured, while the Rover engine went on to power the Rover 3500, the Range-Rover, the Morgan Plus 8, and other more specialized vehicles.

Had the merger taken place earlier shrewd engineers might have seen the possibilities of fitting the compact V8 into the M.G.-B bodyshell and the disastrous M.G.-C might have been stillborn. Certainly after the merger there were engineers at Abingdon who saw the possibilities, men who had experimented previously with fitting Daimler V8 engines into the M.G.-B (including the 4.5 litre power unit from the Magestic Major with, I think, an extra four inches longitudinally in the roadster shell's middle, though this car never ran. Presumably, because the management had been frightened by the M.G.-C debacle, they thought the time was hardly ripe to produce another large-engined M.G.-B, for a Rover-MG mechanical merger failed to transpire.

External differences are limited to the badges, twin door mirrors and Dunlop alloy/steel wheels. The bigger tyres (175 instead of 165) and one-inch raised suspension make the V8 tower above the normal GT. Lines are almost dateless, but some detail features are antiquated.

But one day two or three years ago Ken Costello, a former Mini racing driver from Chislehurst, Kent, arrived at the MG factory to show the aforesaid engineers his Rover-engined M.G.-B concoction, which he subsequently put into small-quantity production. Demand for Costello's V8 M.G.-B proved to be quite high, but he was to strike a problem when his supply of Rover engines from the

factory suddenly dried up. Somehow Costello managed to maintain production, but the reasons for the cessation of supplies seemed pretty obvious. In August this year MG introduced their own version of the M.G.-B GT V8, eight years after the introduction of the four-cylinder M.G.-B GT, five years since MG and Rover became part of the same firm, and six years too late.

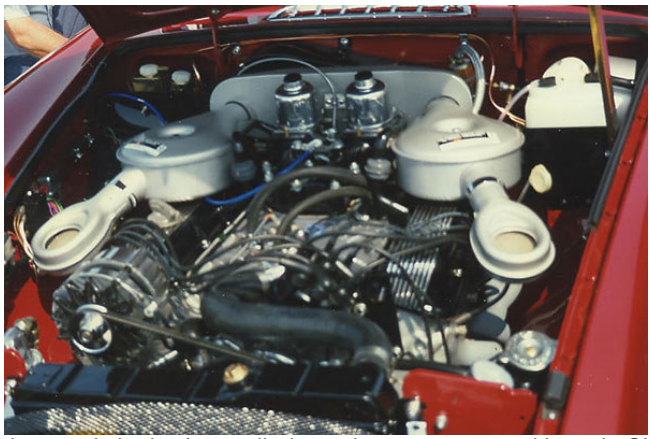
Rather than road test this car for the issue immediately after announcement, I chose to wait until an opportunity for a long continental journey presented itself and what better than a weekend visit to the ultra-modern Circuit Paul Ricard, east of Marseille in the South of France, to report a round of the European Touring Car Championship for our associated weekly journal. In all, nearly 1,900 miles of motoring of which 1,566 miles were completed in France, and 1,726 miles were added to the Smiths odometer between leaving our London office on Thursday lunchtime and returning to it 141 hours later.

In between times this remarkable alloy V8 had succeeded in propelling the 110 m.p.h. body design at cruising speeds of 120 to 130 m.p.h. for miles on end, on one occasion a 121 m.p.h. average being maintained for almost 100 miles at night and always the average autoroute speed remained in excess of 105 m.p.h. In spite of this hard usage the overall fuel consumption worked out at exactly 18 m.p.g. failed to drop below 17 and more representative of what the normal driving customer can expect, averaged 26.3 m.p.g. on one journey of 80 miles which was not on the direct trip, when speeds of 100 to 130 m.p.h. were maintained on an autoroute for 45 per cent of the distance and most of the remainder was in traffic-jam conditions on a main road hampered by road works.

However, even after this experience I am finding it hard to decide whether I really like this latest Abingdon product, or more to the point, whether I would choose one as a replacement for my TR6. It has some excellent attributes, but most of them are marred by some of its more dated features which I have tolerated in the M.G.-B but find hard to accept in a car which is brand-new in price (some £600 more than the 4-cylinder GT) and performance concept, yet is wrapped in the same familiar package.

The package most certainly is the same as the 4-cylinder version, the body being distinguished only by V8 badges on the grille, left-hand front wing, and left-hand side of the lift-up tailgate while there is only one exhaust tail-pipe. More distinctive are the new Dunlop 5J wheels with ventilated cast alloy centres riveted to chromed steel rims, most attractive and claimed to be the strongest wheels ever fitted by MG. Like the current M.G.-B wheels they are of 14 in. diameter and have 5J rims, but are fitted with 175 HR 14 tyres rather than the ordinary GT's 165 SR 14 or the roadsters 155 SR 14. The test car was fitted with Goodyear G800 tyres which when checked at Dover proved to be inflated to the 21 p.s.i. front, 25 p.s.i. rear pressures recommended for moderate speed, lightly laden conditions, although British Leyland had been aware that the car was likely to be driven at very high speed on the continent. Indeed they had kindly fitted yellow beam, correct dipping headlamps and supplied a too bulky continental touring kit, which incidentally was left untouched other than for reasons of curiosity, for this new British Leyland model remained 100 per cent reliable under the sort of duress to which it could have been forgiven for objecting. Raising the pressures to "gross car weight and sustained speed" settings of 26 and 32 made the car suitable for the intended high speeds, slightly reduced for the low-speed steering effort, but had no noticeable effect on the already extremely hard ride.

Opening the heavy bonnet (nowadays fashioned in steel by Pressed Steel Division instead of the aluminum of earlier cars, through given the advantage of a self-propping stay), reveals an awesome sight to 4-cylinder M.G.-B owners or surprised garage attendants. The Buick Special/Oldsmobile F-85 derived Rover V8 sits in there as though the body had been molded round it. Closer scrutiny reveals that this has been far from a shoe-horning job, there being plenty of room to work on the engine other than the plugs, hidden among the exhaust manifolding down between the air cleaners. The bulkhead has been slightly modified to make more room and indents in the inner wheel arches ensure the exhaust don't foul, modifications which will be inherited by the ordinary M.G.-B shells. A modified cross-member is fitted too, while twin thermostatically controlled and slightly noisy electric fans in front of the enlarged radiator allow a reduction in the engine's overall length.



The alloy V8 sits snugly in the four-cylinder's place, surmounted by twin SU carburetters with an integral float chamber and capped by smart alloy rocker covers.

The 3,528 c.c. (bore and stroke 88.9 x 71.1mm.) V8 engine with an MG octagon on its left-hand alloy rocker box retains the hydraulic tappets and all the other features which we have described many times in relation to Rovers. However, European emissions regulations have forced a reduction in compression ratio from 10.5:1 in Rover saloon application to 8.25:1 similar to the Range-Rover. Thus, the maximum power is down from 150b.h.p. DIN at 5,000 r.p.m. to 137 b.h.p. at the same figure, while 193 lb.ft. DIN torque at only 2,900 r.p.m. is claimed.

An unusual SU carburetter lay-out enables the powerplant to be accommodated beneath the standard bonnet. The Rover penthouse manifold is dispensed with in favour of a low-line one which mounts the twin SU HIF 6 (horizontal integral float chamber) carburetters at the rear of the engine where they are fed through a single collector box via twin air cleaners. Each air cleaner includes a bi-metallic valve which draws in warm air from sleeves on the exhaust manifolds when the engine is cold and draws in cool air when the pot is boiling.

The use of alloy makes the basic V8 weigh 40 lb. less than the 4-cylinder iron engine, though the addition of an AC-Delco alternator (BL supports GM again - hopefully this item will be more reliable than the AC-Delco distributor fitted to the Dolomite) and other ancillaries raise the weight to slightly above that of the four, to give a front/rear weight ratio of 49.4 per cent/50.6 per cent compared with 47.8 per cent/52.2 per cent.

Transmission has been toughened to withstand the torque. Higher intermediate ratios in the M.G.-C type gearbox match the power characteristics and reduce the torque load to the box. The gearbox casing is changed to accept a 9.5 in. Borg and Beck diaphragm spring clutch now with a ballrace withdrawal race instead of the rapid-wearing carbon bush found on most other British-Leyland cars. Some measure of the V8's increased capabilities (torque is almost double that of the four) comes with a change of final drive ratio from 3.91:1 to 3.07:1 to aid which already high gearing there is a Laycock LH overdrive fitted as standard, operative on top gear only.

Suspension modifications are remarkably slight. Front and rear suspension is raised one inch and the necessarily longer front coil springs in the wishbone suspension are uprated, as are the semi-elliptic leaf springs supporting the live axle. Dampers are exactly as on the ordinary M.G.-B which means that these lever-type items are likely to be similarly prone to leakage and doubtless the links on the rear ones will be similarly prone to breakage, of which I speak from former M.G.-B owning experience.

Current 4-cylinder M.G.-Bs have considerably more refined cockpits than their earlier brothers, though the pressed-steel, matt-black fascia remains much the same and in the V8 version reminds one that one is driving basically an old friend. However, on the V8 the Abingdon designers have at least retired that ridiculous hand-pump screenwasher which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the which has been a source of complaint since 1962 and replaced it with an electric variety operated along with the two-speed wipers and the overdrive by a stalk on the left-hand side of the steering column. Two or three times I managed to flick on the wipers when flicking the overdrive switch in or out hurriedly and though I became accustomed to the switch eventually, pulling it towards me to switch in the overdrive and out to switch it off felt an unnatural action. A gearlever switch similar to the Triumph-type would be preferable, albeit with an M.G.-B shaped knob, more suited to the position of the gearlever. Headlight dipping, flashing, and winking is carried out by a stalk on the right of the column and the horn is operated by the padded steering wheel boss. The 15.5 in. steering wheel looks, rather than feels, excessively large on first acquaintance, but I would not recommend fitting of a smaller one, while the "leather" rim is plastic, yet comfortable.

Instruments are much the same in layout as before though the tachometer and 140 m.p.h. speedometer are reduced in size from 4 in. to 80mm to accommodate a collapsible steering column. On a car which is described by name as a Grand Tourer and is so obviously suited to continental touring, the omission of subsidiary kilometer markings on the m.p.h. speedometer is nothing sort of disgraceful, particularly at a time when most European countries are tightening up on speed restrictions. A poorly-damped fuel gauge lies on the right of the fascia and a combined oil pressure gauge and water temperature gauge to the left below the rocker-type master light switch. Instrument lighting is controlled as always by a rheostat and maximum illumination could be improved.

A moulded plastic central console houses the courtesy-switch operated interior light, an excellent Radiomobile radio on the test car, switches for the standard equipment heated rear screen and hazard warning lights, a cigar lighter, the gaitered gear-lever, an ash-tray and an armrest, with lift-up lid to reveal a small yet useful locker.

Other interior features are much as on the existing M.G.-B GT: rubber mats in the front footwells, carpet on the transmission tunnel and side panels, and rear floor area; fold-down rear seat to provide more luggage space when the GT is used as the 2-seater which it is forced to be by lack of rear seat room (although a couple of very young children might be accommodated comfortably enough); a wide-opening tailgate which is difficult to move from the open position; two six-volt batteries continue to lie below a panel underneath the rear seat. Other detailed description of this so-familiar design should be unnecessary. However, worthy of comment is the astonishing fact that after 11 years in production the M.G.-B even in this latest V8 GT guise, has no keeps to hold the doors open.

The body design may be aged, but the result remains extremely attractive, the sort of shape which cuts across any class barriers. However its age and the stagnation in development since its introduction is indicated by the extraordinary high level of wind noise, the car's worst feature and the one deciding point which would cancel my custom. Even as low as 45-50 m.p.h. there are annoying hisses from the side-window areas, at 70 m.p.h. voice decibels must be increased to keep up a conversation and above 100 m.p.h. the noise is almost deafening. That this should be so is a tragedy for what could otherwise be such a quiet and refined long-distance touring car, for as in its Rover application the V8 remains smooth, silent and unfussed at all speeds. The root of the problems seems to be roof guttering rather than the front quarterlights, which I would not like to see removed, although the standard twin door-mounted rear-view mirrors (which folded back uselessly at speed) perhaps account for some of the noise.

There will be some potential customers who will dismiss the V8 GT as insufficiently distinguished in appearance from the straight-four. As a standard-production "Q-car" it reigns supreme, however, and left hundreds of amazed faces across the length of France. Often aggrieved faces too, for the fashion in which this big-engined M.G.-B disposes of Alfas, most Mercedes and BMWs and Citroens is remarkable. British Leyland claim conservatively "120 m.p.h. plus", whereas this particular road test car proved capable of a true 130 m.p.h., 4 m.p.h. more than another example tested by our weekly journal for which the performance figures are appended. The tall gearing gives 28.5 m.p.h. per 1,000 r.p.m. in overdrive top, so 128.25 m.p.h. is equivalent to a mere 4,500 r.p.m. Indeed on one occasion a gentle downhill stretch of autoroute saw the speedometer needle playing somewhere around the imaginary 150 m.p.h. mark and the rev counter into the red, before realization struck home and the throttle was lifted rapidly.

Straight line acceleration from rest is impressive, but more important is the tremendous urge which the torque gives in the gears, reminiscent of six-cylinder E-types. Gearbox ratios are excellent, offering maxima of approximately 39 m.p.h., 60 m.p.h., 98 m.p.h., and 122 m.p.h. in the gears, at maximum revs of 5,200 r.p.m., overdrive top being very much an electric fifth gear on this car, which comes in smoothly but cuts out with a jerk unless the clutch is dipped. There will always be those who say that the V8 is underpowered in its low compression guise; maybe for the few, but most owners will find 137 b.h.p. more than adequate.

The gearchange seemed quite happy and positive when rushed with the engine working hard, yet notchy and with baulking synchromesh when treated gently. Its worst aspect was an objection to the engagement of first or reverse from rest. To be fair this car had done but 3,200 miles when delivered and I would expect the change to be quite pleasant with 10,000 miles of loosening up.

Credit must be given for the highly effective brakes, which were capable of pulling down this 2,427 lb. car plus two people and luggage from 130 m.p.h. several times in quick succession without fade, the only sign of hard work being a slight roughness which disappeared when the brakes had cooled again. Just a hint of instability under such hard braking showed that the brakes are rather more advanced than the suspension. Certainly this is one area in which the B V8 scores over its Datsun 240Z competitor. Surprisingly it has not been found necessary to fit ventilated discs, though diameter is raised to 10.7 in. and they are of greater thickness. Rear drums are of 10 in. diameter and a servo is fitted. Overseas cars will have a twin hydraulic system; the home market purchaser must make due with a single circuit, a somewhat nonsensical situation.

Heavy steering has a lot to do with the handling feeling rather ponderous, a heaviness which fails to disappear at high speed. However, application of bicep strength is rewarded by positive by positive steering with plenty of feel and no free-play. Indeed the whole car feels remarkably taut, as indeed the GT always has. Balance is good, nominally an understeerer but not excessively so like the M.G.-C with its heavy engine and torsion bar front suspension. This degree of understeer makes the car stable and safe on fast bends. Too much application of throttle at the wrong time on low gear tight bends can provoke understeer or oversteer depending on the attitude of the car when the throttle is depressed, but in either case lifting off the power and steering correction returns things to normal. On the whole it seemed a much less "chuckable" car than the M.G.-B, feeling heavier largely, I would imagine, because of revised steering geometry; the rack has been moved forward one inch, reducing the Ackerman angle and making the steering more direct, but somewhat heavier. One thing the B V8 does retain is the general feeling of forgiving handling and consequent safety for which the M.G.-B has always been renowned.

Nylon-covered seats with standard adjustable headrests are exceptionally comfortable, far removed from the flat leather slabs of the early M.G.-Bs. But this seat comfort is necessary, for the stiffer rear leaf springs have created a dreadful ride at moderate speeds and bumps should be avoided for the sake of one's spine. As speed rises, the ride improves to some extent, on main roads and motorways at least, but this is one of the worst characteristics of the car.

Heating and ventilation is another bad feature - well, certainly ventilation which was more to the point during my test. Fascia vents are fitted, but these are operated only by ram effect, so it was a case of boiling under the hot sun in South of France traffic. When I owned an M.G.-B I grew used to those A55 heater control knobs on the fascia: to return to them was no pleasure. I would have thought that a 2,300 pound motor car warranted rather more than a one-speed heater fan, which is noisy into the bargain and o out of balance on the test car that at traffic speeds it shook the bulkhead and clutch pedal. A sun-roof would be a welcome extra, which most M.G.-B GT owners seem to have fitted in any case.

(British V8 editor's note: Judging by group photos taken at MGB GT V8 Register meetings, sun-roofs were indeed an extremely popular "extra". What did they cost? We have a University Motors dealer invoice for an MGB GT V8 purchased September 7, 1973 which shows an "installed" price of £103 for a Tudor Webasto Sunroof.)

The M.G.-B GT V8 is an answer to the oft repeated cry for a mass-produced, reasonably-priced British 2-seater, a neglected field since the demise of the Daimler SP 250 and the Sunbeam Tiger. But is it the real answer? I think not. It is not a sports car in the same sense as the aforementioned models, although a soft-top model might have been more so, but is not to be produced, presumably for reasons of torsional stiffness. On the other hand it is a fast, but not so Grand, Tourer. The grandness of the GT is tarnished by the wind noise, the harsh ride, a 12-gallon petrol tank (alright for the British Isles but requiring rather too frequent filling when the full performance potential is realized on a continental trip) and the other more minor dated features. Had the new wine

been put into the old bottle a few years ago and a programme of continuous development maintained, then MG could have had themselves a world-beater. As it is, that superb engine and the excellent performance have not received the justice they deserve. It's a likeable car, but has too many criticisms to make it covetable. The price of £2,293.96 plus £16.92 for inertia seat belts is not outlandish, buys many "extras" including tinted glass, overdrive, heated rear screen, headrests and so on, but also buys many 11-year old features which could have been designed out. -C.R.

Performance
0-30 m.p.h., 2.8 sec; 0-40 m.p.h., 4.0 sec.; 0-50 m.p.h., 6.5 sec.; 0-60 m.p.h., 8.6 sec.; 0-70 m.p.h., 12.1 sec.; 0-80 m.p.h., 15.9 sec.; 0-90 m.p.h., 19.8 sec.; 0-100, 26.9 sec. Maximum speed: see above! Fuel consumption: 17-26 m.p.g.

When MotorSport originally published this article, they illustrated it with two photos. The first showed a parked, dark-colored MGB GT V8 with registration plate number "HOH 932L". A second photo showed the engine compartment. We've substituted similar, but newer and clearer photos because our copies of the originals weren't suitably clear. If you can help us locate the original photos, please contact us!

MGB V8 Goes Like a Shot From a Gun

by Clive Birtwistle

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed complete and unedited from the "Midweek Observer and Gazette" of Tuesday, January 14, 1975.

Details at a Glance

Engine:	Aluminum 3528cc V8, 137 bhp (net)
Brakes:	Disc front, drum rear with servo
Suspension:	Independent coil and wishbone front, semi-elliptic rear.
Gears:	Four speed all-synchromesh remote floor change with overdrive.
Maintenance:	4 grease points, oil change and service every 6,000 miles.
Performance:	Speed in gears - 1st 40, 2nd 62, 3rd 96, 4th 127. 0-60 7.8 seconds.
Consumption:	24 mpg.
Special features:	Abundant performance, taut handling.
Price:	£2,537.73.

Midweek Car Test

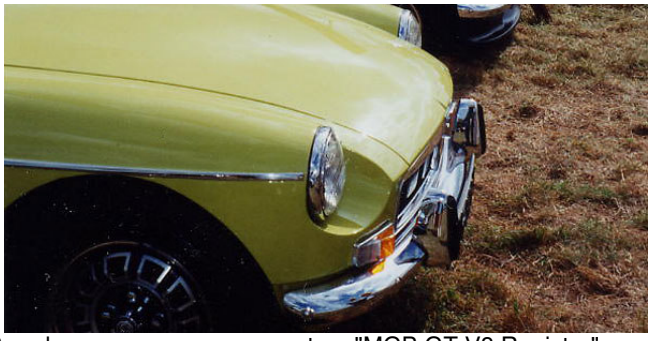
Putting the Rover V8 engine in the MGB GT gives new zest without loss of stability and produces a car that calls for the open road. Flexibility is not lost, although the gearing is fairly high, but the high power-to-weight ratio means jerkier progress if the car is not driven with finesse. The power shows to full advantage at the top end of the range, with effortless cruising at 70mph plus.

It is an exciting car, particularly for those who favour the deceptive performer, for although it looks like an MGB GT the shot-out-of-a-gun acceleration reveals the difference. From standstill, 60mph is reached in 7.8 seconds and 100 mph in 24 seconds.

The firm ride is an MG tradition. A little skittishness at the rear is compensated by direct steering, allowing a quick twitch to straighten up and produce the sort of handling MGs are noted for.

Confidence

Driving position too is right, set on a recline with good support and correctly shaped seat. The MG has always been acclaimed for the confidence it instils and this is no exception. Besides the handling, including good directional stability that goes with a high steering ratio, there is powerful servo braking. Mechanically the car is quiet, but wind noise interferes with radio reception above 50 mph.



Proud owners compare cars at an "MGB GT V8 Register" meet.

Gear changes are short and crisp and can be taken as fast as the driver likes but first and second gear is a little too close to third/fourth, causing some wrong slotting and first gear is rather high, calling for attention to the revolutions to avoid stalling.

The over-drive is a delightful feature, contributing to good fuel consumption on the longer journey and effortless cruising. It is engaged by flicking a stalk on the column which also controls screen wash and wipe. A second stalk operates the usual indicators, horn and headlight dip and flash. Not so convenient is a light switch lost amoung the array of items behind the leather-bound alloy steering wheel.

Instruments include two large dials for speedometer and revolution counter, clearly seen through the wheel, with smaller dials indiscriminately scattered for fuel, temperature and oil pressure. Heating and venting controls too are higgledly-piggledy.

There could be more ventilation than is provided through the centre fascia slots, although there are quarter lights - but this means more wind noise.

Besides good seating, with rake adjustment and detachable head restraints, the driving position is well arranged, with adequate room and a satisfactory field of vision aided by well positioned exterior mirrors. Arm rests are provided on the doors and in the centre, where there is also a narrow oddments receptacle. There is a small lockable cubbyhole and a bin by the passenger's legs. Trim is pleasing with additional padding on the doors.

Although the GT style offers a rear bench, this could only take two very small children. But it does provide a very useful extension of the boot with the seat back folded. Access is through a large tailgate incorporating the back screen. The boot is fully carpeted and trimmed.

Although the V8 engine fills the underbonnet compartment, there is good access to the distributor, twin carburettors and alternator. Plugs are hidden but the oil filter is to hand. You have to lift the rear seat and remove a panel to get at the batteries. An oil cooler is standard.

Next week: Austin Maxi 1750.

Note: When the Midweek Observer and Gazette originally published this article, they included a nice black-and-white photo of a dark-colored, chrome-bumpered MGB GT V8, registration plate "HUD 411M", parked at the edge of a field under a tree.

The pricing quoted above appears to reflect a 10.6 percent increase from model launch, just sixteen months earlier.

BRITISHV8 READ IT HERE
The Online Journal of the Modified! Classic Sports Car Community www.britishv8.org

The cumbersome MGC was a flop but the MGB V8 couldn't fail with its lightweight Rover engine. So why were so few made? Why is it not made now? Chris Harvey looks at the fate of MG's cut-price supercar that is now valued as an appreciating asset as well as an appealing road burner.

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

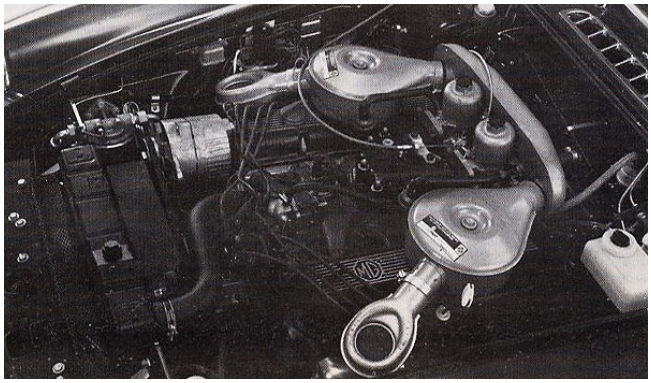
Re-printed unedited by exclusive written permission of "Classic and Sportscar".
(This article originally appeared in the June 1979 issue of "Old Motor" magazine, sometime between 1979 and 1983, Old Motor magazine was re-launched as Classic and Sportscar.)

You know what they say about MGs: they are the most popular, loveable sports cars in the world, but they don't go fast enough. You can just about top the ton in the current antique, the MGB, if you live on the right side of the pond; if you are unfortunate enough to be an American enthusiast, you'll be lucky to squeeze 90 out of your emission-strangled B. Why are they so popular, then? Because they are the last rip-roaring hair-in-the-air, well-nigh indestructible sports car in full-scale production. The B might ride like the rocky road to Dublin but it will cling on when most of the rest have slid into oblivion. All it needs is a bit of oomph, so it is amazing that Abingdon's attempts at producing a really quick car have met with commercial disaster. Both the MGC (MGB plus two cylinders) and the MGB GT V8 (MGB plus four) were good for more than 120mph, but the C handled like a barge because the engine was too heavy and the V8 was killed by politics and the totally false impression that it gobbled fuel in the height of an energy crisis. In fact they made only 2591 V8s; with the exception of the Boy's Own Paper hot rod, the MGA Twin Cam (of which 2111 were built) it was the smallest production run from Abingdon since the war. As the V8 was also the fastest production MG, and one of the best handling, it immediately became a collector's piece as soon as they stopped making them in July 1976. Seems like we never know how good a car is until it's gone.

You'll have to pay up to £4000 for a really good new one now, the price of a new MGB and double that of the equivalent four-cylinder made at the same time. Nearly half (1072) of the V8s made had a chrome front - a body that looked exactly like that of the equivalent MGB GT; the rest were the rubber bumper model made from October 1974 to meet short-sighted U.S. Federal safety regulations. These later V8's also suffered from a spot of penny-pinching in that British Leyland omitted to fit anti-roll bars front and rear to make up for the deterioration in handling brought about by raising the ride height to help meet the new bumper regulations. Actually, all the production MGB V8s had a slightly higher ride height because they had fatter 175-section tyre and alloy road wheels against the four-cylinder's 165 x 14 wires or steel wheels. Apart from a modest sprinkling of V8 badges, their wheels, and slightly higher ride height - giving a more muscular appearance - were the chief way of telling them apart from the four-cylinder cars, apart from driving them, of course.

The difference in performance imparted by the V8's all-alloy 3528cc Rover engine was fantastic. It was good for 124mph, with a 0-60mph time of 8.6sec and standing quarter mile in 16.4sec against the four-cylinder car's 102mph, 13sec and 18.5 (reduced to 96mph, 14.6 and 20.2 in 1973 Federal specification). Fuel consumption was very good: 25mpg against 27mpg from the four-cylinder. People just assumed that an MGB with a V8 engine was thirstier than the lower-powered car and British Leyland did little to quell their fears apart from coughing up a generous quota of road test cars for the popular magazines of the day and leaving people to find out for themselves. An advertising campaign emphasizing this point would have done the world of good for V8 sales, but, then, it was never a popular model in corporate circles.

British Leyland only authorized production in what seems a fit of pique. Down at Abingdon they had been fiddling about with MGB V8s for years. Designer Syd Enever tried all sorts of combinations, including Coventry Climax and Daimler engines when Jaguar joined the fold in 1968. It was obvious that his stiff MGB shell would take a more powerful engine provided it didn't weigh appreciably more than the existing B-series unit's 358lb. The MGC of 1967 had used a modified MGB shell and proved to be a disaster when BMC's redesigned C series 2912cc engine tipped the scales at no less than 567lb. "It should have been half a hundredweight lighter," said John Thornley, the man in charge of MGs at the time. Rover's magnificent alloy V8 weighed about 320lb. (and slightly more than the B series engine when equipped with beefed-up ancillaries), but did not come into the reckoning for a variety reasons in 1967: Rover needed all the engines they could produce and fitting it to an MGB would have increased the demand considerably. Beside MG and Rover were not yet in the same commercial group, British Leyland.



Rover's ex-Buick light-alloy V8 shoehorned neatly into the MGB's engine bay:
It weighed 250lb less than the straight-six C and gave more power.

The history of Rover's wonderfully versatile engine is fascinating. This pushrod unit had been developed from a General Motors engine used between 1960 and 1963. The Americans stopped production when their thin-wall iron casting techniques improved sufficiently to make the lightweight V8 an oddball in their range. It was spotted accidentally by a Rover executive and built under license for the company's saloons and later the Range Rover. Fitting it to the MGB in 1967 would have involved considerable expenditure in meeting anti-emission regulations and could have caused problems with General Motors who did not want to see a cheap, and fast, MGB competing with their Stingray, and using one of their engines.

(British V8 editor's note: Fitting a discontinued GM engine into MGC wasn't a realistic option when the MGC was being developed. Remarkably, many people fail to note the obvious American alternative: the small-block Ford V8 engine that was already being used in British-made Sunbeam Tigers. The timing could have worked out so well: with purchase of Sunbeam by Chrysler, Ford had reason to look for another customer. The Ford 289 V8 in Mark-2 Tigers was 150lbs. lighter than an MGC six, yet it produced far more power and torque. Ford had to comply with the same anti-emission regulations mentioned above, so MG's engineering costs would have been largely mitigated. The MGC chassis provided a stronger, stiffer platform than the Sunbeam Tiger, superior handling, and a GT bodyshell option. MG's much larger dealer network, compared to Sunbeam, would have made an MGC with factory-installed Ford V8 a great success.)

However, during 1970, when MGC production had been abandoned, a garage proprietor from Kent, Ken Costello, who had raced MGBs, started experimenting with fitting the Rover V8 engine to the cars of customers who wanted more performance without the handling problems of the MGC. It was an extraordinarily attractive unit, producing 185bhp at 5000rpm in the 10.5:1 compression ratio form used in Rover saloons and 137bhp in the 8.25:1 Range Rover form. The torque, 226 lb. ft. was massive and proved to be something of an Achilles heel to the Costello V8s when mated with the standard MGB all-synchromesh gearbox it was rather too much. However, other advantages of the installation tended to blind people to this problem; a variety of stiffer rear springs were available to provide tramp-free take-off and the performance was phenomenal - 130mph, 0-60mph in 7.8sec. and the standing quarter mile in 15.8sec with the heavier GT version. This weighed 20.5cwt with a fiberglass bonnet reshaped to clear the Rover engine's twin SU carburetters. Roadsters weighed around 1cwt less and were slightly faster.

There was one additional problem with the roadster in that its shell was not really stiff enough to take all that torque. These bespoke Costello cars retailed at around £2600 in 1972 with the larger (9.5 in.) MGC clutch and higher rear axle ratio (3.07 against 3.9:1); more than double the price of a standard MGB GT at the time. Nevertheless, they received considerable publicity and demand was quite high. After the debacles of the MGC, British Leyland were stung into action. They stopped supplying new engines to Ken Costello and started work on their own MGB V8. Costello soldiered on with exchange units and the odd errant Buick, but there was no hope of him setting up a production line.

Meanwhile Abingdon ran up their first MGB with Rover power in December 1972; it was an extraordinarily neat conversion of the GT shell using the Range Rover version of the V8 and SU carburetters as they considered that its 137bhp and 193lb. ft. of torque were

quite sufficient for the gearbox and rear springs, which were stiffened in any case. A special inlet manifold was used so that the carburetters could be squeezed under a standard bonnet (British Leyland had come in for considerable criticism from America for the bulges on the MGC bonnet) and a higher ratio overdrive gearbox with 3.07:1 rear axle. Fuel consumption was thus improved to around 25 mpg against Costello's lower-geared cars, which returned about 18mpg.

Some slight modifications were needed to the cars' shells (mostly rounding off corners in the engine compartment) and it was decided to standardize this with the four-cylinder machine. Thus, all the MGBs from mid-1973 when V8 production got under way were built with this new shell. Only the GT version was built by the factory, however, who were worried about the roadster's rigidity. It was intended to export the MG V8 to America (where the vast majority of MGBs were sent) and seven left-hand-drive cars were built in the development department at Abingdon alongside ten right-hand-drive ones in January and February 1973. However, the same situation that had gone against the MG V8 in 1967 still applied and there was the problem that there was hardly sufficient room under the bonnet for America's increasingly bulky emission equipment. Eventually, the MGB GT V8 was announced in right-hand-drive form only in August 1973. Two of the left-hand-drive cars were sent to the New York Motor Show and were returned to Abingdon later to join the other five, which were retained until 1974 and 1975. Six were then sold to European customers and the other went to British rallyman Michael Pearson, who campaigned it with considerable success. Swiss MG enthusiast Thomas Studer bought one of the other left-hand-drive cars and races that on the track.

Interior of the first '73 MGB V8 - simple to the point of being austere, but comfortable and cosy with it. Seat had plaid cloth upholstery.

Unfortunately, just as the MGB GT V8 was launched, Britain was about to lurch into a deepening energy crisis and this, with the difficulties in building enough V8 engines, kept production down. The price didn't help either: £2294 in the United Kingdom against £1547 for a four-cylinder MGB and only £1824 for the nearest competitor, the Ford Capri 3000 GXL. The V8 could have been offered for £1800-1900, but British Leyland figured that Costello's had sold for much more and there was a market for a limited amount at the higher price. This was not to prove the case, however, and production petered out (1069 cars built in 1973, 854 in 1974, 489 in 1975 and only 176 in 1976) before the V8 was no more. One more factor that went against it was that British Leyland decided to drop the MGB GT in America in 1975 to give their new hope, the Triumph TR7, a clear run.

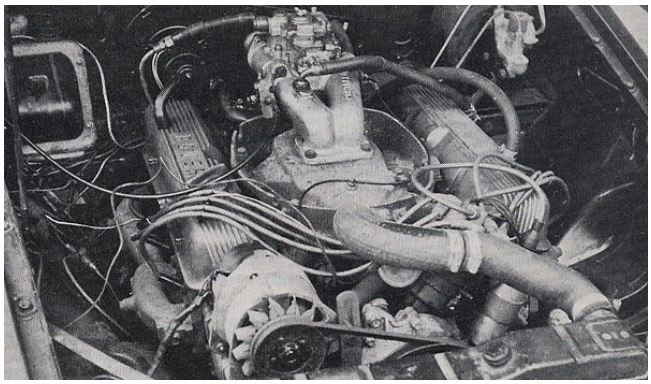
As with any MGB, you have to check for rust in the sills and wings of an elderly example (this can be quite easily prevented by modern rust-proofing agents); with the V8s be especially wary of a noisy gearbox (even in its 137bhp standard form, the box was on the limit of its capacity), and anything other than a very smooth engine. The switches on the V8's twin electric fans are notoriously unreliable and can lead to unexpected overheating with subsequent engine trouble.

Such is the interest in the renaissance of the MGB V8 that rumour has it that British Leyland are about to make more. This has been hotly denied by official sources, who make the point that the four-cylinder cars are still selling so well (and pass the half-million production figure this year) that they have their work cut out producing enough of them!

Chatham's open V8

After the demise of the production cars, there was still a certain demand for the MG V8, and Costello continued to convert the odd car. Another garage proprietor and racing driver, John Chatham wondered what he could do to alleviate the situation. What the enthusiasts really wanted, he reasoned, was an open MG with V8 performance.

With the considerable experience of running and building Big Healeys and ex-works MGCs behind him, Chatham decided to use the MGC shell for his prototype. This was much stiffer than that of the MGB roadster and he had lots of ex-works parts in any case. He then obtained a modified V8 engine giving around 200bhp fitted with a Costello Weber conversion, and mated it to an MGC gearbox. To get over the MGB V8's gearbox problem, he fitted works straight-cut gear clusters and competition overdrive on third and fourth with a 3.7:1 limited slip rear axle, 14in. x 7in. Minilite wheels and low-profile tyres. Suspension and braking were uprated to competition standards and the performance was shattering.



Chris Harvey's Chatham-converted V8-engined MGC roadster on Minilite wheels and 7in. tyres. With modified 200bhp engine, the car will sprint to 60mph in under 6 seconds.

When I first tried the car soon after it was completed in Bristol in February 1978 it recorded a tyre-smoking 5.8sec 0-60mph time with an unmentionable top speed! Like all MG V8s, its 50/50 weight distribution gave it dream-like handling and it took no sales talk from Chatham for me to buy the car. In 35,000 miles since then it still retains the V8's turbine-like power and has shown me why these machines are sought so avidly be collectors.

You can still buy a new MGB GT V8. After converting a number of second hand cars for customers, Chatham built his first all-new V8 in January. Using a Rover SD1 engine and five-speed gearbox with Triumph TR7 C8 Offenhauser manifold and Holley four-choke carburetter, plus Minilite wheels, this machine cost £8200, less the value of the new four-cylinder engine, gearbox, wheels and tyres removed.

Nigel Ricardo's Brooklands Green MGB GT V8 (number 1512 in the production series, originally Harvest Gold)

Nigel Ricardo' Factory-Original 1975 MGB GT V8

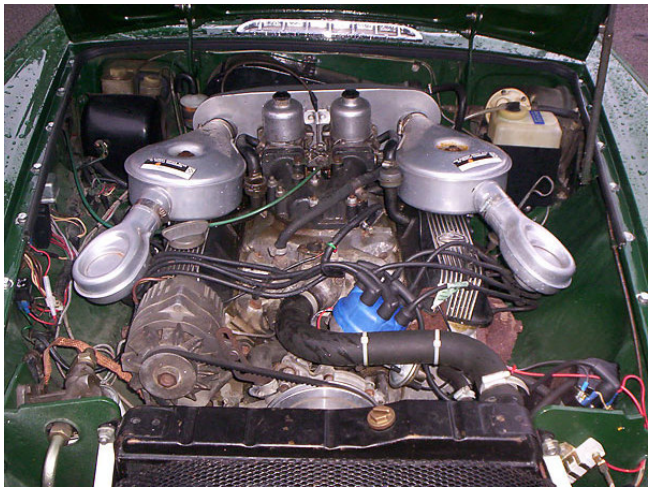
as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Owner: Nigel Ricardo
City: Dorchester, Dorset, UK
Model: 1975 MGB GT V8 (factory)
Engine: Rover 3.5L V8

Note: This car is currently listed for sale on the British V8 Message Board.

This car was built between March 15th and 20th 1974, and was thus one of the last chrome-bumper MGB GT V8s. However, it wasn't registered until February 17, 1975.

Engine:	engine professionally rebuilt in 2004. Pertronics electronic ignition.
Cooling:	twin Facet fans in lieu of original fans.
Suspension:	Spax telescopic shock absorber conversion on front and rear.
Wheels/Tires:	original Dunlop composite wheels and Continental tires.
Body Mods:	a BL front spoiler has been installed. The original bonnet has been louvered. A Webasto sunroof has been installed. Both quarter panels, both inner wheel arches, both front fenders, the doors, the floorboards and both inner and outer sills have all been professionally replaced.
Interior:	wood steering wheel and wood veneer dashboard trim. JVC stereo with CD player and motorized antenna. New carpets, seat coverings and interior trim.
Mileage:	120,000 total miles. The full professional restoration was completed in 2004.




HPU 235N


V8

Notice that the rear bumper has twin license plate lamps mounted in it.
This style was only used for six months in 1974, and is no longer available.

In response to a question on the British V8 message board about how the MG/Rover low pressure positive crankcase ventilation system works, Nigel kindly took several additional photographs.

Kevin Richards' Factory-Original 1974 MGB GT V8

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

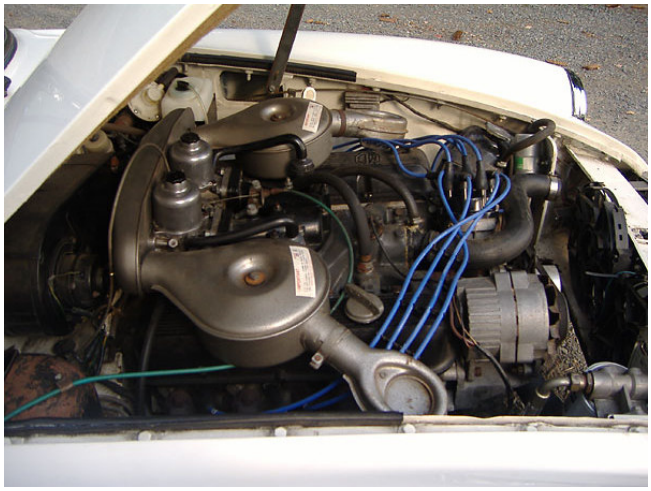
Kevin is beginning restoration of an MGA Sebring racecar, so he's obliged to free up some garage space and raise a little cash by selling this well-loved MGB GT V8. When we spotted the "Craig's List" ad and got in touch, Kevin generously invited us to come over and photograph the V8. The "glamour" (exterior) shots seen here were provided by Kevin, whereas the detail (mechanical and interior) photos were taken by Don Moyer, British V8 Staff Photographer.

At the time of Don's visit, the radiator had been removed to be re-cored. It's conspicuously missing from some of the photos, but with the radiator out of the way we can see construction details that are usually hidden.

Plate "GOF 929N" tells us this car was first registered in Birmingham, between August 74 & July 75.

The original twin electric fans (with yellow blades) have been replaced here with more modern fans. Also, the original cast iron exhaust manifolds have been replaced with tubular "block hugger" headers.

The finned-aluminum electronic module visible here on the far-side fender-well is part of a "Lumenition" ignition system. It's "aftermarket", but can probably be fairly called a "period modification". An English gentleman named E.H. Ford invented the Lumenition (infrared) optical-trigger ignition system in 1968.



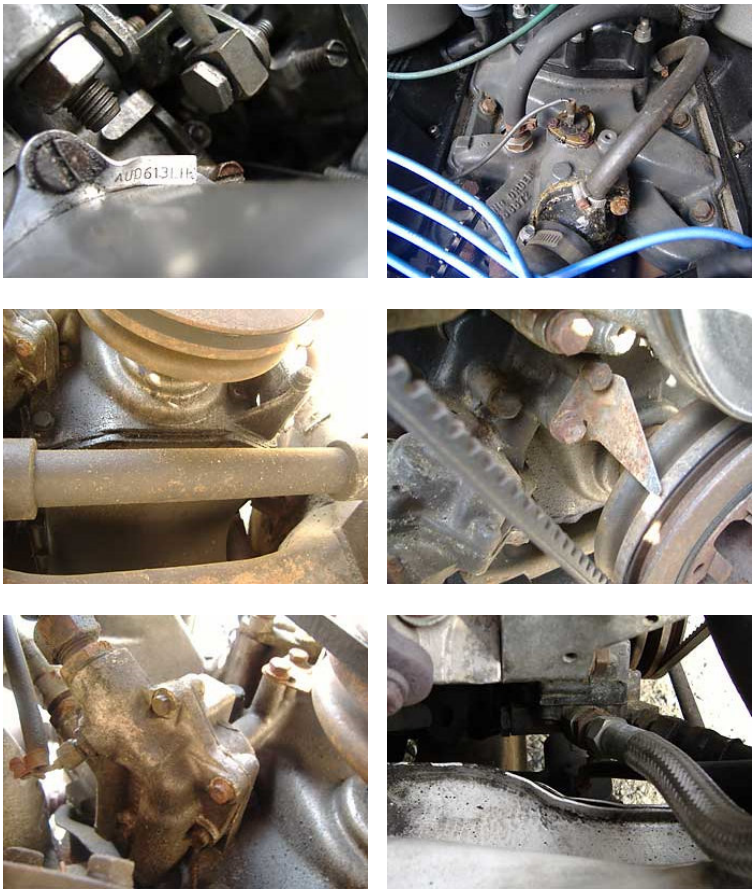
When Rover installed these engines in their saloons and utility vehicles, they centered the SU carburetors over the intake manifold. Keen to keep the carbs under an un-modified MGB hood, MG engineers designed an adapter that shifted carburetor placement rearward as shown here.

MG developed the engine installation to comply with both European and U.S. anti-pollution regulations. The thermostatic air cleaners draw warmed air from near the exhaust manifolds to help the engine warm-up quickly. A bi-metallic valve allows the warmed-up engine to breathe cooler air. (The phillips screw head seen here isn't original.)

"Fit Only British Leyland or Unipart Products as Replacements"

Kevin told us a previous owner had the engine rebuilt, and selected a performance camshaft (of unknown spec.) There's also a pretty good chance the rebuilder may have chosen higher-compression pistons. In stock form, MGB and Range Rover versions of this engine came with only 8.25:1 compression-ratio pistons. When these engines are being rebuilt, it doesn't cost extra to select higher-compression pistons. Rover "3500" sedans, for example, came with 10.5:1 pistons. Buick versions of the engine started at 8.8:1 compression.

Dual this and dual that... right down to dual throttle and choke adjustments.

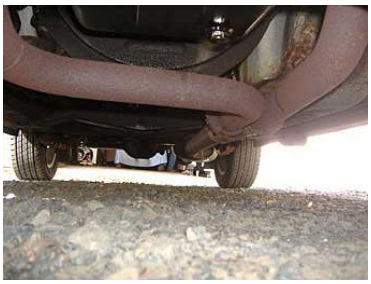


These two photos show how the original MG oil-pump valve-body accomodated their remote oil filter.

Very few MGB V8 conversions have oil coolers, but the factory installed them (at significant expense).

MGB GT V8 came with Delco alternators. (This one is stamped: "7982707 19 HO4 NEG DN460 12V 45A".) The choice of Delco is interesting because Lucas alternators were used on all other MGBs, and also on Rover (3500 & Range Rover) V8 vehicles.



Believe it or not, the original cast iron exhaust manifolds were fragile (and replacements are scarce).
A wide range of replacement headers are available. The style shown here allows otherwise standard piping.


A remote power brake servo and oversized rotors for the front disc brakes were standard equipment on MGB GT V8. Although by all accounts the MGB GT V8 brakes worked quite well, North American readers may be surprised to learn that, for the English market, MG was very late to equip their cars with tandem master cylinders. Shame on them!


Clutch slave cylinder (the spring isn't original)... and steering u-joint, which MG moved rearward compared to previous MGBs.

Magazine reviewers raved about the comfortable seats MGB installed in the MGB GT V8 model. They reported that the nylon upholstery helped keep aggressive drivers from sliding around. The seat upholstery shown here is probably original. Speaker grilles, chrome window cranks, and bright door sills aren't original.

MG made collapsible steering columns standard on the MGB GT V8, although they didn't upgrade to an impact absorbing dashboard. (Both of these highly-effective safety features had been mandated by the Federal "Safety Act of 1966" so North American MGBs were ahead of the game.) To accomodate the larger steering column, MGB GT V8s featured smaller-diameter speedometers and tachometers than regular home-market MGBs.

This steering wheel is from a 1979/80 "MGB LE". The original V8 wheel would've been larger diameter, and it would've had "filled in slots" in the three spokes (where this steering wheel has round holes.)

The righthand-side stalk switch controls lighting functions: turn signals, beam dip, and hi-beam flash. (The end cap appears to be missing.) The key switch has a peculiar little button for releasing the key.

Since GT stands for "Grand Touring", you might expect kilometer markings for touring in Europe or Canada.

This Lucas battery disconnect switch is a smart "period modification".
Above it... the "vestigial" rear seat that complicates access to the batteries.

Sunroofs were a very popular dealer-installed option on MGB GT's, apparently especially on the V8s. There were several popular manufacturers... this specimen is a "Sunway" model sunroof, manufactured by Weathershields Ltd. of Birmingham. That company has changed ownership several times now (from Britax, to Hollandia, and now to Webasto GMBH). How does this folding sunroof work? We'll show you!








The plate says: "Weathershields Ltd., Birmingham S., England, Sunway Roofs. World Patents"

The MGB GT V8 model came with stiffer leaf springs (550 lb vs. 510 lb) to combat axle tramp. This spring pack appears to have been modified, with one leaf cut short (possibly to lower ride height.) The telescoping shock absorbers aren't original though; MG installed regular knee-action shocks on the MGB GT V8s.

The distinctive MGB GT V8 wheels had cast aluminum centers riveted to chromed steel rims.

This car is missing its "V8" fender badge. (One would normally be mounted left of the British Leyland badge.)

The factory's mounting of the "V8" grille badge apparently varied from car to car, even in original press photos. This is the closest to center we've seen it. Usually it's about halfway between bumper overrider and centerline.

Curiously, this car has a British Leyland badge on the righthand fender (where we don't usually find one).


GDF 929N

Dave Wellings' black MGB GT V8 (number 0974 in the production series) was completed November 5, 1973.

Dave Wellings' Factory-Original 1974 MGB GT V8

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Owner: Dave Wellings
City: Yorkshire, UK
Model: 1974 MGB GT V8 (factory)
Engine: Rover 3.5L V8
Restoration performed by: Owner

Dave wrote:

I bought 0974 in April 1986 from Mike Beales at the MGOC at Swavesey. It had one owner for the first ten years, an accountant from London. It was bought from University Motors in Epson, and if you look carefully at the dashboard, you'll see there is a U.M. Medallion which I sourced at Silverstone - way back. There's also a U.M. road tax disc holder on the screen and a U.M. dealer strip in the rear window which I'll photograph if I can remember.

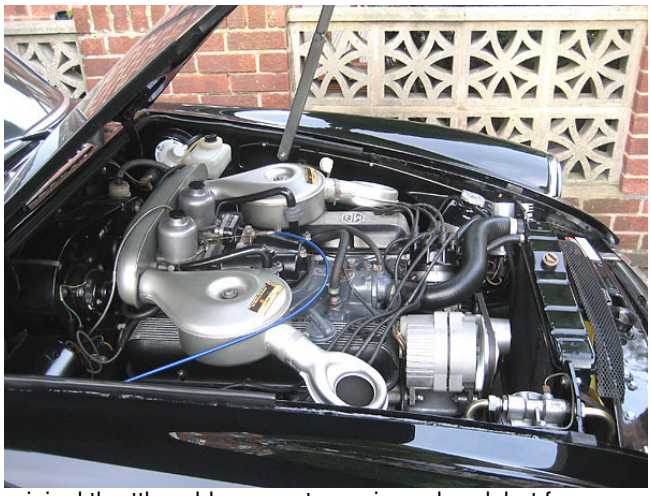
When the second owner bought it he decided to turn the mileage back, reducing it from 60,000 to 40,000 miles. This was a stupid thing to do since it was such a good car. This only came out when I contacted the first owner for any history and got all the old bills and MOT certificates. Mike bought it next without knowing this, and didn't keep it long because he was into MGA's. The rest is history. I stripped the car to a bare shell in 1990 and spent two years restoring it... a labour of love.

Apart from uprated lever arms, 3/4" front sway bar, Lumenition ignition, and an electronic SU fuel pump it's standard. Most of the interior is original except for the centre console and the light switch.

I have the full history from 1974 except for that one MOT Certificate.

Although this engine looks very original overall, several non-standard features are visible in this view. Note the replacement cunifer (copper alloy) brake lines and the armored fuel hose. In the lower right, note the Lumenition ignition module which is sited in front of the radiator bulkhead to keep it cool.

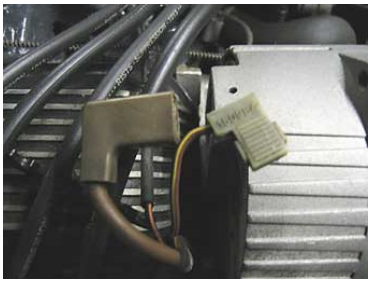
The MGB GT V8 radiator core measures 14.25" from tank to tank. Thus, it provides a 36 percent larger surface area compared to the 10.5" tall radiator core MGB installed on chrome-bumper 1.8L cars.



Most if not all factory-original throttle cables were turquoise colored, but for years only blue cables were available as service parts. Notice the mechanical oil pressure gauge take-off from the remote filter mount. Later in production, the factory moved this to the oil pump housing due to customer concern about delayed measurement from owners who were used to the MGB's flicking oil gauge. At the changeover point (somewhere around chassis 1200) the factory built V8s with a blanking plug, until stock was used up.

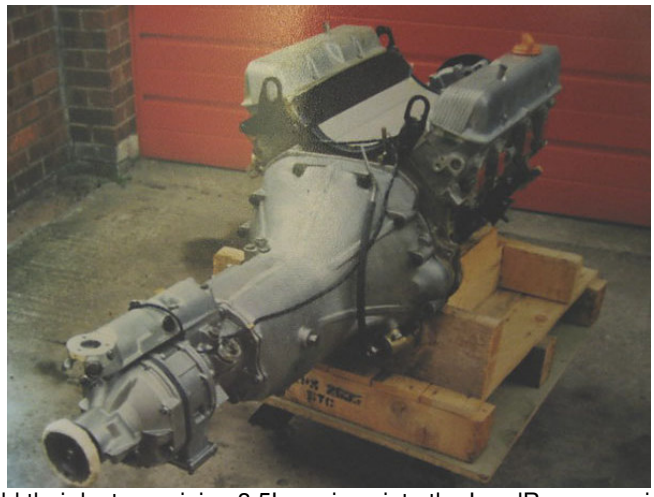
The factory painted intake manifolds and carburetor adapters, even though they were aluminum.
Note: the gray cylinders (between valve covers and carbs) are flame arrestors, not PCV valves.

At the bottom of the lefthand photo, a coolant temperature capillary tube is covered by a black protective sleeve. Just above it, another black tube carries overflow from the carb. It joins the other carb's overflow at a "T" and then drops vertically into a metal drain tube. The crankcase breather (white, with u-tube on top) is visible behind the heater motor. The spiral-sleeved choke cable can be seen attached to the airbox.
In the righthand photo, the black looped tube is a protective sleeve for the heater valve cable. The brake servo vacuum hose is visible at lower left, passing through the engine lift eye. Braid-covered fuel line is also seen.



These photos show the early-style alternator connections. (Apparently production changed from this style to a single multi-cavity connector during production. The smaller terminal shown here, marked "180984", snaps open and closed.)

Front pulleys and harmonic balancer (with timing marks). A blanking plate is found on the timing cover where Rover (and Buick) saloons would have a cam-driven mechanical fuel pump. The yellow plastic clip on the wiring is an authentic detail. It holds the ignition leads loosely together. (These clips were originally creamy white, but they yellow with age.)



British Leyland sold their last remaining 3.5L engines into the LandRover specialist trade in 1990.
A brand new "crated" engine was £1,100 - a very good value which as a Yorkshireman I couldn't ignore!
Also shown: the Laycock Type LH overdrive and how MG's integral bellhousing mated to the Rover engine.



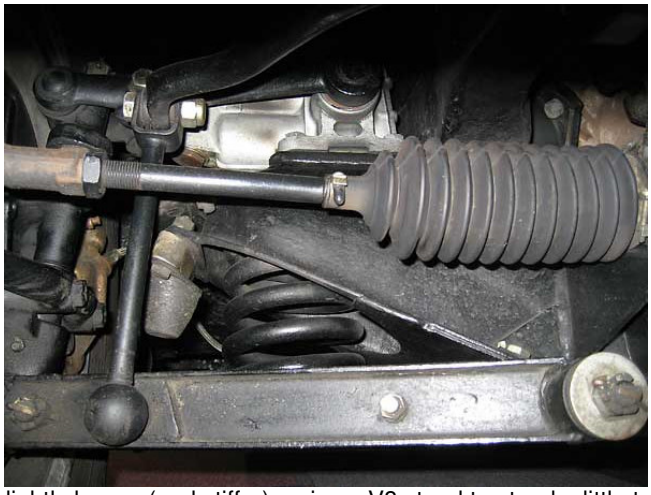

Rover valve covers and front cover were later sold off. The orange filler cap was kept, but spray-painted grey with VinylKote.

Steering universal joint and firewall pass-thru.

Close up of clutch slave cylinder and main power feed junction. (The heat shield shown here isn't original.)

At the time I was restoring the power feed junction, I was stripping an old shower unit.
This provided a valuable source of insulated bushes which were perfect for the application.

Janspeed exhaust system (with block hugger tubular headers, in lieu of original manifolds.)



Because they came with slightly longer (and stiffer) springs, V8s tend to stand a little taller than stock MGB GT's. This photo does a nice job of showing the factory's geometry for front suspension and steering. Notice that the lower control arm is very close to level, and the steering trackrod is only slightly inclined. So arranged, the car exhibits very little bump-steer in hard cornering. As the body rolls relative to the suspension, the inner trackrod drops and effectively increases toe-out. At the same time, the outer trackrod rises and effectively increases toe-in. The two effects largely offset each other. Keep bump steer in mind if you alter your ride height!

MGB GT V8's came with the same S.U. fuel pump as standard MGBs. The replacement fuel pump is standard except solid-state. (Original pumps had breaker points.) So far this has been a big improvement, but I still carry a spare.

Note the drain plug which replacement tanks don't have. Neither does this one! The plug was hacksawed from the original tank and araldited in place. It fooled concours judges for a few years. Thank goodness they didn't put a spanner on it! I no longer "concours" it, but I'm keen on keeping it clean. After a 400 mile Norwich Union MSA Classic Run this autumn, with a wet start in York (and finishing on the circuit at Silverstone) it took me a week to clean the underneath.

By driver preference, a US-spec MGB LE steering wheel has been installed with replacement V8-spec center horn-push. Note the University Motors badge (under the dash vents). The car was originally purchased there, although the badges weren't offered by 1973. The Radiomobile radio/cassette isn't original, but it's a nice "period mod". Everything else looks like it did from the factory. The dashboard only needed light restoration.

These retracting shoulder belts are original-spec replacements.
All the visible carpet is original - and unfaded even after all these years.

Ribbed rubber mat has been installed over soundproofing felt.

A genuine University Motors dealership decal.

The genuine V8 fender badge and embossed-style British Leyland badge.
(Later replacement badges were flat, with printed foil applied to a similarly shaped base.)

The MG Red Shield: for me this sums up the spirit of MG.

Autocar
Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS, Tel: 01-661 3500, Telex: 892084 BISPRS G
To contact the writer please telephone 01-661

History of the Aluminium Alloy V8

The story of the Buick V8 engine which found its way across the Atlantic to power a generation of Rover and Leyland vehicles.

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Re-printed unedited by exclusive written permission of "Autocar".
This article originally appeared in their issue for the week ending November 20, 1976.

by Chris Goffey

Autocar is often prophetic. But the author of a technical review of the then new Buick aluminium V8 engine, writing in the issue of 23 September 1960, could have had little idea just how accurate he was being when he commented, "We will wager that the most widely copied engine of the next 10 years will be the superb new aluminium V8 by Buick." In fact, it was only a chance encounter with the engine by Rover managing director Bill Martin-Hurst that led to this particular prophesy being fulfilled in this country. But fulfilled it has been, with the highly successful Rover V8 engine powering a wide variety of Leyland vehicles over the past nine years.

Work started on the design of the Buick engine back in 1950, with first experimental engine being a cast iron unit 3.85 litres capacity. In the same year, a design for aluminium was prepared, with the displacement going up to 4.15 litres. By 1952, both of these engines had been road tested, under an overall GM plan to come up with a power unit that would be lighter than conventional cast iron engines, and which would allow them to build a lighter, better handling car offering improved fuel consumption with little or no performance penalty. At this time aluminium looked to be the way for engine manufacturers to go in the search for weight saving since the later, more sophisticated thin-wall iron casting techniques were then in their infancy. Work started on the present unit at the GM design laboratories in 1957 with the first unit running in the summer of 1958 before being finally turned over to the Buick division for production engineering and design.

Buick managed to design an aluminium alloy with a high silicon content that gave wear characteristics on the engine test bed which were generally superior to cast iron, confounding the critics who said that they could not have an aluminium cylinder wall with an aluminium piston running in it in a mass production engine. However, one problem they simply could not overcome was the scuffing of the bores by the piston rings in a cold start. It was mainly for this reason that Buick elected to go for iron cylinder liners cast in place in a block with a more modest silicon content in the aluminium alloy. Buick had ruled out any idea of using wet liners because the American engineering techniques do not allow for the handwork precision of wet liners in European designs, and they were most concerned about the problems of water leakage from a poorly sealed liner.

In fact, the feeling against wet liners was so strong that Buick later admitted they would rather of abandoned the aluminium alloy concept altogether then to go to wet liners. The liners in production were pre-heated to prevent chilling in the mould and held in place by mandrels as the block was cast. Buick used gravity casting in metal dies with sand cores for the water jackets. The problems of varying expansion rates in the metal between block, head, and rockers were solved by using hydraulic lifters, already common practice in American engineering. The heads of the Buick unit were also cast in dies with intricate sand cores.

Buick 215 aluminium V8: in this trim it produces approximately 185hp at 4800 rpm.

The engine was installed in a number of well-known American cars after the production troubles were ironed out, notably the Buick Special, Pontiac Tempest, and also the Oldsmobile F85 Cutlass after Oldsmobile engineers had designed different pistons, heads and manifoldings. The Buick Special engine gave 155bhp gross at 4,600 rpm and produced 220 lb.ft. of torque at 2,400 rpm for an all-up weight of 318lb.

(British V8 editor's note: when British authors, including especially Rover/Leyland marketing hacks, write about the Buick 215 they tend to omit any mention of higher-spec variants. In actuality, a very high proportion of General Motors customers selected "optional equipment" high-performance versions of these engines. The 155bhp, 8.8:1 compression, 2bbl carbureted engine described above was just the base model. Tens-of-thousands of Buick Specials and all Buick Skylarks were shipped from the factory with higher-horsepower, higher-compression, 4bbl carbureted engines. Depending on model year, these engines produced between 185 and 200bhp. Oldsmobile similarly made their four-barrel, higher compression engine standard on "Cutlass" and an option on the base-model "F85". The Oldsmobile "Jetfire" variant was turbocharged and produced 215bhp at 4800rpm and 300 ft.lbs. at 3200rpm.)

After all the investment and engineering time that went into the Buick engine, it seems sad that its useful working life in production was so short. By 1964 the engine had been virtually abandoned with the more sophisticated thin wall iron casting techniques being perfected and the American disenchantment with small engines and the compact car. In fact, although 750,000 aluminium engines were produced in various form, it was also successfully run as a 5 litre engine with the cylinder liners deleted and the block cast in iron instead of aluminium. A further 750,000 5 litre iron engines from the same tools were subsequently built.

(British V8 editor's note: It's so hard to communicate the sheer difference in scale between General Motors and the British auto industry. GM produced more aluminium V8 engines in just three years than Rover built in total. The 5 litre engine discussed here, better known stateside as the "Buick 300", was in fact a very, very similar and obviously derivative design although it's a bit of a stretch to say that the same tools were used to build it. The Buick 300 crankshaft and heads can in fact be bolted onto a Buick 215 block, and as an interesting aside, the 1964 model year Buick 300 was fitted with aluminium cylinder heads as standard.)

It was at this stage that the Rover managing director Bill Martin-Hurst took his historic stumble across an aluminium Buick engine lying on the floor of an experimental shop in the Mercury Marine Company's base in Wisconsin. Martin-Hurst was in America talking to Mercury about gas turbine engines for outboard motors, at that time being most anxious to give his ailing gas turbine division a boost. In fact, when he showed Mercury the drawings of the engine his company produced they were more interested in the diesel version of the Land-Rover engine than in his turbines. They had a contract to supply diesels to Chinese fishing junks, and they were having trouble with the Mercedes diesels they were using to fulfill the contract. The head of the Mercury concern, Cark Kiekhaefer told Martin-Hurst that the V8 lying on the shop floor was a Buick, an aluminium engine out of a Skylark that they ad been playing around with for power boat racing purposes.

Martin-Hurst recalls that with a friend he had been taken out in a Skylark on a previous visit to America, and he had formed the opinion then that it had been 'terribly nice'. His thoughts went straight back to England with the problems Rover were having with the six cylinder version of the Rover 2000 which marketing maintained they needed so badly. The prototype had been built, and Martin-Hurst had driven it, but he was worried that the weight of the big old 3 litre six in the front of the 2000 made the car extremely nose heavy. 'Is this engine available?' he asked Kiekhaefer and was told that it had just gone out of production. The engine was measured and weighed against a Rover 2000 engine which Mercury had already received from Rover, and proved to be just 12 lb heavier and within an inch of the overall length.

Kiekhaefer told him to go see Ed Rollart at General Motors to ask if he could use the engine in a Rover car, and in the meantime the Buick that Martin-Hurst had seen was crated up and dispatched to England. Martin-Hurst went to the New York Motor Show and had breakfast with Ed Rollart who was 'jolly nice' but who said he could not authorize licensing the engine. Rover would have to approach GM International. Martin-Hurst went there to see Copeland, the ex-head of Vauxhall and told him of his interest in the unit. Copeland said he would look into the matter.

Back in England, the Buick was sitting in Rover's experimental shop and creating not a little interest. Martin-Hurst tried to get Peter Wilks to put the V8 in a 2000 body but Wilks resisted, telling him that everyone was too busy, and that he wasn't to waste everyone's time. It was no good putting the engine in a car because they would never get permission to use it from GM anyway. But Martin-Hurst persisted, and it was finally agreed that Ralph Nash in the competitions department should do the job. The engine was duly installed with little modification and apart from an over-long propshaft which tended to flex too much, it was a great success.

Martin-Hurst went down to a board meeting in London and without telling Spen King what it was asked him to drive the car back. King climbed in, started up and then switched off again. 'What have we here William?' he asked, and Martin-Hurst told him about the

V8. Spen drove it back to Rover and climbed out with the remark that it was the first Rover he had ever driven which was not underpowered. Martin-Hurst went back to Copeland and discovered that nothing had happened about his enquiry because GM could not believe they were serious. Martin-Hurst was soon able to convince them just how serious he was, and with the help of 'AB' they negotiated a license with GM - a generous license as it turned out, which opened the flood gates of technical information. Up until this point, Rover had had great trouble getting much information about the engine out of GM, but now they were able to acquire all the original service records, drawings and 39 complete engines which the Buick factory still held and which Rover negotiated for a negligible sum.

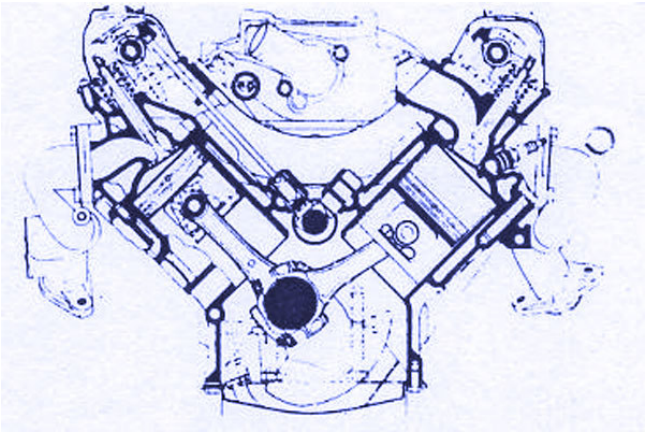
Then came the problems of taking an American manufactured engine and attempting to manufacture it in this country with British component suppliers and foundries. Martin-Hurst soon contacted Buick's chief engine designer, Joe Turley, who was then within 18 months of retirement. He confided to Martin-Hurst that he was not doing too much at Buick anymore, being so near to retirement, so Martin-Hurst asked him to come to England and help in the conversion of the engine to British manufacture. Turley said he was worried about his pension, but Rover won GM agreement that his pension would not be affected, and he and his wife were brought over to England and installed in a flat in Solihull on a salary of £20,000.

When Turley arrived he was puzzled by the Rover engineers' insistence on more power and a higher rev range. The Buick ran out of revs at 4,700 and was getting unhappy at that. Rover wanted at least 5,200 and possibly 5,500. 'Why do you want all those revs?' asked Turley. 'People just don't drive like that.' So he was sat alongside a Rover test driver and proceded to hurtle him across country and up the M6 at over 100mph in those pre-limit days, to show him what sort of treatment the engine would have to withstand. After that experience he returned shattered, with an insight into what Rover wanted.

Turley was invaluable at interpreting the original drawings. Rover could not understand why the engines did not conform to the drawings. Turley was able to point out where things had been changed in production, the changes not being recorded on the original drawings. At one point he wandered into Martin-Hurst's office and said that he was unhappy. He felt that he was not earning his salary. 'How many people have you talked to this week?' asked the Rover managing director kindly. 'About half a dozen I suppose.' replied Turley. 'And what were the questions?' 'Oh, well, they wanted to know why the crankshaft webs had a smaller radius than we showed on the drawings. I told them that after we made about 50,000 engines we started to get crankcase breakages, and we discovered that by reducing the radius of the webs we got around the problem.' 'What do you suppose that sort of information is worth to Rover? You can't put a price on it!' said Martin-Hurst.

Decisions were soon made about the production of the engine in England. In the first place, the gravity die casting with liners in place was carried out in America on an old automatic transmission die casting machine, a transverse machine where the bock was cast on its end. Enquiries were made about the drawings and the methods were met with the answer that the man who had set it all up had died long since.

British casters were unhappy about the technique and soon decided that the only feasible method of production in England was to sand cast the block and then to press fit and shrink the liners in. There were surprisingly few problems. Birmingham Aluminium got it right almost on the first attempt, and with very few changes the engine went into production.



Cross section of the V8 unit - note the centre camshaft with hydraulic tappets still supplied from America to this day.

Rover altered the oil feed to the rocker shaft in an attempt to cut the rocker shaft and rocker arm wear they were experiencing with test engines. They were very worried by the problem, but Turley with his American engineering attitudes to engines was unable to see the need for concern. The problem was that the underside of the rocker arm was wearing away, and at the same time cutting into the case-hardened rocker shaft until it had cut quite a groove, but Turley pointed out that the hydraulic pushrods took up the slack anyway, and the engine stayed quiet so what was all the excitement about? The engine would hold together despite the problem for well over 100,000 miles, so why worry? By that time no one would want the car. Rover engineering was outraged by the suggestion, and tried in turn anodized rockers, then tin-plated rocker bearings, and eventually settled on electro-plated nickel for the surfaces.

(British V8 editor's note: both complete rocker-arm-and-shaft assemblies can be replaced in about one half hour. They're easily accessed by simply removing the valve covers. The replacement parts are relatively inexpensive. Since the engine is equipped with hydraulic lifters, no valve-lash readjustment is required. To this day, American engineers still wonder what those Rover engineers were so worried about!)

They also changed from the American 'Armasteel' specifications for the crankshaft to a nodular steel, a feature about which Turley was very dubious.

With Birmingham Aluminium casting the heads and blocks in sand instead of die casting, the Rover engines were at once in better tune than the original Buicks. When a head is die cast it inevitably bows and when it is then machined flat the combustion chambers at each end will be smaller in volumetric capacity than those in the centre. Rover did not have to contend with this problem.

(British V8 editor's note: since the shrinkage of die-castings is predictable and very consistent from one part to another off a given die design, contending with this "problem" wouldn't have taken much more than an afternoon.)

The accessories for the engine would also have to be British. Rover looked at and tested a compound Rochester carburetor, but soon decided that with European cornering forces it was unsuitable as the engine tended to cut as the fuel centrifuged in the float chamber. Thus the decision was taken to go with twin SU's although this would mean introducing bulges into the bonnet - something the engineers had hoped to avoid.

(British V8 editor's note: it meant other things too. SU carbs are fine, but they need to be synchronized which adds labor and maintenance costs. Furthermore, they tend to need choke enrichment in warmer weather and for longer in cool weather than American-style carburetors.)

Lucas were also approached about the ignition side (the Buick engine had been fitted with an AC-Delco single contact breaker distributor) - this would be Lucas's first single-contact breaker 8-cylinder distributor - and just developed in time for final production. A feature of the distributor was the very long drive shaft, supported in the die cast timing chest on the front of the engine which also contains the water pump. The lower end of the distributor has to drive the oil pump, a Hobourn-Eaton unit. The only item of American manufacture in the entire unit remained the hydraulic tappets principally because the Diesel Equipment Co., of Grand Rapids could turn them out at such a low price and at such good quality that it simply was not worth going to a British supplier. The hydraulic tappets are brought across to this day.

Modified Oldsmobile 215 engine from Jim Hall's famous Chaparral II racecar, circa 1965. (Now owned by D&D Fabrications.)

William Martin-Hurst was convinced that the engine he had bought for Rover was going to power many models for many years, and he was already eager to see it put to more sporting use. He asked Jack Brabham, then using the Buick engine in Repco form in his Formula 1 GP cars for a scrap engine, but Brabham declined. At that time Brabham had won two World Championships with the Repco, the engine being developed in its final form to a four camshaft unit. But the American engineering firm Traco were more than happy to show Rover what they could do, and at one stage a 'full house' 350bhp Traco unit was shipped to Rover for assessment. "I think we still have it," says Martin-Hurst. The Company made a collection of all the go-faster items available for the engine from Iskenderian camshafts to Hallibrand manifolds and they assured themselves that if the need arose they could be certain of having all the development work needed for raising the power of the engine ready to hand. Sadly that has never really happened at Rover, and it has been left to individuals to play with the Rover unit to gain the increases in power it is so obviously capable of delivering.

Notable among the development exercises was that of GKN. They took a standard Rover V8, installed it in the infamous GKN 47D Lotus, with a succession of modifications to manifolds, camshaft, careful attention to balancing, a longer throw crankshaft, bigger pistons, and lightweight flywheel. GKN eventually had the engine delivering a remarkable 296bhp at 6,500 rpm. Later on, Bill Shaw entered a full race Rover 3500 in club racing in this country, with factory support.

The Rover P6 BS prototype (which was renamed "Leyland Eight GE")

There were any number of variations for the V8 in those early days. It was fitted to the revolutionary P6 BS mid-engined sports car prototype, designed by Spen King and Gordon Bashford, and killed off in the Leyland merger. This was a most interesting version of the engine. It ran facing the rear of the car with the final drive case into the sump, driven by a small prop shaft running from the gearbox at the front of the engine. Power was transmitted to the gearbox from the end of the crankshaft by Morse chain and a modified Rover 2000 gearbox was used lying on its side. Rover devised a new exhaust system for the car which gave equal pulses without the need for cross-over pipes. They also fitted 2" SU carburetors, with none of the usual complicated silencing air cleaner trunking. The result was a very quick car indeed, topping 140mph, accelerating from 0-60 mph in 7.0 seconds. The engine was mounted on one side, resulting in extra weight on the front and rear wheels on the right hand side. However, with left hand drive, and the driver only on board, the car would be perfectly balanced.

(British V8 editor's note: Leyland did in fact "kill off" any hope of a Rover mid-engined Grand Touring car being advanced to production. However, they didn't exactly kill off the prototype. Instead, they renamed it the "Leyland Eight GE" and took it to the 1968 New York International Automobile Show for display in the Leyland booth. Leyland senior management apparently didn't see value in building up the Rover brand identity in North America in preparation for introducing the upcoming Rover 3500S model. Instead, they preferred to promote the Leyland company name generally. Go figure. We've published the original Leyland Eight GE press materials. Please see the link below.)

Another one-off using the V8 was a styling exercise made by David Bache, Rover styling director, which was a two door fastback on the 3500, with a rather Chrysler Alpine like front grille and the nickname 'Gladys'. This car was to have been marketed as the Alvis GTS, but was another victim of the merger.

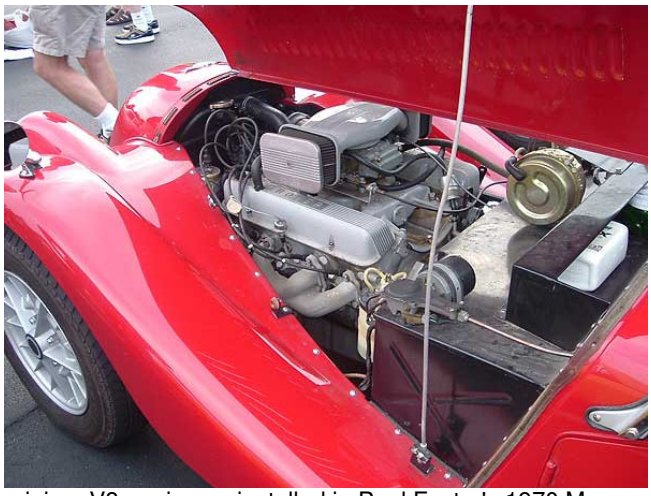
The original V8 installation in the 3.5 saloon and coupe proved very successful. The lighter weight of the unit improved the handling of the big car enormously, and in no time the 3.5s were to be seen whistling around the country at great rates of knots. The conversion of the engine to 3500 form announced in April 1968 involved different manifolds, with the down-pipe being taken from the centre of the exhaust manifold, instead of from the rear end, as in the original Buick and 3.5 installation. At first the car was available only with automatic transmission, but in 1971 the 3500S was introduced, featuring a redesigned exhaust system with the down pipes joining into one pipe much further back down the system. In fact, the two pipes from the manifolds are of larger diameter than the 3500 pipes and combined with the extra length of down pipe this meant the back pressure was thus much reduced over the standard 3500. The 3500S also introduced improved SU carburetors, designated HIF 6 (Horizontal Integral Float-Chamber) which were claimed to provide more stable carburetion during conditions of hard acceleration, braking and cornering. At the time of the announcement of the 3500S (in October 1971) Autocar commented that "relieved of the sobering influence of the torque converter, the engine has assumed a decidedly sporting character. Even so, it has lost none of its silky smoothness and a delightful flexibility." The car developed 152bhp (DIN) at 5,000 rpm and 203.5 lb.ft. of torque at 2,750rpm.


The aluminium V8 engine as installed in Lance LaCerte's 1970 Rover 3500S.

One of the more major changes to the engine had come in June 1970 when the Range Rover was announced. The introduction of the Range Rover unit had called for a new timing chest die to allow for the raising of the water pump to accommodate a starting handle dog and a power take-off point. The compression ratio was reduced to a nominal 8.5 to one (the production engines varying under manufacturing tolerances between 0.25 and 0.75 anyway) from 10.5 in the car form. The reduction in compression ratio allowed the Range Rover to run on 2 star fuel, fed to the engine through Zenith CD 2S carburetors on a special manifold, instead of the SU's of the car engine. The air cleaners were supposed to incorporate a one way valve to allow any water which might find its way into the air cleaner to drain 'harmlessly away', but on one Range Rover at least Autocar found that it was possible to drown the engine in an especially deep water splash. The metal fan was changed for a moulded plastic type (Rover had experienced fatigue failures with fan blades slicing into the bonnet of cars) and the starter solenoid was moved further up the engine to keep it out of harm's way. The Range Rover developed a gross maximum of 156bhp at 5,000 rpm with a peak torque of 205 lb.ft. at 3,000 rpm.

Another major production change for the unit came with the ill-fated P76 saloon engine, first produced in June 1973. This was a fundamentally revised engine from the 3500, featuring an enlarged block to make a 'square' engine of 3.5 inch bore and stroke. This brought the capacity to 4,416cc and the engine developed 192bhp at 4,250rpm and 285 lb.ft. of torque at 2,500 rpm, suggesting improvements above and beyond the capacity change to head design, breathing, and exhaust. The Australians did much of the development of the unit themselves, no doubt in co-operation with Traco, and the exact details of what was done, why, and how are not very clear. It is known that they went for a twin-choke Stromberg carburetor instead of the two SU's and the central manifold design was fundamentally revised.

One of the most altered engine from the manifolding point of view was for the MGB V8. The design and development work for the unit was done at Abingdon, and the most obvious difference was the new inlet manifold moving the carburetors to the back of the unit to permit the retention of the standard bonnet. The engine used for the MGB V8 (announced in August 1973) had more in common with the Range Rover unit than the Rover 3500. It shared the same dished pistons and 8.5:1 compression ratio, but with an AC-Delco alternator instead of the Lucas unit. The SU HIF6 twin carburetors have forward facing inlet tracts into a plenum chamber in the centre of the Vee, a system which MG claimed gave them increased low speed torque over the standard unit. The engine met ECE 15 regulations, with bi-metallic strips controlling the temperature of the air flow into the carburetors. As installed in the MG the unit delivered 137bhp (DIN) and 193 lb.ft. torque at 2,900 rpm.



The aluminium V8 engine as installed in Paul Foster's 1970 Morgan Plus 8.
(Note: the Holley carb and Holley "Hi-Tek" air cleaner aren't "original".)

Another famous application of the V8 in a sports car was of course the Morgan V8. The story of this car started in 1966 when Peter Wilks asked Peter Morgan to merge with Rover to produce a sports car fitted with the V8. Morgan said he liked the engine, but he didn't like the idea of a merger. Wilks agreed, and negotiations for Morgan to use the engine went ahead smoothly until the Leyland takeover, when there was a major hiccup. Leyland wanted permission from GM to use the engine in a Triumph sports car, so permission was sought for both the Morgan and the Triumph. GM replied that they had no objection to Morgan using the engine, but would not commit themselves on the Triumph. In the meantime, Peter Morgan had Maurice Owen shoehorn a Buick V8 into a modified Plus Four, and a very successful car it proved to be. It is still owned by the factory.

After two years had gone by, still with no decision, Morgan approached Harry Webster with a view of getting a meeting with Donald Stokes to try and confirm an agreement. Harry tried to wean Morgan away from the Rover engine by showing him the range of Triumph engines, but Morgan remained convinced that the Rover V8 was the unit he wanted. A couple weeks later, Webster came down to the Malvern factory with George Turnbull, who was to give the final approval. Turnbull went off for a blast around the hills in the car, came back most impressed with it, and told Morgan "You can have the engine as long as you don't take too many of them." The car was exhibited at the 1968 Motor Show and was an immediate hit.

Morgan's use of the engine involves a fair amount of dismantling. The unit comes in a production line package, and Morgan takes off the power steering pump and alternator since they dispense with the viscous coupled fan using an electric fan in its place. They alter the clutch operation, taking the arm through the top of the bellhousing instead of the side, and they fit the original 3.5 manifold with a special exhaust system. Morgan, of course, are still being supplied with V8s in the latest and most revised form from the SD1, the latest model being the Plus 8-77 with the 5 speed gearbox.

The use of the faithful old V8 for SD1, the pride of Leyland's new marketing strategies, called for some fundamental re-thinking. The engineering staff were faced with calls for more power, a higher rev-limit, and the eventual need to meet strict American emission regulations.

The first step was to alter the valving in the hydraulic tappets to delay the point at which they started to "pump up", and after that to improve the breathing. Changes were made to the inlet and more especially to the exhaust manifolds, with dual outlets per bank and much better extractor effect, and new single valve springs were introduced. To complete the change, after exhaustive tests, Lucas electronic ignition was fitted. To test the system, Rover had it running for 6,000 miles of city driving, followed by 6,000 miles around the 'de-tox' route, followed by 6,000 miles at maximum speed around MIRA, all without attention to the ignition. To get the vehicle to work flat out without wearing out a set of tires around MIRA's banking every 10 laps, they erected a six foot high box on the roof of the Rover to drag down maximum speed, but still make the engine work on full throttle. After that they went back and did a further 6,000 miles in traffic. It seems amazing after all this testing that the ignition is still giving so much trouble in service.

Long nose Champion N12Y plugs were adopted to go with the electronic system. The oil pump design was improved with higher output especially at lower speeds, and the water pump housing and impeller were changed to reduce power loss at high speeds. The piston ring depth was reduced to cope with the higher revs, and the temperature controlled air intake valve was introduced into the air trunking. The engine develops 155bhp at 5,250 rpm and 198 lb.ft. of torque at 2,500 rpm.

Those then are the major applications of the Rover engine. There have of course been countless other applications to specials and one-offs, and many developments of the engine in competition work, but the unit stands out for its reliability, its kindliness to different mounting brackets (nothing seems to vibrate and fall off in service) and its durability. The army made all sorts of demands on it for the application to the new military V8 Land Rover, even demanding that the soldiers must be able to stand on it to service it. It has taken all the abuse without complaint, and sadly for British engine designers remains one of the best engines we have ever seen in British cars.

(British V8 editor's note: The cutaway drawing displayed above was included with our copy of the original Autocar article. We added photos, selected from our files and from other sources, and also added captions.)

This article is part of a set of SIX! If you enjoyed this article, check out:
- Rover 3500S Press Release (circa 1969)
- 1970 Rover 3500S Specifications and Pricing
- Leyland "Eight GE" Concept Car Press Release (circa 1968)
- Rover P6 Design Innovations
- Lance LaCerte's Restored 1970 Rover 3500S

British V8: Newsletter Photo Gallery Web Forum Meetings Contact Info Web-Rings Site Map

The Motorway Ltd.

Experience... the difference!

Bill Wardlow and his staff at The Motorway Ltd. provide experience, craftsmanship, and exceptional service to the full range of vintage, classic and performance British automobiles.

From routine service to complete concours restorations and from "stage 1" performance modifications to engine conversions and racecar preparation... you can count on Bill and the whole Motorway Ltd. team for honest advice and quality workmanship.

Saturdays are donut and coffee days! Enjoy the company of other British car enthusiasts in a clubhouse atmosphere. The Motorway Ltd. showroom was built for comfort.

The Motorway Ltd. is dedicated to the preservation and enjoyment of British motor vehicles.

The Motorway Ltd. is a Charter Member of
The British Motor Trade Association.

Come tour our large, clean, well-lit shop!

The Motorway Ltd.
Bill Wardlow, President
124 Racquette Drive
(in the airport business park)
Fort Collins, CO 80524

telephone: (970) 472-8141
e-mail: bill@motorwayltd.com
www.motorwayltd.com

British V8 Conversions Newsletter Meetings Photo Gallery Contact Info Web-Rings Site Map

LEYLAND MOTOR CORPORATION OF NORTH AMERICA
111 GALWAY PLACE • TEANECK, N. J. 07666 • (201) 833-8000 • CABLES: Flywheel New Jersey

FROM: Gertrude I. McWilliams
Director, Advertising and
Public Relations

PRESS RELEASE
29 March 1968

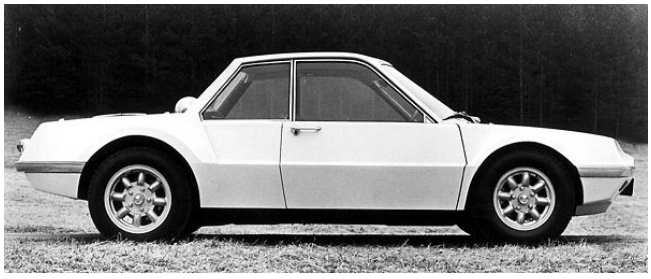
LEYLAND GROUP EXPERIMENTAL CAR

The Leyland Motor Corporation of North America will exhibit an experimental eight cylinder grand touring car on its stand at New York's International Automobile Show opening March 30th. The specification of the car is likely to cause the kind of excitement that greeted exhibition of the first Leyland Eight at the London Motor Show back in 1920. The latter car was designed by the great Perry Thomas, then Leyland's chief engineer.

The new Leyland experimental car is very different from its great predecessors of the 1920's but there are also certain points in common, eight cylinder aluminum engines being an important one. However, the new Leyland experimental car features a V-engine positioned mid-ships and not a straight eight mounted up front.

The Leyland experimental car has been designed as a high performance machine that is, nonetheless, equally satisfactory as a car for every day use. It is easy to get in and out of. There is plenty of luggage room. Provision has been made for fresh air heating and air conditioning. Although essentially a two-seater, a third passenger can be carried on an occasional basis.

The Leyland Group experimental car is a design exercise aimed at achieving experience with a completely practical automobile. It does not, therefore, fall in the category of the so-called "dream cars" so frequently exhibited at automobile shows. For this reason, its trim, finish, and general appearance are at a level commensurate with its function as an experimental project.



The Leyland Eight GE ("group experimental") is a throroughly modern, exciting, and practical sports coupe. It is a mid-engined, two-seater, with room for an occasional third to be added. Clothed in a skin of steel and aluminum panels, the car is a mechanical embodiment of a practical design concept. The body is neither designed nor finished to satisfy aesthetic requirements although the functional appearance thus created has found considerable favor in the view of many who have seen it.

The instruction was to build an experimental car that would be fun to drive, preform well and easily, comfortably, accomodate two discriminating people and their luggage, and exact no penalty because it was not a full sized sedan. That meant it should be air conditioned on the production line, have a first rate heating system and utilize such modern features as electric windows. It should meet all existing safety and similar standards and add any others that are practical and desireable at this time. Furthermore, it should be possible to manufacture it for a sales price that would be tolerable to a fairly wide segment of the public. Say around $5,000.

The person climbing into the Leyland Eight GE is immediately impressed by the extraordinary spaciousness of the interior and the really very superior visibility from its large glass area. The car burbles into life as the engine is started up and its performance does it credit: 0-60 mph in 7 seconds and a top speed of 140 mph. On the other hand its flexible 3.5 litre, 185hp aluminum V-8 engine can be run at "crawl" speeds without difficulty.

The location of the engine - in front of the rear axle and 6 inches to one side - contributes to its extremely fine handling qualities. In the past several years all the really successful competition machines from Indianapolis race cars to the Formula One Grand Prix machines have used this configuration because the improved balance makes the car handle better at higher speeds - so with the Leyland Eight GE. Sophisticated double wishbone independent front suspension with anti-roll bar and de Dion rear suspension are part of the design to further enhance the car's handling, and rack and pinion steering gives the driver fine control.

The Leyland Eight GE is very much of an engineering project. Its shape was determined by what had to be covered and where air had to be deflected or inducted for engineering purposes.

This article is part of a set of SIX! If you enjoyed this article, check out:

- Rover 3500S Press Release (circa 1969)
- 1970 Rover 3500S Specifications and Pricing
- Rover V8 History (courtesy of Autocar magazine)
- Rover P6 Design Innovations
- Lance LaCerte's Restored 1970 Rover 3500S

LEYLAND MOTOR CORPORATION OF NORTH AMERICA

111 GALWAY PLACE • TEANECK, N. J. 07666 • (201) 833-8000 • CABLES: Flywheel New Jersey

Not to be released before Friday, October 10, 1969

ROVER'S NEW 3500 S LUXURY SEDAN POWERED BY LIGHT WEIGHT V8 ENGINE

Sophisticated Rover Sedan offers Aluminum Engine With Outstanding Power/Weight Ratio

The long-established Rover Company Ltd. of Solihull, England, (founded 1878) has adopted a very modern V-8 formation engine for the new 3500 S luxury sedan. Current customer demand is for the fitment of more and more options, and so Rover goes well into the lead among European manufacturers offering more powerful multi-cylindered engines with which to meet this demand.

Thus the 3500 S, now introduced by British Leyland Motors Inc., provides in standard form a complete selection of luxury equipment normally quoted as options. These include power steering, automatic transmission, a fully integrated heating and fresh air system, with air conditioning optional.

Rover has approached the need for adequate power reserve to drive such units, by utilizing a very contemporary engine design. This engine, evolved from a famous American design, has even been successfully adapted to Grand Prix racing cars which won the World Racing Championship.

The beautifully finished V-8 engine is arranged in two banks of four cylinders at 90-degree angle and has overhead valves, operated through push rods and hydraulic self-adjusting tappets.

Aluminum alloy components include all the major units such as cylinder block, cylinder heads, rocker covers, inlet manifold, pistons, water pump, and timing cover. The engine weighs approximately 350 lbs. the same as Rover's smaller 2000 Sedan 4-cylinder engine, but develops 47 per cent more power.

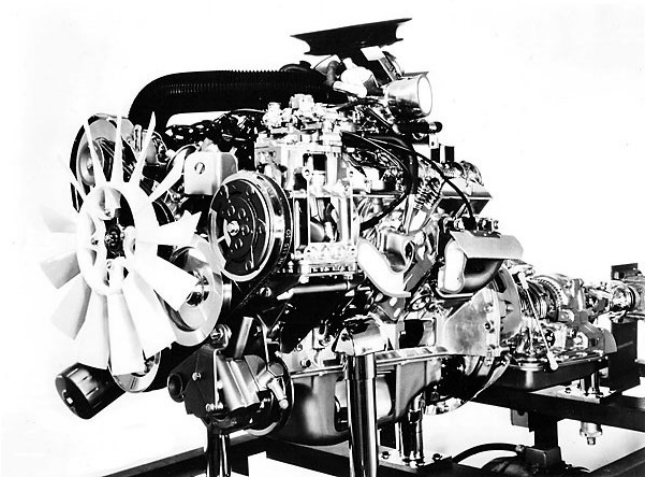
Cast-iron dry cylinder liners are inserted into the alloy block and 3-ring aluminum pistons drive a five lead-indium bearing crankshaft.

Carburetion is by twin 1 3/4 in. bore SU HS6 carburetor, drawing from an 18-gallon fuel tank with 2 3/4 gallon reserve, controlled by a tap at the driver's console.

Water-cooling, with cross-flow radiator, is by belt driven pump, using a 13-blade nylon fan, driven through a viscous coupling to limit fan speed to 2500 rpm; so the fan works only when needed, reducing noise and power loss.

Thus, in many respects, the Rover 3500 S brings to the American customer the best of both engineering worlds - the exclusivity of the imported specialty car, combined with proven technical features developed specifically for American operating conditions.

(Suggested contribution is twenty bucks per year. Feel free to give more!)



Rover's brilliant, lightweight, all aluminum V-8 power unit will be exhibited at all major auto shows in the U.S. this fall. It will be demonstrated by this fine, sectioned working model.

Fitted in the new 1970 Rover 3500 S sedan, the smooth, powerful V-8 is no heavier and no longer than Rover's smaller series 2000 sedan engines, but develops 47 per cent more power.

This article is part of a set of SIX! If you enjoyed this article, check out:

- 1970 Rover 3500S Specifications and Pricing
- Leyland "Eight GE" Concept Car Press Release (circa 1968)
- Rover V8 History (courtesy of Autocar magazine)
- Rover P6 Design Innovations
- Lance LaCerte's Restored 1970 Rover 3500S

Rover 3500S

Suggested Retail Price at Port of Entry $5,398.00

Standard Equipment

V8 engine with automatic transmission
Heavy duty bumpers with rubber faced overriders
Front & rear towing hooks
Icelert warning device
Pirelli radial ply gold band tubeless tires
Stainless steel hub caps
Two exterior rear view mirrors
Windshield washers and intermittent wiping system
Locking gas cap
Spare wheel mounting on trunk lid
Carpeted trunk/wheel-cover
Tool kit
Side marker reflectors and lights
Body rubbing strip
Fully adjustable front bucket seats
Interior courtesy light
Deep pile carpets and underfelt
Padded sun visors with vanity mirrors
Non-slip front shelf mat
Leather covered steering wheel
Electric windows
Power steering
Power-assist disc brakes
Fresh air heater
Electric clock
Tachometer
Map reading lamp
Adjustable safety steering column including anti-theft locking system & ignition key audible warning
Reserve fuel system
Brake-pad wear warning system
Cigar lighter
Front and rear ash trays
Armrests on all doors and in center of rear seats
Map pockets of front doors
3-point safety harnesses for all four seats
Head restraints on both front seats
45 amp Alternator
Four-way hazard warning flasher
Air pollution emission controls
Rear quarter "flow through" ventilation system
Engine and trunk compartment lights
Undercoating

Optional Extra Equipment (factory installed)

Air Conditioning.....$478.00
Tinted Glass All Around..... 49.50
(necessary with air conditioning)
Electrically heated rear window..... 49.00
Roof rack..... 49.00

Available Accessories (F.O.B. ports of entry)

All transistor AM/FM pushbutton custom radio....$100.00*
* Extra charge for installation.

Prices and Specifications Subject to Change Without Notice

British V8 Newsletter, Volume XV Issue 3, December 2007

The material above is reprinted from the original British Leyland press release for North American introduction of the Rover 3500S model, dated Friday October 10, 1969. Our copy of the original photo didn't reproduce well, so we substituted a clearer Leyland promotional photo (circa February 1970).

The following sales literature, a one-page flyer dated February 1970, followed the press release.

Rover 3500S

The Rover 3500S with its V-8 engine, power steering, factory designed and installed air conditioning (optional), and power windows has been built for America. To be sure, the European version, the 3500, is already a very great success in Europe, but it was developed and engineered in response to requests from this side of the Atlantic for the features Americans want in automobiles of such a level of craftsmanship.

The basic design of the car is the same as that of the much lauded Rover 2000 series with its cage-like base unit construction, unique suspension system, excellent disc brakes on all four wheels, fine handling qualities, and concern for passenger and driver comfort and safety. To these have been added a 3.5 litre aluminum V-8 engine, Borg-Warner Type 35 3-speed automatic transmission, larger disc brakes, wider wheels and tires, Adwest Varamatric power steering, Delco electrically operated power windows, periodicity windshield wiping system, and optional fresh-air conditioning integrated into the design of the car and its heating and ventilation system.

SPECIFICATIONS
Body Exterior: Immensely strong base unit fitted with detachable body panels. Base unit paint-dipped, and all exterior panels sprayed electrostatically. All doors front hinged and have anti-burst devices. Exterior trim items in stainless steel or anodized aluminum. Front locking hood with safety catch and interior security control. Alternative spare wheel mounting position on trunk lid. Locking gas cap. Doors and fenders protected by side rubbing strip, Extra long bumpers with rubber-faced overriders and front and rear towing eyes.

Body Interior: Fully adjustable and reclining front bucket seats with head restraints; rear seats also of the bucket type with a wide centre armrest which folds to provide accomodation for an occasional third passenger. All seats trimmed with perforated top quality amblair. Heavy pile carpets throughout including trunk. Armrests on all doors. Front doors have large map pockets. Storage accomodation includes two large padded glove lockers, non-slip front shelf and full width rear parcel shelf. Leather covered steering wheel. Power windows with individual controls and driver's master override switch. Flow-through ventilation system.

Standard Equipment: Fresh-air heater, cigar lighter and ashtrays, clock, four-way hazard warning

2.8 in.; 184 b.h.p. at 5200 rpm; Compression ratio 10.5:1; Maximum torque 226 lbs./ft. at 3000 rpm; **Block**: Aluminum alloy with inserted cast-iron dry liners. **Cylinder heads**: Aluminum alloy with in-line valve arrangements; valves operated by hydraulic self-adjusting tappets and push-rods. **Crankshaft**: Five bearing with vibration damper. Required anti-pollution equipment.

Electrical System: 12 volt negative ground. 45 amp-hr. alternator. 60 amp battery.

Steering: Adwest Varamatic power steering. 3.25 turns lock to lock. Column adjustable for rake and contains anti-theft lock.

Brakes: Power-assisted, self-adjusting disc brakes all around. Electrical contacts in disc pads warn of maximum wear ccondition. Disc diameter: front - 10.82in.; rear - 10.69 in. Total swept area: 372 sq. in.

Suspension: Front: double wishbone system but the top links are pivoted on a common axis across the car and so angled to resist weight transfer due to braking. Horizontally mounted coil springs. Anti-roll bar. Rear: de Dion sliding tube type with universally jointed, fixed length drive shafts located by Watt's type linkage with coil springs. Hydraulic telescopic shock absorbers all around.

flasher. Courtesy and map lights. Windshield washers and intermittent wiping system. Two exterior and one interior rear-view mirror. Three point safety harnesses on all four seats. Engine and trunk compartment lights. Icelert warning device. Tool kit. Electrically heated rear window.

Engine: V-8 215 cu. in. (3528 cc); Bore 3.5 in.; Stroke

Dimensions: **Wheelbase**: 103.375 in. **Track**: **Front**: 53.375 in. **Rear**: 51.75 in. **Ground clearance**: 7 in. **Turning Circle**: 31.5 ft. **Overall Length**: 181 in. **Width**: 66 in. **Height**: 56.25 in. **Curb Weight**: 3184 lb. **Tire size**: 185 HR14 Pirelli radial ply gold band tubeless. **Fuel tank**: 15 imperial gallons including reserve of 2.25 imperial gallons.

This article is part of a set of SIX! If you enjoyed this article, check out:
- Rover 3500S Press Release (circa 1969)
- Leyland "Eight GE" Concept Car Press Release (circa 1968)
- Rover V8 History (courtesy of Autocar magazine)
- Rover P6 Design Innovations
- Lance LaCerte's Restored 1970 Rover 3500S

British V8: Newsletter Photo Gallery Web Forum Meetings Contact Info Web-Rings Site Map

Rover P6 Design Innovations

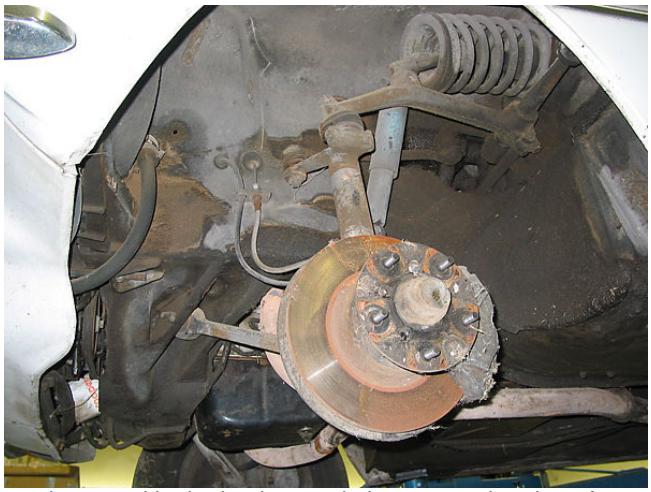
as published in British V8 Newsletter, Volume XV Issue 3, December 2007

by: Bill Wardlow of The Motorway Ltd.

When the Rover 3500S debuted in North America, I was already working on P6 models. I had a job in a Rover / Land Rover dealership in northern New Jersey. In fact, I was driving a beautiful '67 2000TC which I'd bought for $600.00 with a blown 2nd gear. As I recall, $60.00 worth of parts put me on the road in a car which otherwise would have been financially out of the question for me. So you see, I came to appreciate the P6 design before there was a V8 in the picture. Its other design features, many with an eye toward safety, have left a more permanent mark on me than has the aluminum powerplant. I shall touch only lightly on them here. A book could be written.

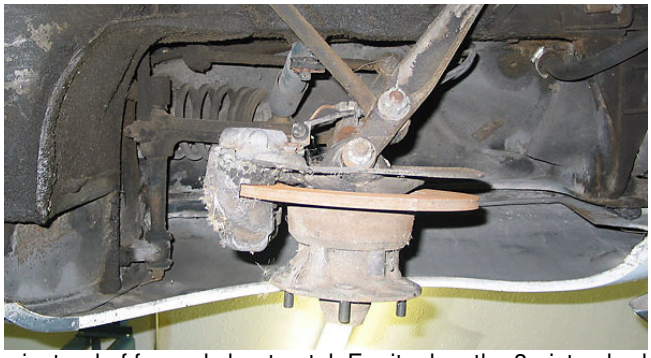
The Rover P6 design was a "clean sheet of paper" affair, and a chief design consideration from the beginning was safety. In 1963, safety was a tough sell, especially in this country, but the Rover team was determined! Thus, when the Rover 2000 made its debut it had 3-point safety harnesses for all four occupants, energy absorbing headrests up front, an innovative impact-absorbing dashboard with deformable honeycomb-structure "shin-bin" lids, anti-burst door locks, break-away interior details, engineered and crash-tested crumple-zones front and rear, 4-wheel disc brakes, and a host of features that were not to be seen on other cars (especially American iron) for twenty, thirty, or even forty years! In many cases, these changes were only made by other manufacturers in response to government mandates.

Although the photos shown here are of later V8 ("3500S") version of the P6 platform, almost all of the features shown and discussed were available to the car buying public from 1964 in the smaller-engined "2000" series models.



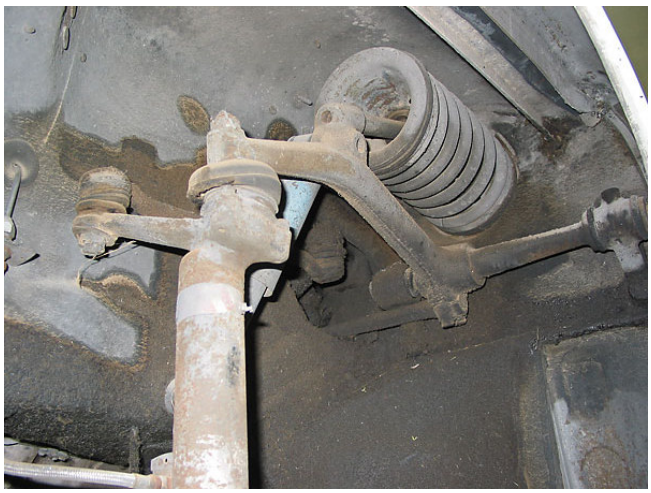
Left front suspension... and in the background: the extremely-robust front crossmember.

Notice how the "rocker" transfers verticle wheel motion into fore and aft spring travel. Also note how the shock absorber actually extends on bump instead of compressing. (This is favorable in terms of shock absorber longevity.) If you look at the horizontal axis of the rocker in its bushings, and look below the inner one, you'll see the mount for the anti-roll bar. The bar itself is a straight hexagonal piece which you can see disappearing into the engine bay.



Forged suspension links instead of formed sheetmetal. For its day, the 3-piston brake caliper was massive.

Another interesting feature is that the brake pads had integral electrical wear sensors, starting with 1969 model year cars. The wiring appears here as a "second brake line".

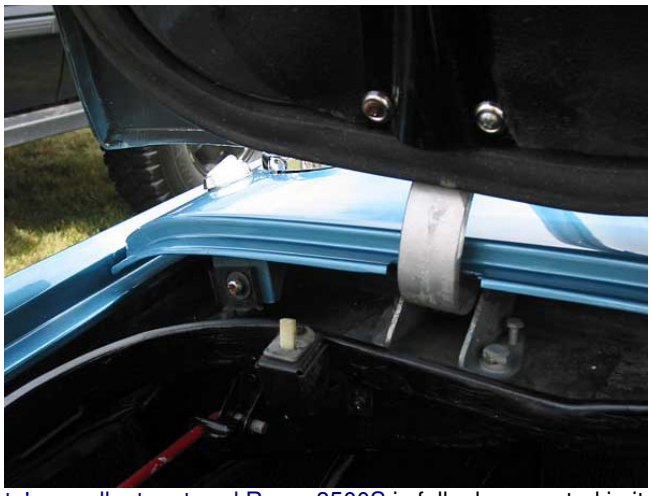


Strong stuff! Big, serviceable ball joints.

Why did the car have such an unusual front suspension design? One reason that's often reported is Rover had maximized engine compartment packaging space in anticipation that one day they might install their turbine engines. Whether there's any merit to this suggestion is immaterial - the unusual front suspension provided tangible technical benefits of its own. The most important benefit was superior crashworthiness; it kept frontal impact force from causing cabin intrusion at a time when frontal impacts usually shoved steering columns like a spear toward the driver.

The P6 steering box is located just barely forward of the firewall, with the track rod running behind the engine to a bell-crank relay, and thus forward to the steering arms on the "swivel pillars". To comply with the federal "Safety Act of 1966", other automobile manufacturers were obliged to install collapsible steering columns. Rover was exempt from this mandate because their design already provided the same benefit.

The P6 was also one of the first automobile platforms with its engine mounts designed to direct the engine and gearbox downward, underneath the vehicle, upon impact. This may seem elementary now, but if you recall seeing wrecks of 50's and early 60's cars, you may remember seeing engines sitting in front seats.



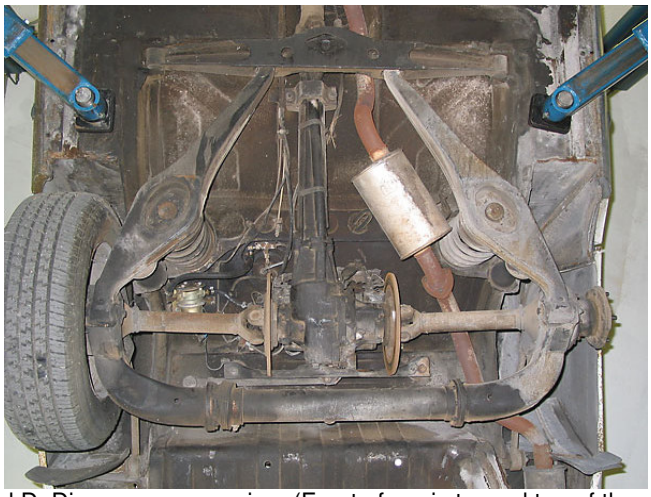
Lance LaCerte's excellent restored Rover 3500S is fully documented in its own article.

The whole P6 platform, in fact, is one strong unit! It's more rigid under torsional loading than virtually any production sedan before it. The "base unit" of the P6 was constructed as one solidly-welded monocoque structure with integral roll cage. It is possible to remove every body panel from one of these cars, including even the roof sheet metal, and still have an operating car with a complete cabin structure!

Ergonomically designed interior.

When these cars first came out, they had fixed length (separately adjustable) lap and shoulder belts. Once you were in and belted-up there was no moving around. It was not a problem because every instrument and control needed for driving was within easy reach. The controls were laid out logically and intuitively. We could use some of that in today's cars! I really enjoyed the security of those belts. (They were very like a race car.)

Four wheel disc brakes with booster. The system was well tuned and provided excellent modulation. There are many cars in production today that don't measure up in terms of brake balance and feel.



Modified DeDion rear suspension. (Front of car is toward top of the picture.)

Although articles have been written over the years about the P6's unique "modified DeDion type" rear suspension, Many of the descriptions of it have been incomplete or just plain wrong. To launch into a complete discussion of its features and properties here would be beyond the scope of this article. Suffice it to say that the P6 suspension is unusually compliant, very steady, and that road-holding on irregular surfaces remains among the best I've driven. A brief overview of system components will provide a little insight.

The main "DeDion tube" is the straight section across the bottom of the photo.

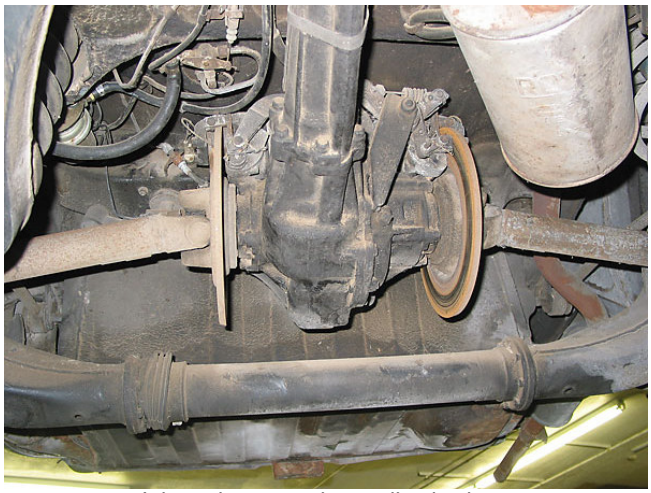
The "elbow" to the right is rigidly attached to that tube and also houses one wheel hub.

The elbow to the left is bolted to the opposite wheel hub and also to a smaller diameter straight tube which rides on bronze bushings inside the larger tube. It therefore is free to both plunge and swivel. The axes of the two tubes always remain colinear, so the two wheel hubs remain nominally parallel.

(Note: the fuel tank is mounted above the differential, behind the rear seats, which is the safest place for it! If the car is rear-ended, there's a generously-sized crush zone between the rear bumper and fuel.)

The DeDion tube has an oil filler plug for lubricating the bronze bushings. Note also that the differential housing is on rubber mounts, with a torque rod to restrict side-to-side motion.

The lower & upper arms shown here function as a "Watts linkage" to locate the hub fore and aft.



Inboard-mounted rear disc brakes.

The inboard brake calipers are hydraulic, but they also include a cable-operated lever mechanism to engage the emergency brake. This was a very modern feature for its day, and an important one too. This was a true emergency brake, with enough grip to stop the car from speed. (It wasn't just a parking brake! Many of today's cars use a small, seperate brake drum inside the bell of the rotor, or a small secondary brake caliper. These designs typically provide less braking capability to the hand-brake lever.)

Springs with concentric shock absorbers.

The Rover P6 suspension used fixed-length half shafts. Underneath the rubber boots that are visible in this photo, you would find conventional U-joints. I discovered early on that all six of the U-joints in the system are interchangeable with Chevy 1/2 ton pick-up truck parts.

Conclusion

To think that all of the innovations in the Rover P6 were available over forty years ago staggers me, and I was there! These cars were very expensive to build - Just look at the welded, ground, and polished stainless steel door glass frames! - and North American customer weren't provided very good support by the "factory". However these are stout, reliable and safe cars that can still be used as fine daily drivers or as enthusiast machines. All they need is understanding.

I've been surprised and a little dismayed over the years to see how many of the aluminum V8 engines of the Rover "3500S" P6-variant have been removed and transplanted to other vehicles. I think an awful lot of folks are unaware of what a gem of a car came wrapped around that motor in the first place. With a little updating and some imaginative engineering, I think a 3500S could easily be developed which would give some fairly new "Bimmers" a good run!

This article is part of a set of SIX! If you enjoyed this article, check out:
- Rover 3500S Press Release (circa 1969)
- 1970 Rover 3500S Specifications and Pricing
- Leyland "Eight GE" Concept Car Press Release (circa 1968)
- Rover V8 History (courtesy of Autocar magazine)
- Lance LaCerte's Restored 1970 Rover 3500S

Lance LaCerte's 1970 Rover 3500S (P6B)

as published in British V8 Newsletter, Volume XV Issue 3, December 2007

Owner: Lance LaCerte
City: Denver, CO
Model: 1970 Rover 3500S ("P6B")
Engine: 3.5L Rover V8

Engine:	3.5L Rover V8. These engines were originally built with 10.5:1 compression ratio, and were rated at 184hp at 5200 rpm, 226ft.lb. of torque at 3000rpm. Lance's engine was rebuilt in August 2007 by Ted Ax. A later-model Rover SD1 engine block was substituted, and neoprene seals were used in lieu of original rope-type seals.
Induction:	twin 1.75" bore SU "HS6" carburetors (stock).
Ignition:	Lucas distributor with condensor/points (stock).
Cooling:	re-cored radiator and mechanical fan.
Exhaust:	stock iron manifolds, single muffler.
Transmission:	Borg Warner 35 (3-speed automatic).
Front Susp.:	Rover's uniquely designed double-wishbone IFS, featuring telescoping shocks and horizontally-mounted coil springs! 19mm hexagonal-section sway bar (stock). Adwest Varamatic power steering (stock).
Rear Susp.:	Rover's uniquely integraged "de Dion tube" suspension. Like all de Dion suspensions, the design features low unsprung weight because the differential and brakes are mounted to the chassis and connected to the wheels by u-jointed "half-shafts". The wheels are held parallel to each other by a rigid tube. Also, like many other de Dion suspension, coil springs with concentrically mounted telescopic shock absorbers are used. The rear suspension is located by trailing links and side-to-side displacement is restricted by a Watts link. However, Rover's apparently unique development over other de Dion suspensions is that the half-shafts don't feature slip-joints. Instead, the de Dion tube itself telescopes to accomodate body roll.
Rear End:	Rover differential, 3/08:1 gears (stock).
Brakes:	four-wheel disc brakes with Girling hydraulics and servo assist. Electrical pad-wear sensors. Rear discs are inboard-mounted.
Sources:	"All British Cars" in Vancouver Canada.
Completion:	August 2007. (135 miles driven, as of the Colorado Conclave in September.)

A few special notes about the Rover 3500 and 3500S models:

Lance's car is one of only 2043 Rover 3500S cars built to North American specification.

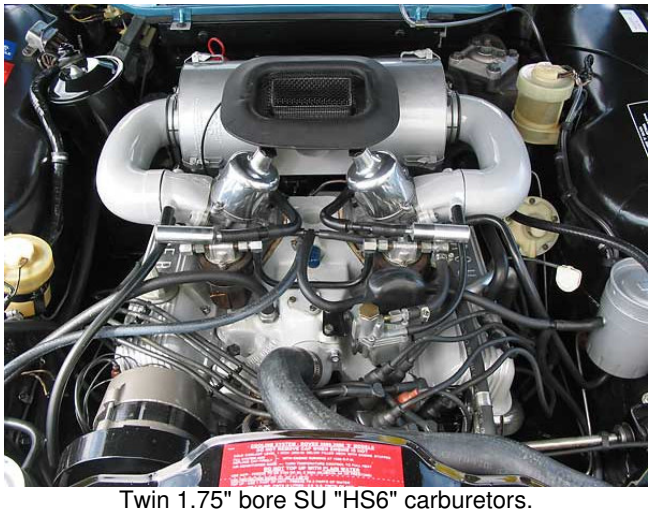
The Rover 3500S body is composed of non-structural steel panels; they can all be unbolted and removed from an underlying monocoque structure. When the body was originally being designed, Rover planned to install their own gas turbine engine. The unusual front suspension was developed to facilitate an extra-wide engine bay.

The "Icelert" warning device (aka: "penguin detector") was factory-installed. It senses humidity and temperature, and warns as

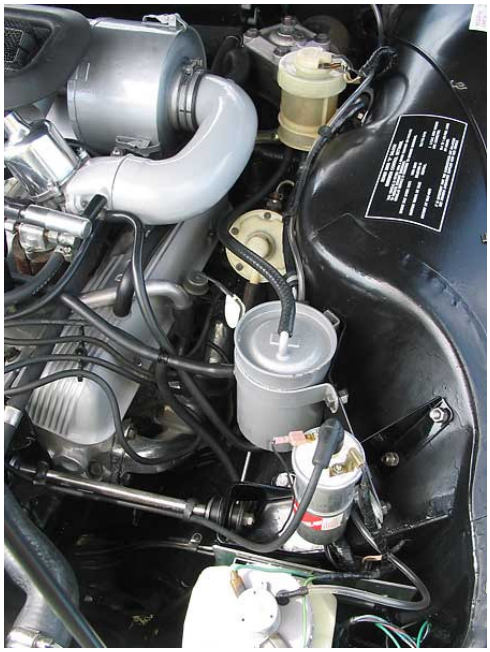
outside air temperatures drop.

Princess Grace was driving a Rover 3500 when she lost control, wrecked, and died in Monoco. (She had apparently suffered a minor stroke while driving. Her daughter, Princess Stephanie, survived the accident. By all accounts the Rover 3500 was an exceptionally safe and "crashworthy" car by the standards of its day.)

Look for Rover 3500s in many movies... especially as a police car! Remember that scene at the end of "Monty Python and the Holy Grail" when the police arrest King Aurthur and Sir Bedevere? They're also driven by futuristic police in the film "Gattaca" and by an evil henchman who chases Austin Powers in "The Spy Who Shagged Me".

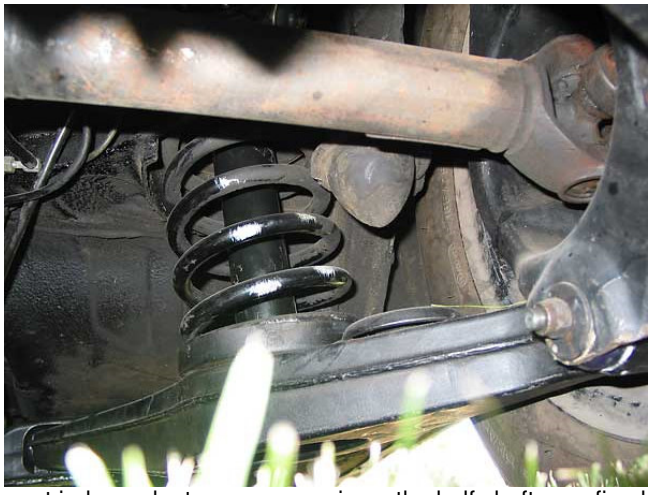


Twin 1.75" bore SU "HS6" carburetors.

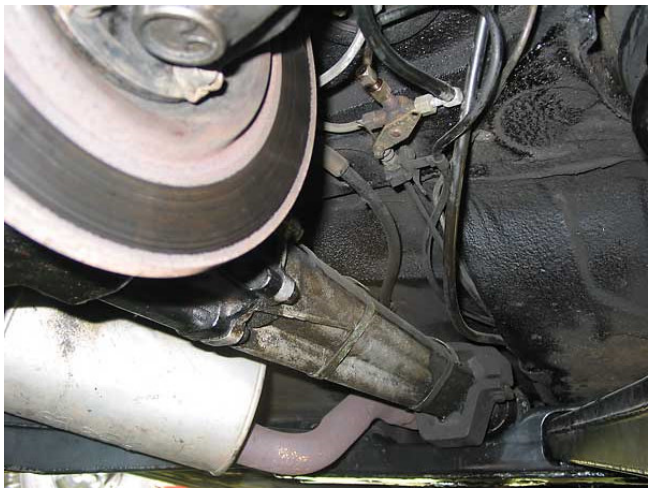


We don't have good pictures of it here, but the front suspension features coil springs that are mounted high up behind the tires and actuated via bellcranks. At first glance, the telescoping shocks look conventional, but in fact by virtue of their mounting, their function is reversed from normal - the shocks actually extend when a tire hits a bump, which is a good thing because it eliminates binding and improves shock absorber life. The steering gear and all steering linkage are behind the engine, and mounted high, so that in a front-end impact the steering wheel won't normally be pushed rearward toward the driver. (Thus a collapsible steering column wasn't required for Rover to comply with the Federal "USA Safety Act of 1966".) The front anti-sway bar is similarly tucked neatly away.

A "de Dion tube" keeps the two rear wheels absolutely parallel in all situations. Rover's de Dion tube is unique though, because its two parts were designed to telescope and to rotate relative to each other. In this picture you can see the accordian-pleated seal that protects the joint. You may just barely see the oil-fill lug at mid-tube. Inside, the de Dion tube has bronze bushes lubricated with thick gear lube.



Unlike most independent rear suspensions, the half shafts are fixed-length.



Obviously, the differential has a very long pinion section. Where it mounts to the chassis (with a rubber shock mount) there's a harmonic-tuned weighted block to reduce vibration. In this view you can also see the cable operated remotely-controlled valve that's used to access the "reserve capacity" of the fuel tank.

Inboard disc brakes reduce unsprung weight for improved ride quality.

Knee bolsters on both driver and passenger side of the dashboard fold down to reveal glove boxes.
The driver side actually has two separate compartments, with room for the steering column between.
The fuse and relay center is easily accessible behind the passenger side knee bolster.

Looking through the steering wheel, in this view you can see the Icelert switches and warning lamp.

Low and to the right of the center console... the cable-operated remote-control for the reserve-fuel petcock.
Check out the transparent green illuminated dashboard knobs. Rolls Royces don't have this much quirky goodness!

The vinyl-covered lower dashboard panels were constructed of honeycomb plastic to absorb energy in a crash.

A lot of engineering went into Rover's headrests, which "cam" rearward in an accident to absorb energy.

Rear bucket seats and a center arm rest make this a comfortable touring car for four.

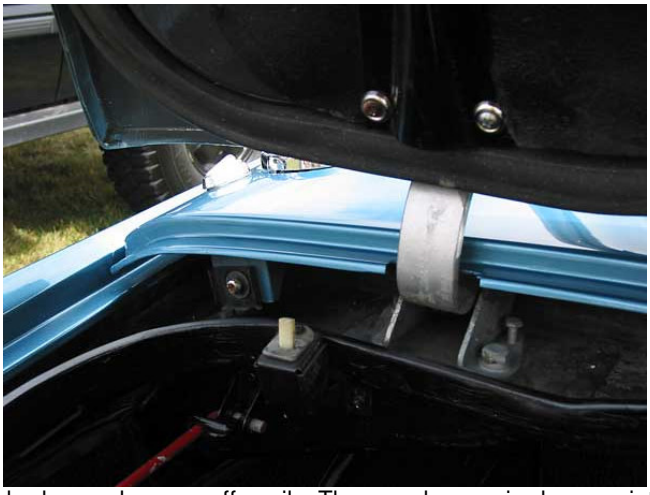
It's not really shown here, but all four seats were equipped with three-point seat belts.

Rover provided generous, compartmentalized storage space. Door pockets neatly hide a paperback or maps.

That's real wood veneer. Incidentally, Rover sourced their electric windows from GM's Delco division.

Rover placed the fuel tank over the differential to enhance rear-end crashworthiness.

Torsion springs hold the trunk lid up, unless the spare tire is secured on top of the trunk-lid. The red prop rod that's shown here can be used to hold up the trunk lid when the tire is stored outside.



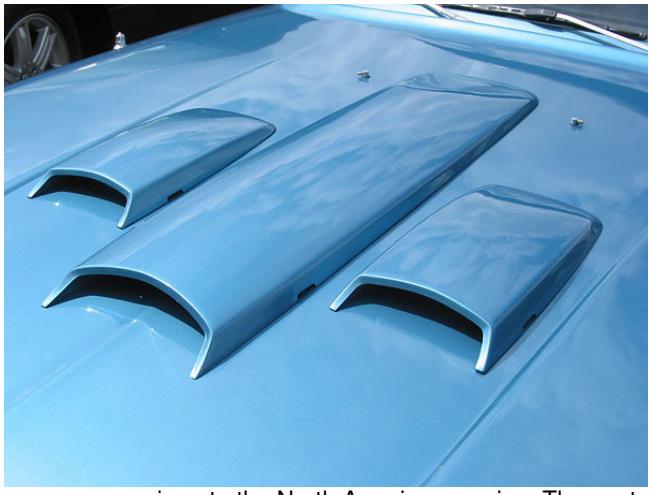
All the exterior body panels come off easily. They can be repaired or repainted off-the-car.

The trunk-mounted battery box seals up nicely.

The Icelert sensor monitors humidity & temperature. (The alarm lamp and switch panel were shown above.)

Rover Car Club of Otago, New Zealand insignia. Rover cars have a loyal worldwide following!

The lens extensions make parallel parking extra easy.



Distinctive triple hood scoops were unique to the North American version. The center one is gasketed to the engine air cleaner. The two smaller scoops are for summer-season cooling. Rotate the valve for winter driving.

The Rover 3500S came standard with locking gas cap. A less obvious feature is that the rear-deck panel can be removed very quickly with just a couple fasteners. Once removed, rubber clamps that secure the rear glass are easily loosened. Remove the clamps, and the glass slides down and out! The windshield is mounted similarly.

This trunk-lid badge is quickly removeable. The spare tire can be moved from inside the trunk to the top of the trunk-lid where it mounts here on a special adapter - freeing-up extra luggage space!

The Rover 3500S stainless steel hubcaps don't need to be removed for lugnut access.

This article is part of a set of SIX! If you enjoyed this article, check out:

- Rover 3500S Press Release (circa 1969)
- 1970 Rover 3500S Specifications and Pricing
- Rover P6 Design Innovations
- Rover V8 Engine History (courtesy of Autocar magazine)
- Leyland "Eight GE" Concept Car Press Release (circa 1968)