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Miscellaneous

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MOT Preparation (applicable in the UK, other countries have their own tests, standards and limits)

Added September 2010

Michael Beswick found and has sent me this [my comments]:

"I was asked by a friend's son what he should check before sending his car for MOT, to avoid it failing on something minor. The list is not exhaustive, and assumes no mechanical knowledge or tools. Just newspaper to kneel on and maybe a pair of rubber gloves! It is also SIMPLIFIED, and makes no attempt to cover items that require equipment to test them or requires knowledge of the testers' manual. Probably takes 15 minutes.

"MOTs are a test- the tester may not adjust anything other than Headlamp aim during the test [if you suspect headlamp aim is off then drive to the test centre having removed the headlamp rings yourself, I suggest!]. Certain minor items -such as blown bulbs- can be replaced at the end of the test before the car is passed. Garages may well charge for fitting an item, especially if it is discounting the test [**VERY** silly to go for a test with blown bulbs ...]. (Currently £54 max but available for £39.95 etc) So it pays to avoid this if possible. Certain failure items must be retested for no fee. Partial re-tests may or may not incur a fee. Details are shown on a poster that MOT stations must display and on the VT30 fail certificate.

"All the usual caveats apply. Your investment can go down as well as up. Your home is at risk etc etc. This information is not governed by the Financial Services Authority.....

"Hazard lights, (if fitted) must work , ignition on, ignition off

"Horn must work. Fuel cap must seal [visible rubber seal, not loose and rattling about, actually sealing is not checked]. Door mirrors to be secure. You must have a driver's door mirror and either a rear view or passenger side one [only **one** of interior, external offside, or external nearside mirror is required on passenger vehicles according to [MOTUK](#)]

"Wipers must work, with blades that clear the screen and are intact [clear an arc to give an 'adequate' view, not specified]. Washers +fluid. (push type washer is fine). Windscreen -chips bigger than 10mm in the area in front of the steering wheel will fail: as will bigger than 40mm in the rest of the area swept by the wiper blades.

"Indicators left & right. 60-120 flashes per minute is required.

"Side lights-front and back, dip beam, main beam, rear number plate lights. If fitted, rear fog light + tell-tale [if two are fitted the off-side lamp **must** work. If neither work but they are accessories added by an owner then you **may** get away with it!]. Brake lights. Indicate left then right and check stop/tail lights don't flash in time. (Reverse lights don't matter [not tested, although at one time if they were operated from a manual switch by the driver they must also have a tell-tale])

"Then put hazards on and all the above, (except indicators) to check that other lights are not "disco-ing" in time with the hazards.

"Seat belts must recoil (often slowly!), unless static type, and lock in place in the buckle. Belts must not be unduly frayed.

"Check the tyre tread depth -it needs to be 2mm (1.6mm is the legal min). Check the side walls for bulges or damage. You can't do much about the inside face without lying under the car!

"Handbrake-does the lever poke you in the eye when you pull it up? Turn the steering wheel-if it moves more than from 12 o'clock to 1 o'clock without turning the road wheels it will probably fail

(depends on steering wheel diameter)

"Exhaust must be "supported"-waggle the tail pipe a bit (when cold...) - it shouldn't. Noise is subjective, as it is difficult to determine a "standard" car!

"Number plates -lots of regulations. Stick on ones on the bonnet should pass but don't always. 1/1/73 was the change year from metal black & silver to modern yellow/white. Take the V5C to prove date of first registration and/or ask first!

"Bits must not be obviously falling off!

"Play in bearings, suspension, or steering is beyond the scope of this. If you think headlamp aim may be wrong, remove the chrome bezel before the test to make adjustment easier. If you can see the front brake pads they must be a minimum 1.5mm thick (the thickness of a 5 pence piece).

"Corrosion within 300mm of a suspension mounting or seat belt anchorage or major structural item will fail

"Local classic car clubs/users can best advise on "sympathetic" MOT stations who understand older cars. High throughput / low price ones probably do not fall onto this category! If you are not sure about a particular thing , take the car in and ask BEFORE the test is due!

"If the car has no MOT you may legally drive it to a pre-booked MOT test-nowhere else. Insurance for this trip is a slightly murky area. [You can get insurance without having tax or an MOT. I'm pretty sure it is an offence to drive to an MOT station **without** insurance, regardless of whether it is a pre-booked test or not. It's not something you should ever put to the test, I suggest, or you may be **personally** liable for any damage or injury caused to third-parties as well as being prosecuted. Note that someone else may be able to drive **your** car on **their** insurance, Third-party cover only.]

"Should the car fail, you can drive it home or to a garage to have it fixed [The MOT station may encourage you **not** to drive the car away on safety grounds, i.e. have it fixed there and then or arrange for it to be towed/trailerred somewhere else, but they cannot legally prevent you driving it away].

"Should you have some days "left" on your current MOT but the car fails the test, you still have an MOT, but you are driving an "un-roadworthy" vehicle. The current MOT Pass certificate shows the earliest date at which the vehicle can be presented for test - just under a month before the certificate expires. By having the car tested near this date, there should be ample time to fix items that fail. If the car passes, the new certificate is automatically dated for 12 months from the date of the expiry of the current certificate. However if it does fail, be aware that although you still have an MOT, you are driving an "unroadworthy vehicle" which restricts legal use. The penalties are pretty similar to not having an MOT and whilst technically covered by your insurance in legal terms, you are unlikely to have a claim settled.

"I've probably missed something, but it's a start! Good Luck!"

You can also check the brakes to make sure the pedal doesn't sink under sustained pressure, and if you have a servo 'empty' it by repeated operations of the brake pedal with the engine off until it stops wheezing, then with the pedal firmly pressed start the engine. While emptying the servo the pedal should get higher and harder, then when starting the engine it should sink a little.

See also [MOTUK](#) and [Haynes](#). In addition I spend a few minutes each year under the car, at the annual service before the MOT, just looking around and waggling things, bending the brake hoses back looking for surface cracking etc.

November 2011: There are proposals to [cease MOT testing of cars registered before 1st January 1960](#), as well as possibly make testing a bi-annual event for newer cars. One has to ask "Why?" One of the reasons seem to be that owners of 1960 and earlier cars are likely to be enthusiasts and so look after their cars better, but that doesn't follow at all. It's true that pre-1960 cars are 0.6% of the population,

and contribute to 0.03" of road casualties and accidents, but that is down to the greater sense of self-preservation of people driving cars of this era. Many cars at the 'lower' end of the classic price scale are likely to be owned by younger and less well-off people, with other cars and families to support, who may well take short-cuts on their pride and joy if they are allowed to. They are equally liable to be owned by people who don't know as much about their cars as perhaps they ought to, as can be seen by some of the questions and comments in the various online communities. Another reason given is that many aspects of the current test are not relevant to older cars - which is true, but in that case they are not tested! It's difficult to see just what could be dropped from the MOT that **isn't** safety-related. I'm no lover of MOTs, it's taken me 20 years to lose the 'heart in the mouth' feeling on delivering my cars for their tests and getting the verdict. As a Michael Beswick has said, it will only take one child to be killed seriously injured by a classic car that had a defect that should have been picked up on an MOT, and we might find ourselves under a much stricter regime or maybe even restricted to trailering them to private circuits etc. Nigel Case, owner of the Classic Car Club, is quoted as saying "It's nonsense. Older cars need more attention. You could buy a car which seems superficially fantastic, but it will be rotten underneath and a death trap."

Even less reason for reducing the frequency on cars less than 10 years old, with the first test being at four years. One of the biggest reasons for failure of modern cars is worn tyres, and you can see this in any supermarket car park. Manufacturers have progressively reduced the ownership experience to one of being completely passive, and most people only ever do things like servicing and replacements when someone tells them they have to. The failure rate is increasing - 35% in 2008, 37% in 2010, and 12% of tyres are illegal on replacement. In the current financial climate people are cutting down on servicing where things might get picked up, and the MOT will be the only time that they can be.

Despite the above, there are new advisories from 1st Jan 2012 [which will be failures from 1st April 2012](#). That's the list of new and amended items, but before you groan about something like the steering lock on an MGB having to be working as I did (Vee's has never worked in my ownership) you might like to have a look at the [full manual](#). This has new and amended paragraphs and sections denoted by a vertical bar to the left, and in the case of the steering lock it is only to be tested on cars first used from 1st January 2001. There are others, like the new main-beam tell-tale check is only on cars first used from 1st April 1986. One thing that applies to **all** vehicles is the battery condition and security check - all those who have fitted 'battery bins' or 12v batteries and not bothered to re-engineer the clamps take note!

Nut Screws Washers and Bolts

On this site:

[Torque Values](#)

[Translate between part numbers and description for many MGB fasteners](#)

Links:

['Fastener Decoder Booklet'](#) A reproduction of the document produced by BMC in 1964, kindly sent to me by Marc.

[Hex Bolt Head Markings](#) from Unified Engineering Inc.

[MGB Bolt Sizes/Taps and Dies](#) by Les Bengtson

[MGB 18V Engine Bolt Sizes](#) by Les Bengtson

[Whitworth sizes and numbers](#) from Samstag Sales.

[British Tools and Fasteners](#), which says it all really (the original link was to The British Tool Company which has been out of business a couple of years.

[Rask Cycle](#) on bolt head markings and torque figures.

[Uni-Thread](#), for taps, dies, reamers and much more.

[Tracy Tools](#) ditto (funnily enough also in Devon).

[Abbey Power Tools](#), which has Whitworth and BA spanners as well as much else.

[Precision Screw and Bolt](#), conversion charts for UNC and UNF decimals and diameters and Metric equivalents, e.g. UNF No.10 is 0.190" which is very close to 3/16" or 4.826mm, which equates to M5

Torque Values

Nuts and bolts can be assembled with dry, oiled or greased threads. From comparisons made with generic sources of information it seems that the figures in the MG Workshop Manual, at least, are

probably for oiled threads. Greasing threads can make them liable to come loose. For example I read many years ago that wheel studs should be oiled, not greased.

Although there are a lot of figures here there are still a lot more where no torque figure is given. It is possible that those given here are 'non-standard' torque values and the rest should be tightened to the 'standard' values for the type, size and thread of the nut and bolt. A chart of these 'standard' values is given on this [Geno's Garage](#) web page, and another set from [Alma Bolt Company & Prime Fasteners](#).

Also see this list of 'standard' values from the [Rover V8 Engine Manual](#):

METRIC

M5	.....	.4 Nm (3 ft-lb.)
M6	.....	.6 Nm (4.5 ft-lb.)
M8	.....	1.8 Nm (13 ft-lb.)
M10	.....	3.5 Nm (26 ft-lb.)
M12	.....	6.5 Nm (48 ft-lb.)
M14	.....	8.0 Nm (59 ft-lb.)
M16	.....	13.0 Nm (96 ft-lb.)

UNC / UNF

1/4	.....	8-10 Nm (6-7 ft-lb.)
5/16	.....	2.5 Nm (18.5 ft-lb.)
3/8	.....	4.0 Nm (29.5 ft-lb.)
7/16	.....	7.5 Nm (55 ft-lb.)
1/2	.....	9.0 Nm (66 ft-lb.)
5/8	.....	13.5 Nm (100 ft-lb.)

By [Monte Morris](#).

Additions by Peter Scott.

MBG GT V8 Workshop Manual Supplement and Rover V8 Engine Manual.

Additions from Haynes.

Application	Engine	Torque (ft-lb.)	Comments
Engine (4-cyl)			
Main bearing nuts	All models	70	
Flywheel set screws	18G/18GA	40	
Gudgeon pin clamp bolts	18G/18GA	25	early models(CBB)
Big-end bolts		+35 to 40	early models(CBB)
Big-end bolts		33	later models (RBB) oiled thread
Cylinder head nuts	18G/18GA	45 to 50	
Rocker bracket nuts	All models	25	
Oil pump to crankcase	All models	14	
Sump to crankcase	All models	6	
Cylinder side cover screws	18G/18GA	2	
Cylinder side cover screws deep cover	18G/18GA	5	
Timing cover 1/4 inch screws	18G/18GA	6	
Timing cover 5/16 inch screws	18G/18GA	14	
Rear plate 5/16 inch screws	All models	20	
Rear plate 3/8 inch screws	All models	30	
Water pump to crankcase		25	early models(CBB)
Water pump to crankcase		17	later models (RBB)
Water outlet elbow nuts	18G/18GA	8	
Rocker cover nuts	18G/18GA	4	
Manifold nuts	All models	15 to 16	

Oil filter centre bolt	18G/18GA	15	early models(CBB)
Clutch to flywheel	All models	25 to 30	
Carburettor stud nuts	18G/18GA	2	
Carburettor stud nuts	All models	15	
Distributor clamp bolt (nut trapped)	18G/18GA	4	
Distributor clamp bolt (bolt trapped)	18G/18GA	2 to 3	
Fan blade fixing screws	18G/18GA	7 to 9	
Crankshaft pulley nuts	All models	70	
Camshaft nut	All models	60 to 70	
Oil pipe banjo	All models	37 max	
Front plate 5/16 inch screws	All models	20	
Rear engine mounting bolt	All models	38 to 40	
Oil pressure relief valve domed nut	All models	43	Pre-1978
Oil pressure relief valve domed nut	All models	40	1978 on
Rocker bracket nuts	All models	25	
Air pump mounting screws		18	
Spark plugs	All models	18	
ENGINE (Factory V8)			
Main bearing cap bolts: Nos. 1 to 4		53	
Rear		68	
Connecting rod cap nuts		33	
Cylinder head bolts		68	
Rocker shaft to cylinder head bolts		28	
Flywheel bolts		55	
Oil pump cover bolts		13	WARNING! I got mine up to about 10 and they didn't seem to want to go higher. Bearing in mind they are going into the alloy front cover I stopped. If you look at the 'Other V8' figures there are two - 9ftlb and for Suffix B 3ftlb. 3 seems a bit low for oil under pressure even with Loctite, but 9 is definitely safer than 13.
Oil pressure relief valve plug		33	
Timing chain cover bolts		23	
Crankshaft pulley bolt		150	
Distributor drive gear to camshaft bolt		43	
Exhaust manifold bolts		13	
Induction manifold bolts		28	
Induction manifold gasket clamp bolt		13	
Carburettor adapter nuts		18	
Water pump bolts: 1/4 U.N.C.		7	
5/16 U.N.C.		17	
ENGINE (Other V8)			
Crankshaft pulley bolt	All models	199	
Timing cover to cylinder block bolts **	All models	16	
Camshaft gear bolt	All models	37	
Rocker cover bolts	All models	6	
Rocker shaft to cylinder head bolts	All models	28	

Cylinder head bolts *	Not suffix B		
Outer row	Not suffix B	51	
Centre row	Not suffix B	66	
Inner row	Not suffix B	66	
Cylinder head bolts *	Suffix B		
Stage 1	Suffix B	15	
Stage 2	Suffix B	Then 90°	
Stage 3	Suffix B	Further 90°	
Lifting eye to cylinder head bolts	All models	18	
Connecting rod bolts	All models	37	
Main bearing cap bolts ***	All models	52	
Rear main bearing cap bolts ***	All models	66	
Flywheel bolts	All models	59	
Drive plate and ring gear assembly bolts	All models	30	
Drive plate adapter bolts	All models	59	
Oil sump drain plug	All models	30	
Oil sump bolts	All models	17	
Oil pressure relief plug	All models	33	
Oil pump cover to timing cover	All models	9	
Oil pump cover plate screws ****	Suffix B	3	
Oil strainer bolts	All models	7	
Distributor clamp bolt	All models	15	
Spark plug	All models	11	
Coolant pump/timing cover to cylinder block	All models	16	
* Lightly oil threads prior to assembly. ** Coat first three threads with Loctite 242 prior to assembly. *** Coat threads with lubricant EXP16A (Marston Lubricants) prior to assembly. **** Coat threads with Loctite 222 prior to assembly.			
Rear Axle			
Differential bearing cap bolts	4-cyl	60 to 65	three-quarter floating axle
Pinion bearing nut		135 to 140	three-quarter floating axle
Crown wheel to differential carrier		55 to 60	three-quarter floating axle
Bearing retaining nut		180	three-quarter floating axle
Half-shaft nut		150	Semi floating axle tighten to align to next hole
Differential bearing cap bolts		50 to 55	semi- floating axle
	Factory V8	53	
Crown wheel bolts	4-cyl	60 to 65	
	Factory V8	63	
Pinion nut new spacer only		180 to 220	
		Adjust to	see section Ha Bentley

Pinion nut oil seal change		preload	and Leyland Workshop Manual
Rear Suspension			
Rear shock absorber bolts	4-Cyl	55 to 60	
Shock absorber to side-member nut	Factory V8	58	
Front Suspension			
Front shock absorber bolts	All models	43 to 45	
Brake disc to hub	All models	40 to 45	
Brake caliper mounting	All models	40 to 45	
Brake caliper clamping bolts	All models	35.5 to 37	Spotted by Ed Woods in the main body of the manual: "Only split the caliper if it is unavoidable, then replace the fluid channel seal, bolts and lock plates. Only bolts supplied by BMC Service Ltd. may be used"
Bearing retaining nut	All models	40	tighten to next split-pin hole
Cross member to body	4-cyl	54 to 56	
Cross member to side member nut: Top	Factory V8	55	
Bottom	Factory V8	45	
Shock absorber pinch bolt	All models	28	
Wishbone cross bolt	All models	28	
Bottom wishbone pivot to cross-member nut	Factory V8	45	
Anti roll bar link	All models	60	
Spring pan nuts and screws	All models	22	
Stiff nut to crossmember mounting bolt		44 to 46	GHN4 GHD4 GHD5 GHN5 models
King pin to wishbone - lower fulcrum		45	
King pin to damper - upper fulcrum		40	
King pin trunnion (nut on top of king pin)		60	then tighten to next split-pin hole
Steering			
Steering arm bolts	All models	60 to 65	
Steering rack fixings		30	
Steering wheel nut	4-cyl	41 to 43	
Steering wheel nut 9/16 in. UNF	4-cyl	27 to 29	GHN4 GHD4 GHD5 GHN5 models
Steering wheel nut 11/16 in. UNF	4-cyl	41 to 43	GHN4 GHD4 GHD5 GHN5 models
Steering wheel nut	4-cyl	36 to 38	GHN4 GHD4 GHD5 GHN5 some local models
Steering wheel nut	Factory V8	28	
Steering column universal joint bolts	All models	20 to 22	
Steering rack and pinion bearing nut	All models	40	
Steering tie-rod lock nut	All models	33 to 38	
Steering lever balljoint nut	All models	34 to 35	
Swivel pin nut	All models	60	tighten to align to next hole
Steering column top fixing bolts	All models	12 to 17	
Column clamp bolt	Factory V8	7	Note this is given in the manual as "85 lbf inches"
Road wheel nuts	4-cyl	60 to 65	

Road wheel nuts	Factory V8	60	
Transmission/Gearbox			
Mounting to gearbox case		15 to 20	manual transmission
Drive flange nut without overdrive		150	manual transmission
Drive flange nut overdrive Type D		100 to 130	manual transmission
Drive flange nut overdrive Type LH		55 to 60	manual transmission
Front brake band adj. screw locknut		15 to 20	automatic transmission
Rear brake band adj. screw locknut		25 to 30	automatic transmission
Filler tube to transmission case		20 to 30	automatic transmission
Filler tube to connector sleeve nut		17 to 18	automatic transmission
Drive flange nut		55 to 60	automatic transmission
Center support bolts		10 to 18	automatic transmission
Converter to drive plate bolts		25 to 30	automatic transmission
Transmission case to converter housing		8 to 13	automatic transmission
Extension housing to transmission case		8 to 13	automatic transmission
Oil pan to gearbox		8 to 13	automatic transmission
Front servo bolts		8 to 13	automatic transmission
Rear servo bolts		13 to 27	automatic transmission
Pump adaptor to housing screw		2 to 3	automatic transmission
Pump adaptor to housing bolts		17 to 32	automatic transmission
Pump adaptor to transmission case		8 to 18	automatic transmission
Manual shaft locknut		7 to 9	automatic transmission
Pressure adaptor plug		4 to 5	automatic transmission
Drain plug		8 to 10	automatic transmission
Upper valve body to lower valve body scr		20 to 30	automatic transmission
Lower valve body to upper valve body scr		20 to 30	automatic transmission
Oil tube and end plate to valve body		20 to 30	automatic transmission
Valve bodies to transmission case bolts		5 to 9	automatic transmission
Cam bracket screws		20 to 40	automatic transmission
Governor to counterweight screws		4 to 5	automatic transmission
Governor to cover plate screws		20 to 48	automatic transmission
Front servo adjusting screw locknut		15 to 20	automatic transmission
Rear servo adjusting screw locknut		25 to 30	automatic transmission
Starter inhibitor switch locknut		4 to 6	automatic transmission
Downshift cable adaptor bolts		8 to 9	automatic transmission
Filler tube connector to transmission		20 to 30	automatic transmission
Stone guard screws		17 to 19	automatic transmission
Driving flange nut		55 to 60	automatic transmission
Propeller shaft flange nuts	All models	30 to 35	
General			
Hydraulic brake pipe connection 3/8 UNF		5 to 7	
Hydraulic brake pipe connect 7/16 UNF		7 to 10	

Chassis No.		Gearbox	Cable	Length	Notes
101-9402 101-138400	RHD LHD	non-OD	GSD103	1143mm (3' 9)	It seems highly unlikely, if not impossible, for RHD and LHD cables to be the same length
101-10611	RHD	OD	GSD116	1422mm (4' 8)	
101-138400 10612-138400	LHD RHD	OD	GSD117	1542mm (5' 0)	It seems highly unlikely, if not impossible, for RHD and LHD cables to be the same length
9402-138400	RHD	non-OD	GSD111	1219mm (4' 0)	
138401-410000	RHD	non-OD	GSD249	991mm(3' 3)	
138401-410000	RHD	OD	GSD116	1422mm (4' 8)	
138401-153877 (Canada) 138401-187210 (roadster) 138401-187840 (GT)	LHD	non-OD	BHA4596	1270mm (4' 2)	not USA, Sweden, Germany
138401-153877 (Canada) 138401-187210 (roadster) 138401-187840 (GT)	LHD	OD	GSD151	1829mm (6' 0)	not USA, Sweden, Germany
138401-282419 (USA) 153878-282419 (Canada)	LHD	non-OD	GSD104	1373mm (4' 6)	North America, Sweden, Germany, without service indicator
138401-410000 (USA) 153878-410000 (Canada)	LHD	OD	GSD151	1829mm (6' 0)	North America, Sweden, Germany, without service indicator
187211-328800	RHD	Auto	GSD103	1143mm (3' 9)	
187211-328800	LHD	Auto	GSD116	1422mm (4' 8)	not USA, Sweden, Germany
187211-328800	LHD	Auto	GSD117	1542mm (5' 0)	North America, Sweden, Germany, without service indicator
282420-410000	LHD	non-OD	GSD145		North America, Sweden, Germany, without service indicator
360301-386600 (Canada) 360301-422791	LHD	non-OD	BHA5351		North America, Sweden, Germany, gearbox to service indicator
360301-386600 (Canada) 360301-422791	LHD	OD	BHA5360	1016mm (3' 4")	North America, Sweden, Germany, gearbox to service indicator
360301-386600 (Canada) 360301-422791	LHD	all	BHA5359	584mm(1' 11")	North America, Sweden, Germany, service indicator to speedo
410001 on	RHD (all)	OD	GSD315	1450mm (4' 9)	
410001 on	LHD	non-OD	AAU3868	1200mm (3' 11)	without service indicator
410001 on	LHD	OD	AAU3870	1700mm (5' 7)	without service indicator
All V8	RHD	OD	GSD116	1422mm (4' 8")	

There is also the question of right-angle drives.



The Parts Catalogues show **all** cars as having one at the gearbox end (13H 2567) to allow the cable to run alongside the gearbox as it travels forwards. However neither of my cars has one, the cable making a neat enough turn through 90 degrees here, however this may need a slightly longer cable to avoid a tight turn.



The big issue is whether LHD cars had an additional one at the speedo head or not. Again the Parts Catalogues indicate one was always used (BHA 4794 up to 76, the same 13H 2567 as for the gearbox for 77 on), because the cable came up through the

same hole in the bulkhead (above the clutch foot rest) as in RHD cars then across the car behind the dash. This would have resulted in too tight a turn behind the speedo in the limited space available, hence the second unit. However some people have indicated their cable goes through the bulkhead in front of the driver, then goes across and down via some unspecified route, which renders a right-angle drive unnecessary, including 3-synch cars using the large hole under the hinge slot. Clausager appears to show a 74 car routed in this manner, but using a smaller hole further above and towards the centre of the car than the large hole (which contains the heat control cable?).

What year is my MG?

By John H. Zajac

Often the question comes up regarding "What year is my MG?" with the early cars. Cars built in 1951 or even 1950 are titled as "1952" TD's for example. Early MGB's built in 1962 or 3 may be listed as 1963 or 1964s. Owners of early cars are especially urged to know their VIN numbers in order to get the correct original equipment. Why?

My understanding of the situation is that the "model year" was an American primarily GM invention. In the 1930's GM's chairman Alfred Sloan began the practice to showcase annual styling changes. Soon every other US manufacturer followed suit and the concept of a "model year" starting in the fall of the year started.

This system was alien to most European manufacturers including MG. VW even used their rather stable product plan to their advantage with the Beetle's advertising in the States. The European manufacturers basically updated their cars when required for competitive reasons and only loosely followed a "model year" concept. MG up until the late sixties was like this hence the issue with when was it built when was it sold what year is it anyway what do I put on the title? Early cars had model years "designated" by the dealer. It was a world where model years were ingrained into American paperwork registration and titles (after all who couldn't tell the difference between a '59 Chevy and a '60?) but with imports from Europe well it was a different story. The dealer typically filled out the paperwork so that a car sold in the model year (October to October) was of that model year regardless of date of manufacture.

What changed that "system" was the safety and emissions regulations which phased in requirements *by model years* for cars sold in the US. Once that occurred all the European manufacturers had to follow US procedures for VINs and linking US-destined cars to specific model years and levels of safety and emissions equipment. Of course old habits are hard to break and while I'm sure MG put in all legally required equipment I've heard how sometimes earlier parts sometimes ended up in the next model year's cars on occasion.

So- it's not unusual for cars exported to the States sold prior to 1967 (I think that's when the first safety/emissions laws became effective) to have wildly different dates of manufacture vs. model year on their title and why after that a system was imposed on the VIN designation. Later cars therefore will have their model year "baked into" the VIN regardless of the date for manufacture. It's easy to imagine how MG would have had to have been building the next year's model in late spring or early summer in order to be in showrooms in the U.S. by the fall.

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From 'Original MGB with MGC and GT V8' by Clausager

True VINs including the model year only appeared on the very last MGBs - those built between June 1979 and October 1980. Before that car or chassis (UK) or serial (North America) numbers of the form 'G-HN5/nnnnn-G' (for an MG 1800cc engine two-seater tourer 69-79 model built at Abingdon) were used. In the UK a vehicle's 'year' is generally regarded by owners as the date it was first registered the exception being for inclusion in the 'Historic' registration class and its free annual Road Fund Licence or Tax Disc where the cut-off date (31st December 1972) relates to the date of manufacture rather than the date of first registration.

Clausager refers to 'model years' from 1969 on which started production in November 1968. Thereafter the new model year could start production at any time from May 1978 (for the 1979 model year) to December 1974 (for the 1975 model year) but was typically August or September. 1974 saw another main change-point in September for the '1974 1/2' model year cars and the full rubber bumpers. Small changes appeared constantly throughout production however. The changeover points listed by chassis/serial number could be a little chaotic as 'old' parts were used up before 'new' parts were used. Therefore it was common for a car with a chassis/serial number *before* the change point to have some parts that should only have appeared *after* the change point and vice-versa. The only thing that could be said for sure is that as far as is known matched items were fitted i.e. you wouldn't get a car with one 1976 headlight and one 1977!

Dating your car by its windows - based on the original compiled by [Neil Cairns](#). Updated October 2008

MG's made in the 1950's to the late 1970's can be dated by the 'TRIPLEX CODE' etched into or screen printed onto the toughened glass. This also works for any other make using TRIPLEX glass.

Note that it dates the GLASS, so is only an indication of the cars age, assuming the glass is original.

If you are not quite sure of the year of your car, but the decade is known, just look for dots above and below the TRIPLEX TOUGHENED or LAMINATED logo on the glass. Unfortunately it is complicated by the code system changing in January 1969.

Before January 1969 one dot above T, R, E or X gives the quarter of the year the glass was manufactured:

T = Jan, Feb, March
R = April, May, June
E = July, Aug, Sept
X = Oct, Nov, Dec

From January 1969 the code indicated the month not the quarter, and although the same four letters were used there could be one, two or three dots used:

Jan	• TRIPLEX (dot over the T)	Jul	: TRIPLEX
Feb	• TRIPLEX (dot over the R)	Aug	: TRIPLEX
Mar	• TRIPLEX	Sep	: TRIPLEX
Apr	• TRIPLEX	Oct	: TRIPLEX
May	: TRIPLEX (double dot over T)	Nov	: TRIPLEX
Jun	: TRIPLEX	Dec	: TRIPLEX

But which year? Nine letters make the word TOUGHENED, one dot below a letter gives the year of the decade:

T = 1, O = 2, U = 3 and so on. However, if you see no dot (or possibly a dot under a space **after** the last letter), the year is zero.

Say your car is a 1950's MG, then TRIPLEX TOUGHENED, with one dot over the 'R' in Triplex, and the other under the last 'E' in Toughened, indicates 'April/May/June 1958'.

My 75 GT has Sicursive side glass but a Triplex heated back-light with a dot over the E and one under the G, indicating March 74. The car has a build date of May 1975, so you can see that glass (and quite probably other components) could be hanging round for some time before being used - no Just In Time then!


My thanks to Pierre De Rijck of Belgium for questioning this information when he found multiple dots on his windows, as originally the information from Neil only indicated one dot. The additional info came from these [Spitfire](#) and [Mini](#) sites. However it should be noted that these two differ for 1969 and later for the months of March and April. The former shows the dots over the I and P of TRIPLEX whereas the latter shows then over the E and X as previously. As **both** sites show only the E and X letters being used in all other cases, I'm tempted to think the Triumph site is in error and have assumed such. Pierre also mentioned his two side windows had different codes. This could have been due to breakage in the past, but in his case the two codes seem to be consecutive months in the same year and so are more likely to be from two production batches rather than one. If LHS and RHS glasses are made, packed and shipped separately rather than as pairs this is more then likely, especially given the apparent gap between manufacture and fitting. Less so if the glasses were shipped as pairs, but still possible if one were damaged or a defect found during the build of the car.

All of this miscellaneous [information](#) -while miscellaneous- is all important in its own way. While you may not need to know all the various [part](#) names etc before you make a [car donation](#), having it all here in one big [resource](#) is still pretty helpful!




Links

[Body](#) [Brakes](#) [Clutch](#) [Cooling](#) [Electrics](#) [Engine](#) [Fuel](#) [Gearbox](#) [Heater](#) [Ignition](#) [Propshaft](#) [Rear Axle](#) [Steering and Suspension](#) [Wheels](#)


The following sites carry information on a variety of topics:

 [So good it deserves a line of its own right at the top - a set of 'How to' videos from John Twist and University Motors](#)

I've had to delete the links to the MGOC articles on things like axle clonk repair etc. as you have to be a member to get access to them now. But even then it isn't easy finding them - you have to go to Members Area, Technical Archive, enter search terms and select 'Within Enjoying MG only'. Looks easy written there, but I had to have several goes to get there the first time.

 [from Paul Kile](#)  [Paul Lewis](#)  [and Norm Nock all of the Sacramento Valley MG Car Club](#)

 [Barney Gaylord's 'The MGA with an attitude' - mainly MGA but some details and much general information will be applicable to the MGB.](#)  [MGA and MGB technical information from British Automotive](#)

 [Scions of Lucas \(SOL\). Technical info for MG and other marques much of the 'other marques' info will also apply to MG to some extent.](#)  [Skye Poier's 'The MGB Experience' site](#)

 [Rich Mason's 'Helpzone'](#)  [Tech Tips from the NAMGBR](#)

 [Robert Epstein's 'MGB Tech Tips'](#)  [John and Elaine Hubbard's 'MGB-GT' pages](#)



 [Chicagoland MG Club - Tech tips](#)  [for a variety of marques and MG models from Moss Motors \(now only available by logging-in\)](#)

 [Parts sources from \(Bob?\) Lundgren](#)  [Automobile Repair manuals Online \(not](#)










 [Robert Bentley manuals](#)  [MGB Parts List available online from Moss USA. Other MG models and marques available.](#)

 [Miscellaneous MGB info from AutoChart Inc.](#)  [Classic car restoration courses at UK Further Education Colleges from Restored Classics](#)












 [Recalls and Technical Service Bulletins from Alldata](#)  [Fuel Additives Lubricants and Coolant reference information from Stephen Ringlee's Volvo Maintenance FAQ](#)

 [UK MOT info from MOTUK \(geddit?\)](#)  [UK MOT info from Haynes](#)




 [Using a vacuum gauge for fault diagnosis.](#)  [Speedo and tach serial numbers through the years from Anon](#)

-  [More speedo info from Autochart](#)
-  [Yet more speedo info from Paul Tegler](#)
-  [Speedo repairs from Anthony Rhodes or as a downloadable PDF](#)
-  [Speedo repairers and suppliers Speedograph Richfield successors to Smiths Industries](#)
-  [Bespoke and replacement instruments from Caerbont Automotive Instruments](#)
-  [Another on-line Parts Catalogue from Brown and Gammons in the UK](#)
-  [Handy Reference Information from Pegasus Auto Racing - Decimal inch equivalents copper electrical wire specs and more.](#)
-  [Smiths and Jaeger speedo repairs from Tigers United](#)
-  [John Twist's Tech Tips hosted by NAMGBR, on a variety of topics.](#)

Body Links:

-  [Bodywork from John Elwood.](#)
-  [Paint Codes from Paul Tegler's 'Teglerizer' site](#)
-  [British car keys cut in the USA by Pete Groh.](#)
-  [Roadster screen from Lee Daniels \(updated link\)](#)
-  [MGB Chrome Bumper Conversion sites from Google](#)
-  [Body Rotisserie from Bob Beaupre](#)
-  [Body Rotator from Skye Poier](#)
-  ['The Instillation \(sic\) of Sills & Rockers' from Classic Auto Restoration Services. A commercial site but includes 'How to' and FAQs.](#)
-  [Hood/top fitting from Washington DC Centre MG Car Club](#)
-  [Remanufactured bodies from British Motor Heritage](#)
-  [Brief information on fitting a child seat in the back of a GT. The lap and diagonal static belt from Securon can be found \[here\]\(#\). NOTE: Check the legality of these in the UK following the change in UK law from 18th September 2006, although it seems that systems with an older BS approval marking will remain legal until May 2008. Other than that it is legal to have an unrestrained child \(or two\) in the back of a GT, but illegal to have them restrained with an unapproved system.](#)

Brake Links:

-  [Brake fluid from Veteran Triumph Register](#)
-  [Servo overhaul on a TR6 from Buckeye Triumphs.](#)
-  [Low brake fluid level warning - note the remote servo can suffer seal failure which causes all the fluid to be sucked out of the master!](#)





Clutch Links:










(None at present)

Cooling Links:








-  ['Advanced Cooling System Basics' \(sic\) from Stewart Components](#)


Electrics Links:


-  [Smartscreen intermittent wiper control. So good I have them on both my MGBs.](#)
-  [Lamp/bulb and fuse info from 'Automotive Lite Bulbs'](#)
-  [More lamp/bulb info from Daniel Stern Lighting including FAQs, Tech info and 'How To'. Note that headlamp aiming shows LHD, reverse the images for RHD.](#)
-  [Lots of electrics info on the 'The T*****h TR6 Web' much of which is also relevant to MGs.](#)
- [Alternator conversions from Bob](#)
- [Converting 4-cylinder tachs to V8 from the](#)

-  [Muenchausen.](#)
-  [British V8 Forum.](#)
-  [Tach calibration and repair from Mark Olsen's Sunbeam Tiger pages. Includes the circuit diagram of the inductive circuit.](#)
-  [Rebuilding a tach with modern electronics from Theo Smit's Tiger pages includes a link to a description of how to modify the inductive tach to work with electronic ignition.](#)
-  [Tip from Crane \(may work with other manufacturers products\) if your inductive tach \(64 to 72\) doesn't work with your new electronic ignition.](#)
-  [Enlargeable coloured wiring diagrams in PDF format from Advance Auto-wire. These differ from the Workshop Manual Haynes Bentley in that associated components are placed together so reducing the amount of wiring snaking about and hence making them easier to follow.](#)
-  [Lucas relay info on CRC's TVR site.](#)
-  [Lucas Technical catalogues for bulbs, switches etc.](#)
-  [Racemettle geared starters, contains useful info on the number of pinion teeth used by each model.](#)


Engine Links:

-  [V8 power for the MGB from Dan Masters](#)
-  [MG V8 conversions from Mike Barnes](#)
-  [V8 conversion from Glenn somebody or other](#)
-  [More V8 conversion from commercial site V8 Developments](#)
-  ['MGB V8 Conversions by Roger Parker' - a noted authority](#)
-  [A Buick V8 conversion by Leon Zak](#)
-  [MG Engines from the TA to the MGF by \[Neil Cairns\]\(#\)](#)
-  [BMC engine numbers from 1952 to 1990 also by Neil Cairns. However the section on Gold Seal numbers doesn't include those for the MGB, for which \[see here\]\(#\).](#)
-  [More info from Neil Cairns, this time on the differences between the 18V engine as used in the MGB and that used in the Marina.](#)
-  [Got an 18V engine with a funny number? These were used in the Sherpa van. \(Note March 2007: Not currently available but I'll leave this link here for a while in case it comes back.\)](#)
-  [Rover V8 engine number ranges from Capri Racing. Doesn't actually include the factory V8 MGB \(or the RV8 as far as I know\) but may be helpful if you get hold of an engine for a conversion.](#)
-  [Oil filter study from Russ W. Knize.](#)
-  [Engine oil bible from 'The Speed-Trap Bible' by Chris Longhurst. Also see the sections on \[Snakeoils\]\(#\) and \[Additives\]\(#\).](#)
-  ['More Than You Ever Wanted to Know About Motor Oil' from The Vintage Triumph Register. Biased towards the makes and grades available in the USA.](#)
-  [Another oil filter study from SHOclub](#)
-  [More oil info, this time from a British biker, but mostly applicable to cars. Explanations of viscosity, detergency, relationship between gear and engine oil viscosity ratings, synthetics and additives \("Don't!" in this last case\).](#)
-  [Another oil filter study. Two words of warning though - this relates to very high output close-tolerance Ford engines, and to me at least the detailed data conflicts with the conclusions.](#)
-  [Compression Tests - from Puma Racing](#)
-  [Engine weights for many marques by Dave Williams, passed to me by Bob Howard. MG 4-cylinders under 'BL', V8 and V6 under 'Rover'. Some engine dimensions, only for the V8 in the case of MG, also some gearbox weights. \[See here\]\(#\) for Workshop manual info.](#)
-  [Cylinder-head casting numbers - a frequent source of questions - from British Automotive](#)
- [MGB cylinder head identification from Sean](#)
- [A little more MGB cylinder head](#)


 [Brown's Flowspeed.com](#), mainly for North American spec engines.


 [identification info](#) this time from Paul Walbran Motors in New Zealand.


Fuel Links:


 [Carburettor Models by Year](#) from Paul Tegler's 'Teglerizer' site


 [Polishing SU dashpot covers](#) by Paul Tegler


 [SU Carburettors](#) by Scott Fisher and Roger Garnett


 [THE S.U. VARIABLE CHOKE CARBURETTOR](#) by Malcolm Land - what it is and how it works.


 [Unleaded Fuel](#) - a technical guide from Puma Racing.


 [SU Fuel Pumps](#) description, rebuilding and modification by Dave Dubois.


 [Zenith/Stromberg water choke](#) by Rick Jaskowiak. And for a picture of a manual choke conversion click [here](#).


 [SU carb and fuel pump parts](#) from SU Burien. Includes spec data on things like piston springs.

 ['Minty Lamb SU Needle Compare-o-rama'](#). Shades of Wallace and Gromit, but it is an on-line SU needle comparison and selection program.


 ['Living with Unleaded'](#) from Rick Astley


 [Tech info](#) from ZTherapy


 [SU Carburettor Tips](#) by Jim Taylor from the Jaguar Clubs of North America, including piston 'drop test' specs

 [Detailed pictures](#) of the HIF6 carb linkage pieces on the factory V8 from British Auto.


 [RON MON and PON \(American\)](#) octane ratings explained from Wikipedia and [compared](#) by Mad Mole.


 [SU/Butec carb data](#) from Peter & Rita Forbes' Engine Webpages.


 [The Hitachi-SU Tech Pages](#) from Julian Series


 [Alternatively a downloadable comparison and selection program](#) from Scott A. Beavis.

Gearbox Links:

 [A gearbox testing tool](#) from Kai Radicke


 [Theoretical Top Speed calculator](#) from mySportsCar.

 [Adding overdrive to a non-overdrive gearbox](#) by Octarine Services


 [Modifying the rear crossmember to give improved access to the gearbox mount bolts.](#) NB: Not sure if this is strictly necessary if you attach the crossmember to the gearbox before you raise the cross-member up to the chassis rails.


Heater Links:


 [Heater Valve Improvements for BMC B-Series Engines](#) from Bob Muenchausen's 'Muenchausen's Garage'


 [MGB Heater Rebuild and Upgrade](#) from Chicagoland MG Club


Ignition Links:


 [High Energy Ignition systems](#) from the Veteran Triumph Register.


 [Distributor curves](#) from Paul Tegler's 'Teglerizer' site


 [More distributor info](#) from Doug Jackson's 'British Automotive'.


 [Yet more distributor info](#) from AutoChart Inc.


 [A problem and solution](#) when installing electronic ignition systems.


 [Transpo supply the electronic module](#) for the 45DM4 distributor. Select 'Ignition Modules', 'Delco', and it is the DM1906.


 [Coil ballast systems](#) from the Veteran Triumph Register.


 [Electronic Ignition Systems](#) from Autocar Electrical Equipment Co Ltd

 [Even more distributor info](#) from TDC Engineering many Lucas serial numbers not just MG.


 [Tuning \(as opposed to 'setting-up'\)](#) Lucas distributors also from TDC Engineering.

 [Product information](#) for the 123 electronic distributor. For installation and technical data [see here](#).


 [Original-spec advance springs, yes advance springs, from Distributor Doctor,](#) although unfortunately only for 25D and not 45D. Other springs available if you can quote

 [Points, condensers, rotors and caps](#) reputedly of better quality than those from the usual suspects, as well as electronic ignition conversions.


Propshaft Links:


 [Driveline alignment - problems and solutions](#) from Drivetrain Specialists of Las Vegas


Rear Axle Links:

 [Wheel hub and rotor/disc measurement points](#) from Wheel Vintiques


Steering and Suspension Links:


 [Tube shock conversion](#) from Paul Tegler's 'Teglerizer' site

 [Make your own steering column/rack shaft alignment tool.](#) Original link replaced by a section on these pages as more information has come to light, click on the globe then 'Column/Rack Alignment'.


 [Suspension bible](#) from 'The Speed-Trap Bible' by Chris Longhurst


Wheel Links:


 [Tyre sizes and axle ratios](#) from Skye Poier's 'The MGB Experience' site


 [Wheels and tyres bible](#) from 'The Speed-Trap Bible' by Chris Longhurst


 [Tyre Size Comparisons](#) from Club DSM


 [Tire/Wheel Combination Calculator](#) from Rick Tolan

 [Solent Wheels,](#) who apparently make a good job of refurbishing V8 wheels where the chrome is peeling. They powder-coat the whole wheel silver, then top-coat the alloy with satin black, and polish the areas round the cut-outs, all for £50. I understand they split the centre from the rim and re-rievet in the process.


 [Central Wheel Components.](#) They can make stainless spokes to fit MGB wheels for you to fit but do not work on the wheels themselves, only motorbike wheels. Highly polished they are close to chrome, but are said to resist breakage better.


 [British Wire Wheel](#) - based in the USA despite the name. Sell both Dunlop and Dayton so a useful price comparison.


 [Tyre sizes and axle ratios](#) from Scott Galaba's BMW M Coupe and Z3 Coupe site.

 [Tyre sizing sidewall info](#) construction etc from Dunlop

 [Wheel and Tyre Sizing](#) from AGP Motorsports

 [Lots of stuff on wheels and tyres](#) from the All Morgan site

 [My local wire-wheel rebuilder](#) - Phillips & Son, Unit 3, Seven Stars Road, Oldbury, West Midlands, 0121 544 9060, just a couple of minutes from J2 of the M5. The map (click the globe) has the green arrow close to where they actually are between the canal bridge and the A457, even though that is shown as Park Lane and not Seven Stars Road.

 [Weights of many wheels,](#) probably all after-market.

If you know of any sites containing technical information that you would like to see listed here (including your own of course) please [mail me](#) with the URL.

<http://www.mgb-stuff.org.uk/>

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