

Manufacturers Reference No. for Application



F.I.A. Recognition No.

002-R

# ROYAL AUTOMOBILE CLUB

PALL MALL, LONDON, S.W.1.

## Federation Internationale de l'Automobile.

*Form of Recognition in accordance with  
Appendix J to the  
International Sporting Code*

Manufacturer.....MG CAR COMPANY.....

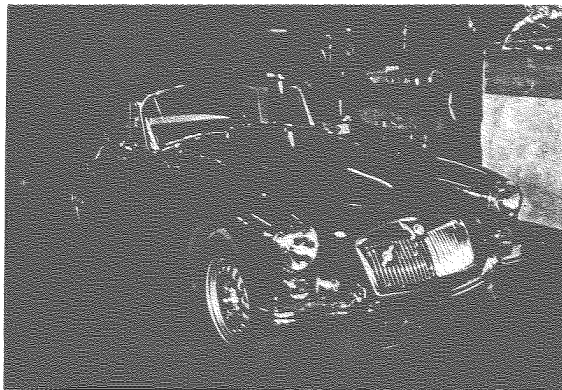
Model.....MGA TWIN CAM..... Year of Manufacture.....1958 - 1960.....

2 SEATER \_ YD  
COUPE YM  
Chassis.....

Serial No. of  
Engine.....BL16GB.....

Type of Coachwork.....STANDARD 2 SEATER, OPTIONAL COUPE.....

Recognition is valid from..... In category.....Group 3.....



Stamp of F.I.A./R.A.C. to be  
affixed here

Form: R.F.I.A.

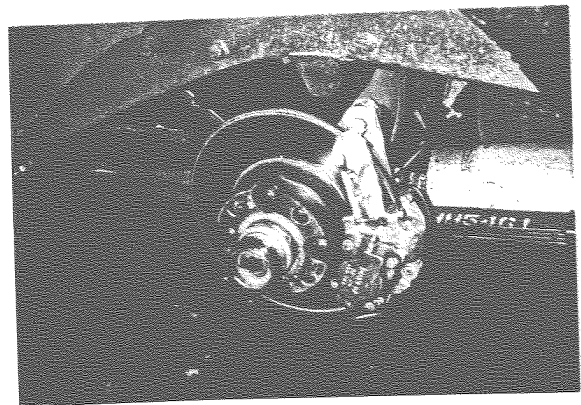
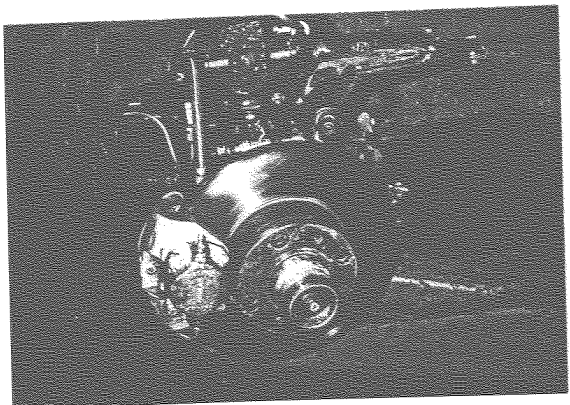
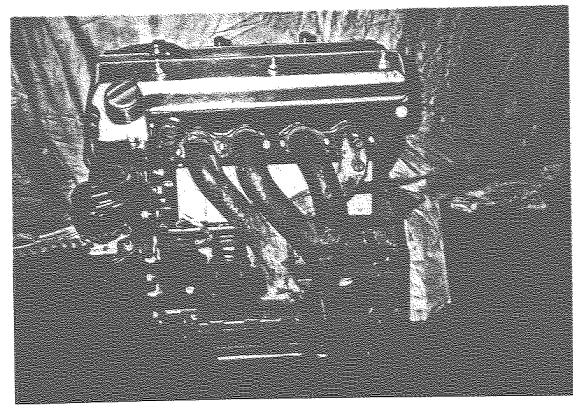
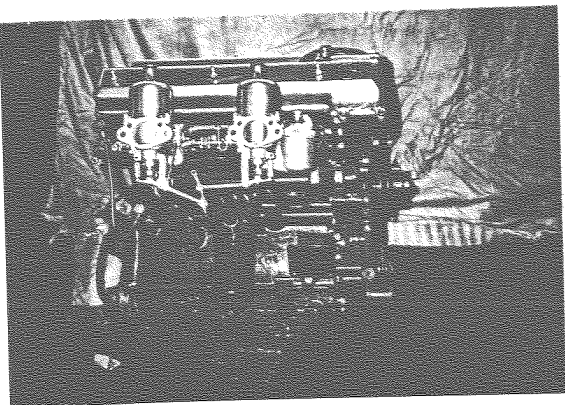
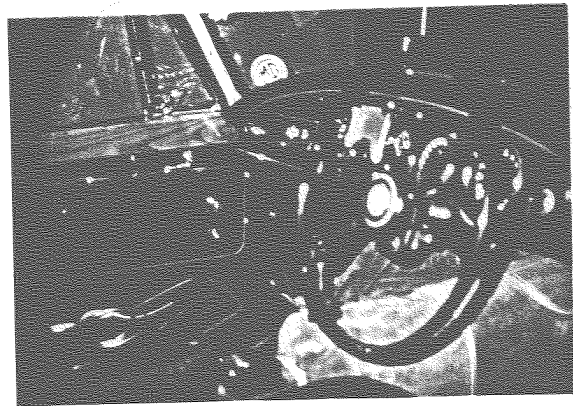
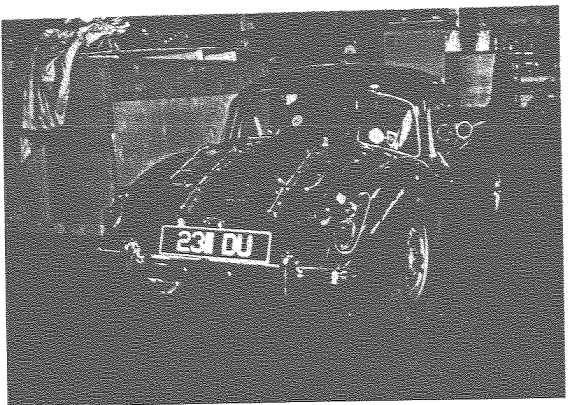
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General description of car:

*Specify here material/s of chassis/body construction*

STANDARD Chassis steel  
Body steel  
Doors steel aluminium skin  
Bonnet aluminium  
Boot aluminium

OPTIONAL Wings aluminium  
Front shroud aluminium  
Rear shroud aluminium  
Hard top aluminium  
Hard top fibreglass



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**ENGINE** in line In line Catalogued B. H. P. 108  
 No. of cylinders 4 in V - at R.P.M. 6700  
 opposed -

Cycle Four stroke Firing order 1-3-4-2

Capacity 1588 cc. Bore 75.41 mm. Stroke 89 m.m.  
 Maximum rebore 1.106 mm Resultant capacity 1636 c.c.  
 Material of cylinder block Cast Iron Material of sleeves, if fitted None

Distance from crankshaft centre line to top face of block at centre line of cylinders 251.5 m.m.  
 Material of cylinder head Aluminium Volume of one combustion chamber 85.5 c.c.  
 Compression ratio 9.9 Alternative 8.3

Material of piston Aluminium No. of piston rings 4  
 Distance from gudgeon pin centre line to highest point of piston crown 57.15 m.m.

Bearings { Crankshaft main bearings: Type Steel/lead indium Dia. 50.8 m.m.  
 Connecting rod big end: Type Steel/lead indium Dia. 47.65 m.m.

Weights { Flywheel 6.6 kg.  
 Crankshaft 14.85 kg.  
 Connecting Rod 1.05 kg.  
 Piston with rings 0.35 kg.  
 Gudgeon pin 0.11 kg.

No. of valves per cylinder 4 Method of valve operation Overhead cam  
 No. of camshafts Two Location of camshafts Overhead

Type of camshaft drive Gear to half speed shaft, then chain

Diameter of valves: Inlet 40.38 m.m. Exhaust 36.58 m.m.  
 Diameter of port at valve seat: Inlet 35.41 m.m. Exhaust 30.99 m.m.

Tappet clearance for checking timing: Inlet 0.432 m.m. Exhaust 0.432 m.m.

Valves open: Inlet 20 BTDC Exhaust 50 BBDC

Valves close: Inlet 50 ABDC Exhaust 20 ATDC

Maximum valve lift: Inlet 9.52 m.m. Exhaust 9.52 m.m.

Degrees of crankshaft rotation from zero to-  
 Maximum lift: Inlet 104 Exhaust 104  
 3/4 Maximum lift: Inlet 84 Exhaust 84

Valve springs: Inlet Coil Exhaust Coil  
 Type Coil  
 No. per valve Two

Carburettor: Type Semi down draft No. fitted Two  
 (up or down draft, horizontal)

Make SU H6 Model H6  
 Flange hole diameter 44.45 m.m. Choke diameter 41.15 m.m.  
 Main jet identification No. 2.54 mm

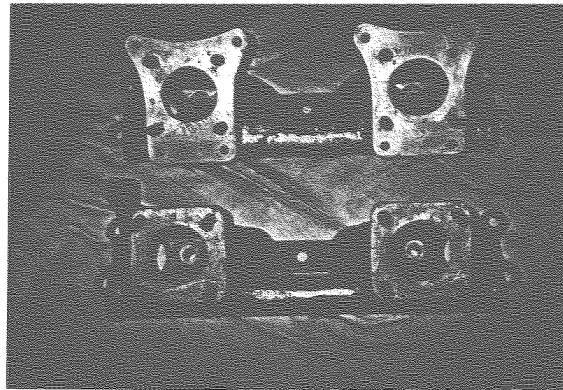
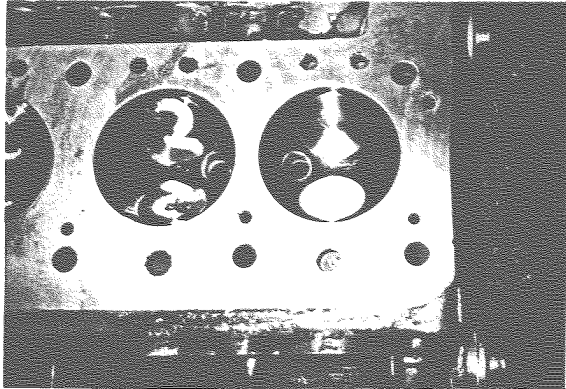
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Air filter: Type Vokes No fitted Two

Inlet manifold:

Diameter of flange hole at carburettor 44.45 m.m.

Diameter of flange hole at port 39.75 m.m.



Exhaust manifold:

Diameter of flange hole at port 38.86 m.m.

Diameter of flange hole at connection to silencer inlet pipe 48.26 m.m.



### ENGINE ACCESSORIES

Make of fuel pump.....	<u>SU</u>	No. fitted.....	<u>One, optional two</u>
Method of operation.....	<u>Electric</u>		
Type of ignition system.....	<u>Battery and coil</u>		coil or <del>XXXXXX</del> magneto
Make of ignition.....	<u>Lucas</u>	Model.....	<u>DM2</u>
Method of advance and retard.....	<u>Centrifugal</u>		
Make of ignition coil.....	<u>Lucas</u>	Model.....	<u>HA12, optional B12</u>
No. of ignition coils.....	<u>One</u>	Voltage.....	<u>12</u>
Make of dynamo.....	<u>Lucas</u>	Model.....	<u>C39PV2, optional 22290</u>
Voltage of dynamo.....	<u>12</u>	Maximum output.....	<u>25 max alt 30</u> amps.
Make of starter motor.....	<u>Lucas</u>	Model.....	<u>M35G1</u>
Battery: No. fitted.....	<u>Two</u>	Voltage.....	<u>6</u>
		Capacity.....	<u>64</u> amp. hour
Oil Cooler (if fitted) type.....	<u>Optional aluminium</u>	Capacity.....	<u>1</u> pints

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**TRANSMISSION**

Make of clutch BORG AND BECK Type 8 ARG  
 Diameter of clutch plate 8" - 20.3cm No. of plates One  
 Method of operating clutch Hydraulic  
 Make of gearbox MG Type Manual MGA Twin Cam  
 No. of gearbox ratios Four  
 Method of operating gearshift Manual  
 Location of gearshift Centre of car on floor  
 Is overdrive fitted? No  
 Method of controlling overdrive, if fitted None

	GEARBOX RATIOS		ALTERNATIVE RATIOS					
	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth
1.	3.64	$\frac{21}{30} \times \frac{11}{28}$			2.45	$\frac{26}{25} \times \frac{11}{28}$		
2.	2.214	$\frac{21}{30} \times \frac{20}{31}$			1.62	$\frac{26}{25} \times \frac{19}{32}$		
3.	1.374	$\frac{21}{30} \times \frac{25}{26}$			1.268	$\frac{26}{25} \times \frac{22}{29}$		
4.	1	Direct			1	Direct		
R.	4.76				3.32			

Type of final drive BMC 'B' type hypoid gears  
 Type of differential Two star wheels, two planet wheels  
 Final drive ratio 4.3 Alternatives 4.1, 4.55, 4.875  
 No. of teeth 10/43  
 Overdrive ratio, if fitted None

**WHEELS**

Type Dunlop disk Weight 7.72 kg.  
 Method of attachment Dunlop centre lock  
 Rim diameter 381 mm. Rim width 101.6 m.m.  
 Tyre size: Front 590 x 15 Rear 590 x 15

**BRAKES**

Method of operation Hydraulic  
 Is servo assistance fitted? No  
 Type of servo, if fitted None  
 No. of hydraulic master cylinders One Bore 22.225 m.m.

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	Front	Rear
No. of wheel cylinders	<u>Two per side</u>	<u>Two per side</u>
Bore of wheel cylinders	<u>53.97</u> m.m.	<u>38.1</u> m.m.
Inside diameter of brake drums	<u>-</u> m.m.	<u>-</u> m.m.
No. of shoes per brake	<u>-</u>	<u>-</u>
Outside diameter of brake discs	<u>27.94</u> m.m.	<u>27.94</u> m.m.
No. of pads per brake	<u>Two</u>	<u>Two</u>
Dimensions of brake linings per shoe or pad (if all shoes or pads in each brake are not of same dimensions, specify each)		

	Front	Rear
Length	<u>5.3</u> m.	<u>5.3</u> m.
Width	<u>4.6</u> m.	<u>4.6</u> m.
Total area per brake	<u>24.38</u> m. <sup>2</sup>	<u>24.38</u> m. <sup>2</sup>

#### SUSPENSION

	Front	Rear
Type	<u>Wishbone</u>	<u>Beam axle</u>
Type of spring	<u>Coil</u>	<u><del>Coil</del> LEAF</u>
Is stabiliser fitted?	<u>Yes</u>	<u>No</u>
Type of shock absorber	<u>Armstrong lever</u>	<u>Armstrong lever</u>
No. of shock absorbers	<u>Two</u>	<u>Two</u>

#### STEERING

Type of steering gear Rack and pinion

Turning circle of car Right hand 9.78, Left hand 9.91 m., approx.

No. of turns of steering wheel from lock to lock 2.75

#### CAPACITIES AND DIMENSIONS

Fuel tank <sup>Standard 45.4</sup> Optional 68.1 or 77.18 litres or 104.42 litres Sump 7.38 litres

Radiator 7.7 litres

Overall length of car 396.2 cm. Overall width of car 147.3 cm.

Overall height of car, unladen (with hood up, if appropriate) 127 cm.

Distance from floor to top of windscreen:

Highest point 94.5 cm. Lowest point 91 cm.

Width of windscreen

Maximum width 116 cm. Minimum width 104.3 cm.

\*Interior width of car 121.4 cm. Coupe 121

No. of seats Two

Track: Front 121.68 cm. Rear 124.14 cm.

Wheelbase 238.76 cm. Ground clearance 15.24 m.m.

\* (To be measured at the immediate rear of the steering wheel, and the width quoted to be maintained in a vertical plane of not less than 25cms.)

Overall weight with water, oil and spare wheel, but without fuel 914.4 kgs.

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Optional equipment affecting preceding information:-

1. Aluminium flywheel 5.45 kg
2. Laycock diaphragm clutch 8" or 8.5"
3. Twin 2" SU carburettors H8 with inlet manifold for injector pipes as pictured.
4. Twin Webber DCOE carburettors with aluminium manifold as pictured. (40 dcoe  
and 42 dcoe)
5. Camshafts as per Factory No's. EX/962/1, 1A, 2, 2A, 3 and 4.
6. Valves EX/962/192 inlet 44mm.  
EX/962/193 exhaust 39.4 mm.
7. Armstrong adjustaride lever arm rear shock absorbers.
8. Dual brake master cylinder
9. Appendix J windscreen, height to floor minimum 71 mm  
maximum 87 mm.
10. Perspex side and rear windows in Coupe.
11. Auxillary fuel pump.