

F.I.A. Recognition No. 156g  
Group 2 - Towing



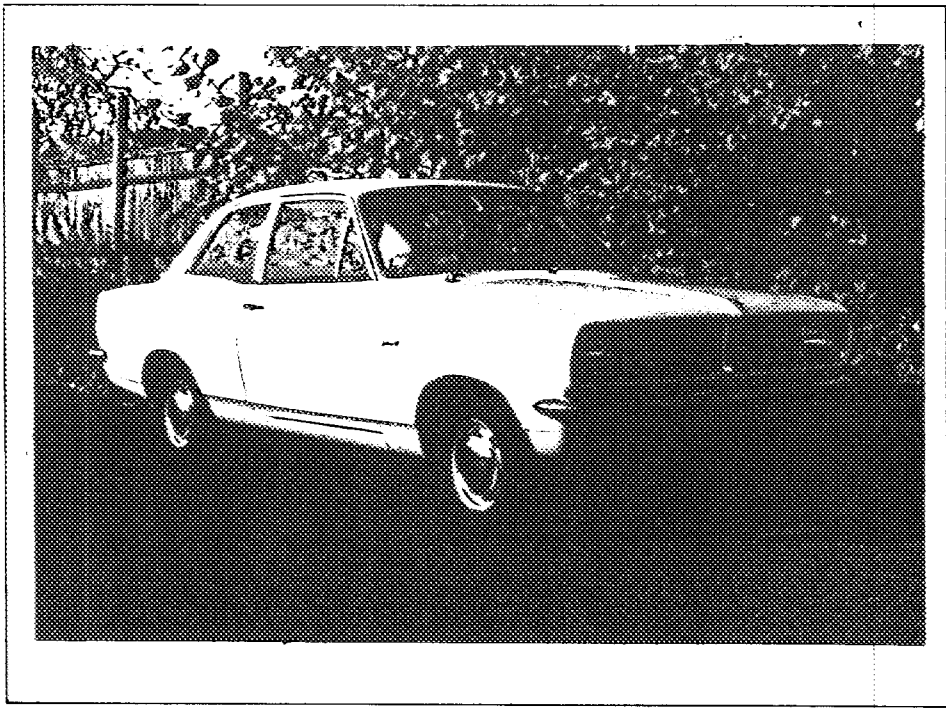
# ROYAL AUTOMOBILE CLUB

31, Belgrave Square, London, S.W.1

Form of recognition in accordance with appendix J to the International Sporting Code of the  
FEDERATION INTERNATIONALE DE L'AUTOMOBILE

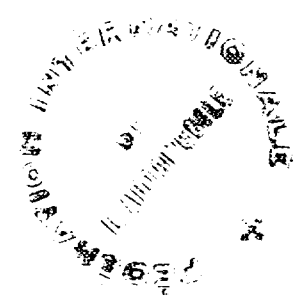
Cylinder-capacity 1599 cm.<sup>3</sup> 97.5 in.<sup>3</sup>  
Manufacturer VAUXHALL MOTORS LTD. Model VIVA 1600 DE LUXE  
Serial No. of chassis/body 933118E1000000 ONWARD Manufacturer VAUXHALL MOTORS  
Serial No. of engine 3000001 Manufacturer VAUXHALL MOTORS  
Recognition is valid from 1st July 1969 List 1969/5  
The manufacturing of the model described in this recognition form started on JUNE 1st 19 68  
and the minimum production of 1,000 identical cars, in accordance with the specifications of  
this form was reached on APRIL 1st 19 69

Photograph A,  $\frac{3}{4}$  view of car from front



F.I.A. Stamp

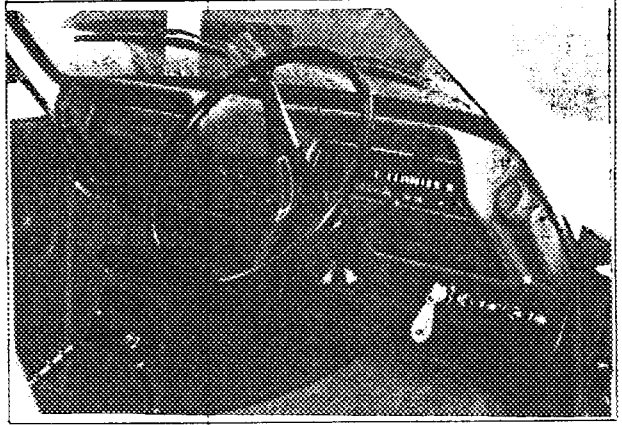
R.A.C. Stamp



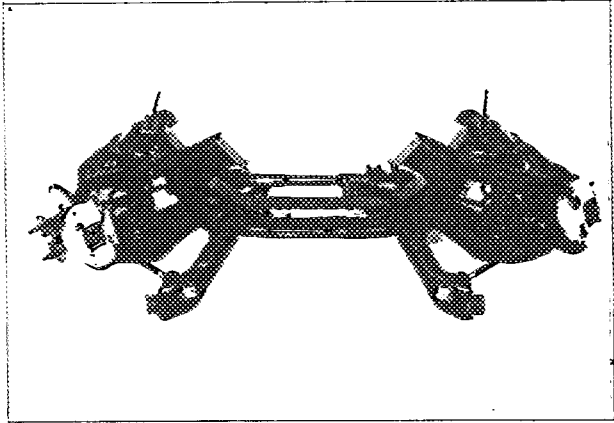
B



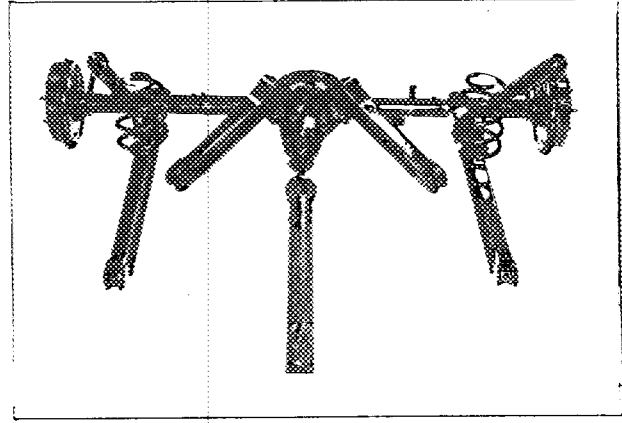
C



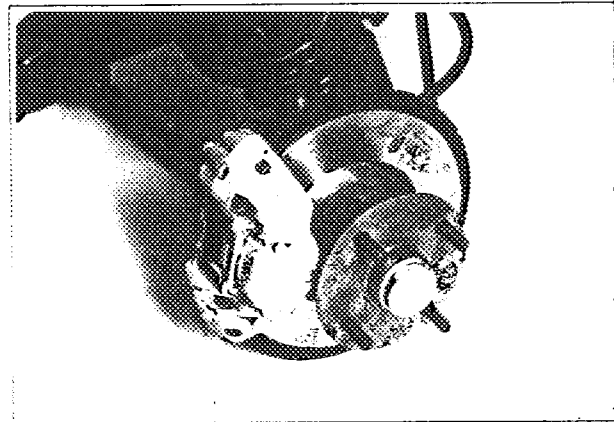
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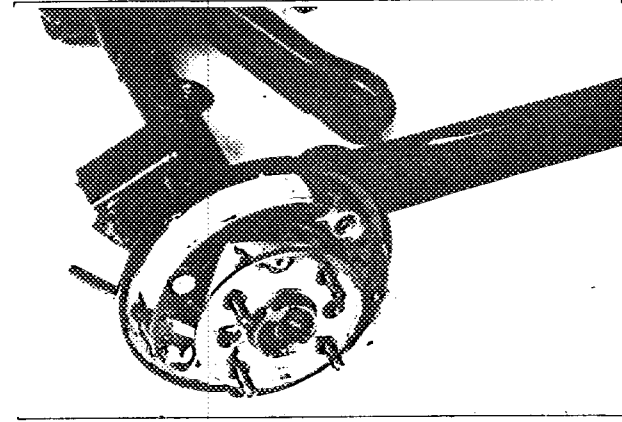
E



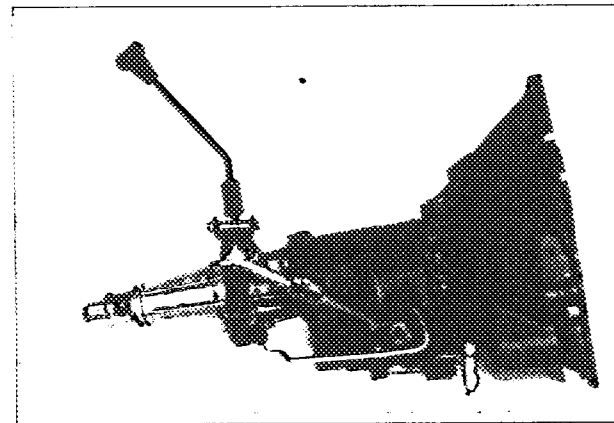
F



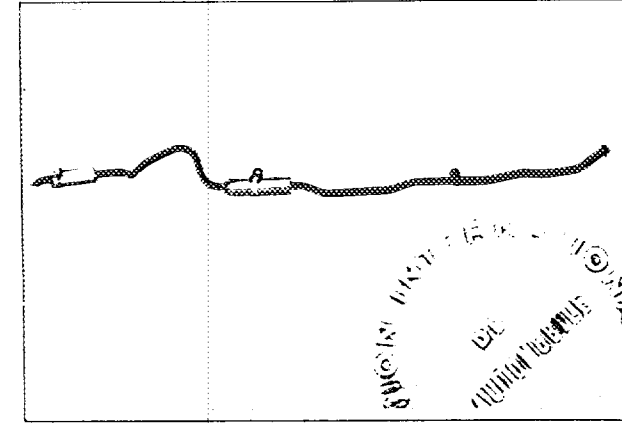
G

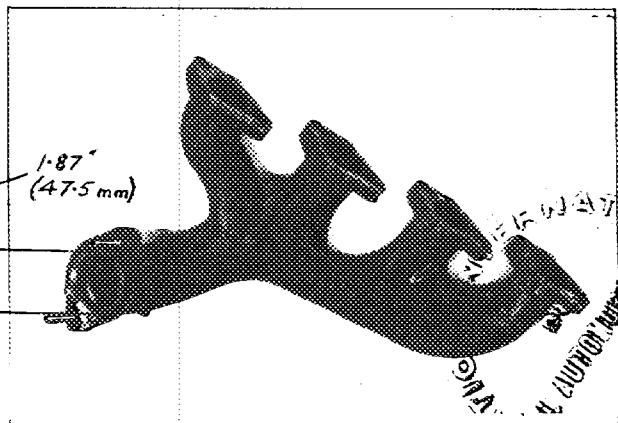
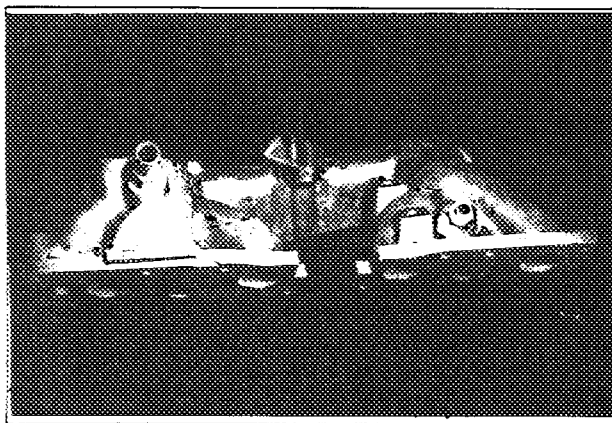
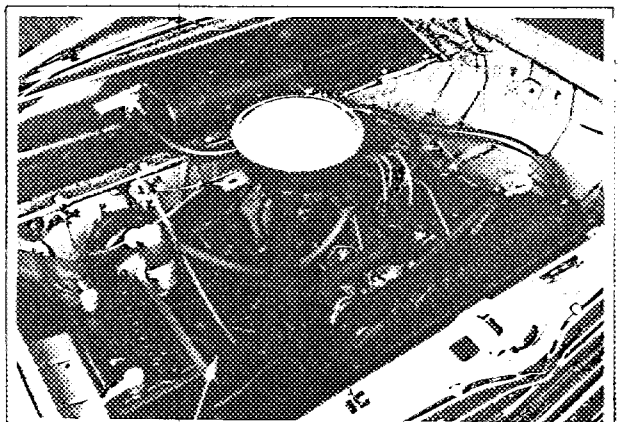
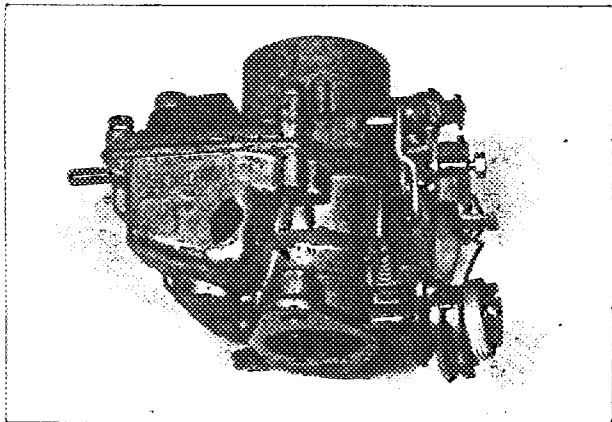
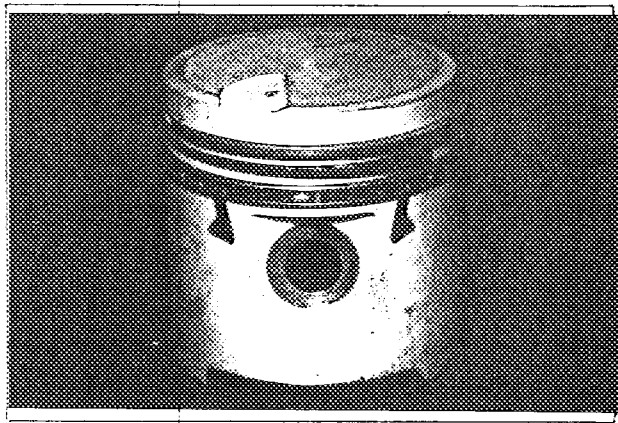
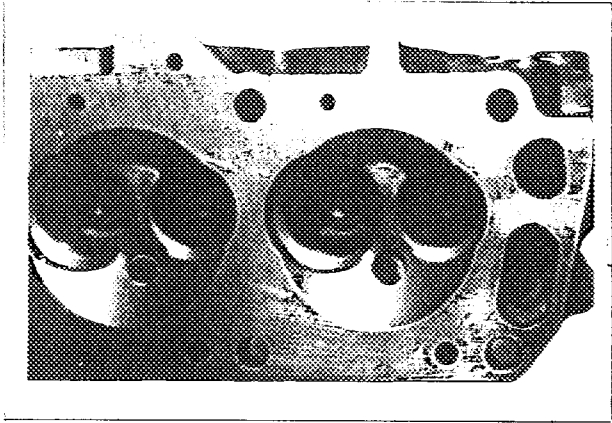
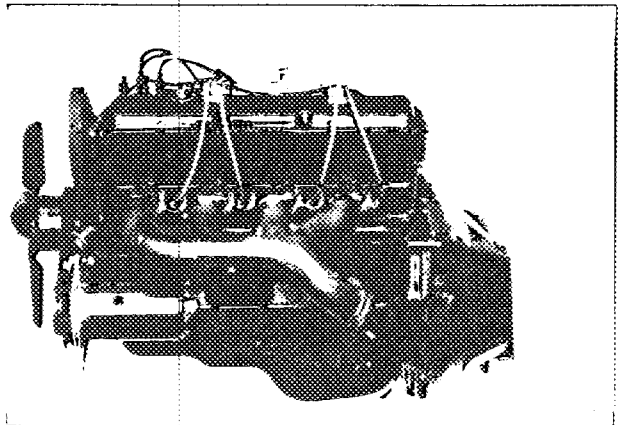
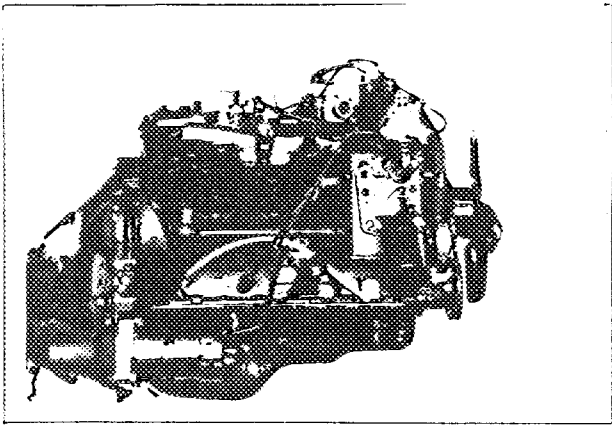


H



I





J

K

L

M

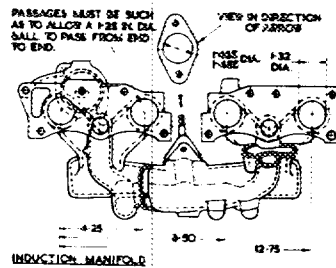
N

O

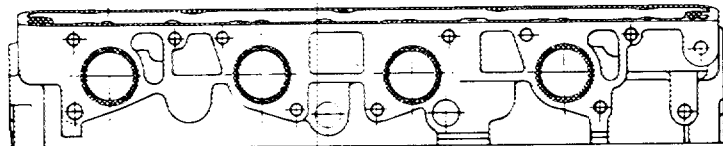
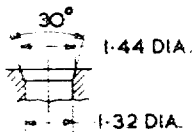
P

Q

Drawing inlet manifold ports, side of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.

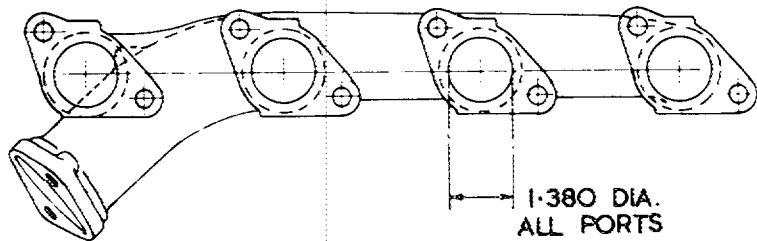


Drawing of entrance to inlet port of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.



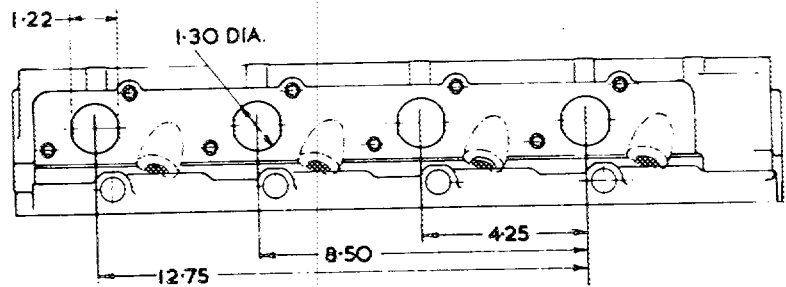
CYLINDER HEAD-INLET PORTS

Drawing of exhaust manifold ports, side of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.



EXHAUST MANIFOLD

Drawing of exit to exhaust port of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.



CYLINDER HEAD-EXHAUST PORTS

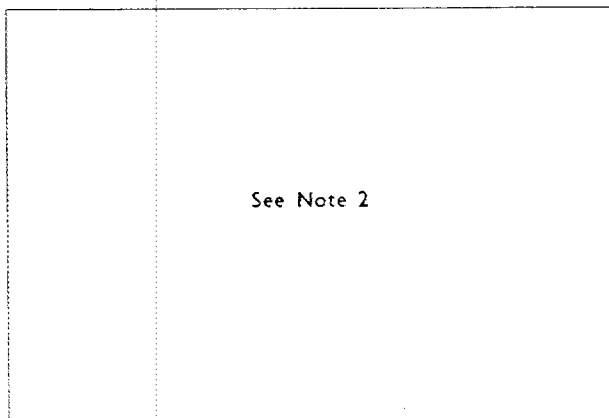
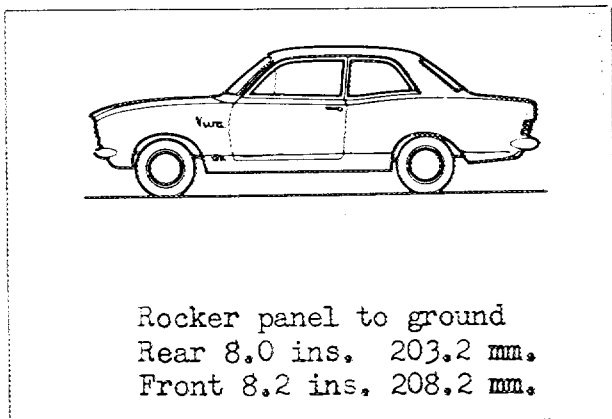


**NOTE 1.**

All dimensions must be given in two measuring systems, see Note 3.

**CAPACITIES AND DIMENSIONS**

1. Wheelbase	2433.3	mm.	95.8	inches
2. Front track	1295	mm.	51	inches
3. Rear track	1295	mm.	51	inches



4. Overall length of the car	409.45	cm.	161.2	inches
5. Overall width of the car	160.02	cm.	63	inches
6. Overall height of the car	135.39	cm.	53.3	inches
7. Capacity of fuel tank (reserve included)	36.37	ltrs.	9.61	gall. U.S.
			8.0	gall. Imp.
8. Seating Capacity.				
9. Weight. Total weight of the car with normal equipment, water, oil, and spare wheel but without fuel or repair tools:	863.64	kg.	1904	lbs.
			17	cwts.

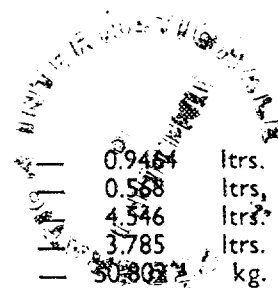
**NOTE 2.**

Differences in track caused by the use of other wheels with different rim widths must be stated when recognition is requested for the wheels concerned. Specify ground clearance in relation to the track and give drawing of two easily recognisable points at front and rear at which measurements are taken. These ground clearance dimensions are only for information when checking the track and can in no way affect the eligibility of the car.

**NOTE 3.**

**CONVERSION TABLE**

1 inch/pouce	— 2.54	cm.	1 quart US
1 foot/pied	— 30.4794	cm.	1 pint (pt)
1 sq. inch/pouce carre	— 6.452	cm. <sup>2</sup>	1 gallon Imp.
1 cubic inch/pouce cube	— 16.387	cm. <sup>3</sup>	1 gallon US
1 pound/livre (lb)	— 453.593	gr.	1 hundred weight (cwt.)



**CHASSIS AND COACHWORK (Photographs A, B and C)**

- |   |                              |
|---|------------------------------|
| 20. Chassis/body construction: <del>separate</del> unitary construction |                              |
| 21. Unitary construction, material(s)                                   | Steel                        |
| 22. Separate construction, Material(s) of chassis                       | -                            |
| 23. Material(s) of coachwork  | Steel                        |
| 24. Number of doors 2 Material(s)                                       | Steel                        |
| 25. Material(s) of bonnet   | Steel                        |
| 26. Material(s) of boot lid   | Steel                        |
| 27. Material(s) of rear-window  | Glass                        |
| 28. Material(s) of windscreen   | Laminated or toughened glass |
| 29. Material(s) of front-door windows                                   | Glass                        |
| 30. Material(s) of rear-door windows                                    | None                         |
| 31. Sliding system of door windows                                      | Gear operated drop glass     |
| 32. Material(s) of rear-quarter light                                   | Glass                        |

**ACCESSORIES AND UPHOLSTERY**

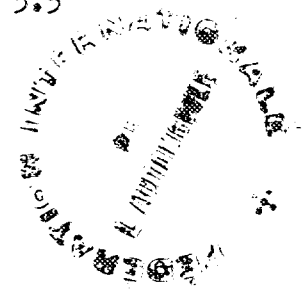
- |   |  |
|---|--|
| 38. Interior heating : yes — <del>no</del>                                      | 39. Air conditioning : <del>yes</del> — no             |
| 40. Ventilation : yes — <del>no</del>   | 41. Front seats, type of seat and upholstery Blown PVC |
| 42. Weight of front seat(s), complete with supports and rails, out of the car : |  |
|   | 9.843 kg. 21.7 lbs.                                    |
| 43. Rear seats, type of seat and upholstery Blown PVC - spring case             |  |
| 44. Front bumper, material(s) Steel Weight                                      | 3.209 kg. 7.076 lbs.                                   |
| 45. Rear bumper, material(s) Steel Weight                                       | 3.299 kg. 7.274 lbs.                                   |

**WHEELS**

- |                                      |                                |
|--------------------------------------|--------------------------------|
| 50. Type Disc                        |                                |
| 51. Weight (per wheel, without tyre) | 3.81 kg. 8.41 lbs.             |
| 52. Method of attachment 4 Stud      |                                |
| 53. Rim diameter 304.8 mm. 12 ins.   | 54. Rim width 127 mm. 5.0 ins. |
| or 330.2 mm. 13 ins.                 | 139.7 mm. 5.5 ins.             |

**STEERING**

- |   |
|---|
| 60. Type Rack & Pinion                                      |
| 61. Servo-assistance : <del>yes</del> no                    |
| 62. Number of turns of steering wheel from lock to lock 3.2 |
| 63. In case of servo-assistance                             |



**SUSPENSION**

- 70. Front suspension (photograph D), type Independent - wishbone
- 71. Type of spring Coil
- 72. Stabiliser (if fitted) Not fitted
- 73. Number of shock absorbers Two
- 74. Type Telescopic - double acting
- 78. Rear suspension (photograph E), type Beam axle - 4 link suspension
- 79. Type of spring Coil
- 80. Stabiliser (if fitted) Not fitted
- 81. Number of shock absorbers Two
- 82. Type Telescopic - double acting

**BRAKES** (photographs F and G)

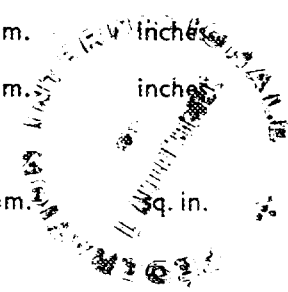
- 90. Method of operation Hydraulic
- 91. Servo-assistance (if fitted), type Suspended vacuum
- 92. Number of hydraulic master cylinders One (option - twin master cylinder - Code 494-
- 93. Number of cylinders per wheel Two FRONT One REAR
- 94. Bore of wheel cylinder(s) 48.26 mm. 1.90 inches 17.78 mm. 0.70 inches

**Drum Brakes**

- 95. Inside diameter mm. inches 203.2 mm. 8.0 inches
- 96. Length of brake linings mm. inches 159.51mm. 6.28 inches
- 97. Width of brake linings mm. inches 31.75mm. 1.25 inches
- 98. Number of shoes per brake Two
- 99. Total area per brake mm.<sup>2</sup> sq. in. 10136 mm.<sup>2</sup> 15.71sq. in.

**Disc Brakes**

- 100. Outside diameter 213.36 mm. 8.4 inches mm. inches
- 101. Thickness of disc 9.53 mm. .375 inches mm. inches
- 102. Length of brake linings mm. inches mm. inches
- 103. Width of brake linings mm. inches mm. inches
- 104. Number of pads per brake Two
- 105. Total area per brake 5032.6 mm.<sup>2</sup> 7.8 sq. in. mm. sq. in.



**ENGINE** (photographs J and K)

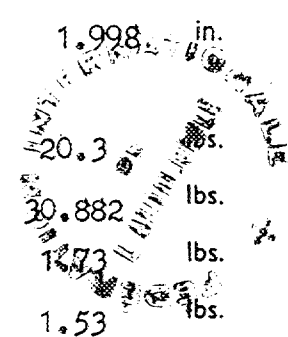
- |   |                                  |   |                                      |
|---|----------------------------------|---|--------------------------------------|
| 130. Cycle  | 4 stroke                         | 131. Number of cylinders                | Four                                 |
| 132. Cylinder Arrangement   | 45° - in-line                    |   |                                      |
| 133. Bore   | 85.69 mm. 3.374 in.              | 134. Stroke                             | 69.2 mm. 2.726 in.                   |
| 135. Capacity per cylinder  |                                  |   | 399.5 cm. <sup>3</sup> 24.38 cu. in. |
| 136. Total cylinder capacity  |                                  |   | 1598 cm. <sup>3</sup> 97.52 cu. in.  |
| 137. Material(s) of cylinder block  | Chromidium cast iron             | 138. Material(s) of sleeves (if fitted) | Not fitted                           |
| 139. Cylinder head, material(s)   | Chromidium cast iron             | Number fitted                           | One                                  |
| 140. Number of inlet ports  | Four                             | 141. Number of exhaust ports            | Four                                 |
| 142. Compression ratio  | 8.5:1 (7.3:1 option)             |   |                                      |
| 143. Volume of one combustion chamber                                       |                                  |   | 50.84 cm. <sup>3</sup> 3.1 cu. in.   |
| 144. Piston, material   | Aluminium alloy                  | 145. Number of rings                    | Three                                |
| 146. Distance from gudgeon pin centre line to highest point of piston crown |                                  |   | 43.8 mm. 1.725 in.                   |
| 147. Crankshaft: moulded/ <del>cast iron</del>                              |                                  | 148. Type of crankshaft: integral/      | Yes                                  |
| 149. Number of crankshaft main bearings                                     | Five                             |   |                                      |
| 150. Material of bearing cap  | Cast iron                        |   |                                      |
| 151. System of lubrication  | <del>dry sump</del> /oil in sump |   |                                      |
| 152. Capacity, lubricant  | 4.83 ltrs. 8.5 pts.              |   | 5.1 quarts U.S.                      |
| 153. Oil cooler: <del>yes</del> /no   |                                  | 154. Method of engine cooling           | Water                                |
| 155. Capacity of cooling system   | 7.67 ltrs. 13.5 pts.             |   | 8.1 quarts U.S.                      |
| 156. Cooling fan (if fitted) dia.   |                                  |   | 34.93 cm. 13.75 in.                  |
| 157. Number of blades of cooling fan  | Four                             |   |                                      |

**Bearings**

- |                                   |      |      |      |       |     |
|-----------------------------------|------|------|------|-------|-----|
| 158. Crankshaft main, type        | dia. | 63.5 | m.m. | 2.5   | in. |
| 159. Connecting rod big end, type | dia. | 50.7 | m.m. | 1.998 | in. |

**Weights**

- |   |                      |                     |          |        |      |
|---|----------------------|---------------------|----------|--------|------|
| 160. Flywheel (clean)                         |                      | 9.21                | kg.      | 20.3   | lbs. |
| 161. Flywheel with clutch (all turning parts) |                      | 14.46               | kg.      | 30.882 | lbs. |
| 162. Crankshaft                               | 17.09 kg. 37.69 lbs. | 163. Connecting rod | .785 kg. | 1.73   | lbs. |
| 164. Piston with rings and pin                |                      | .698                | kg.      | 1.53   | lbs. |





**FOUR STROKE ENGINES**

170. Number of camshafts One 171. Location Housing on cylinder head  
 172. Type of camshaft drive External toothed belt  
 173. Type of valve operation Cam via inverted bucket tappet

**INLET** (see page 4)\*

180. Material(s) of inlet manifold Aluminium alloy casting  
 181. Diameter of valves 43.05 mm. 1.695 ins.  
 182. Max. valve lift 9.65 mm. .380 in. 183. Number of valve springs Two  
 184. Type of spring Helical coil 185. Number of valves per cylinder One  
 186. Tappet clearance for checking timing (cold) .203 mm. .008 ins.  
 187. Valves open at (with tolerance for tappet clearance indicated) 33.26 BBDC  
 188. Valves close at (with tolerance for tappet clearance indicated) 65.26 ATDC  
 189. Air filter, type Paper element

**EXHAUST** (see page 4)\*

195. Material(s) of exhaust manifold cast iron  
 196. Diameter of valves 36.07 mm. 1.695 ins.  
 197. Max. valve lift 9.65 mm. .380 in. 198. Number of valve springs Two  
 199. Type of spring Helical coil 200. Number of valves per cylinder One  
 201. Tappet clearance for checking timing (cold) .203 mm. .008 ins.  
 202. Valves open at (with tolerance for tappet clearance indicated) 65.26 BBDC  
 203. Valves close at (with tolerance for tappet clearance indicated) 33.26 ATDC

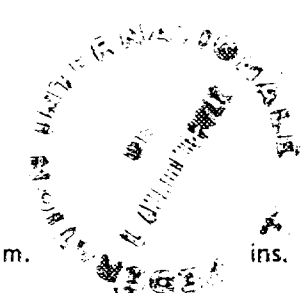
**CARBURETION** (photograph N)

210. Number of carburettors fitted One 211. Type Downdraught  
 212. Make Zenith 213. Model 36IV  
 214. Number of mixture passages per carburettor Single choke  
 215. Flange hole diameter of exit port(s) of carburettor 36.02 mm. 1.418 ins.  
 216. Minimum diameter of venturi/minimum diam., with piston at maximum height (example : SU)  
29 mm. 1.142 ins.

**INJECTION** (if fitted)

220. Make of pump 221. Number of plungers  
 222. Model or type of pump 223. Total number of injectors  
 224. Location of injectors  
 225. Minimum diameter of inlet pipe mm. ins.

\* For additional information concerning two-stroke engines and super-charged engines, see page 13.

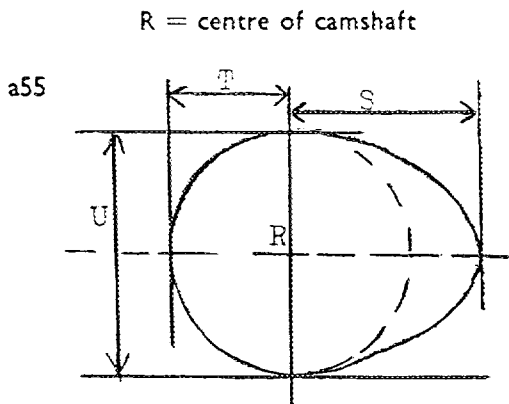


**ENGINE ACCESSORIES**

230. Fuel pump : mechanical ~~and/or electrical~~
231. No. fitted One
232. Type of ignition system Coil 233. No. of distributors One
234. No. of ignition coils One 235. No. of spark plugs per cylinder One
236. Generator, type : ~~dynamo~~/alternator—number fitted One
237. Method of drive Belt
238. Voltage of generator 12 volts
239. Battery, number One
240. Location In engine compartment
241. Voltage of battery 12 volts

**ENGINE AND CAR PERFORMANCES** (as declared by manufacturer in catalogue)

250. Max. engine output 83 (type of horsepower: BHP Gross ) at 5800 r.p.m.
251. Max. r.p.m. 6500 output at that figure Not available for publication
252. Max. torque 90 lb/ft Gross at 3200 r.p.m.
253. Max. speed of the car 149.66 km./hour 93 miles/hour

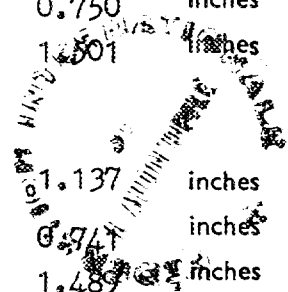


**Inlet cam**

S =	28.879	mm.	1.137	inches
T =	19.050	mm.	0.750	inches
U =	38.125	mm.	1.501	inches

**Exhaust cam**

S =	28.879	mm.	1.137	inches
T =	18.821	mm.	0.741	inches
U =	37.821	mm.	1.489	inches





**IMPORTANT**—The conformity of the car with the following items of the present recognition form is to be disregarded during the scrutineering, when the vehicle has been entered in group 2 (Touring cars) or 3 (Grand Touring cars) : 41, 72, 80, 91, 142, 143, 144, 145, 146, 153, 156, 157, 160, 161, 162, 163, 164, 182, 186, 187, 188, 189, 201, 202, 203, 212, 213, 215, 216 222, 225, 230, 250, 251, 252, 253, 255 photographs I, M and N and page 4.

During the scrutineering of cars entered in group 4 (Sportscars) only the following items of the present recognition form are to be taken into consideration : 1, 2, 3, 9, 20, 21, 22, 23, 24, 25, 26, 70, 71, 78, 79, 90, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 147, 148, 149, 150, 158, 159, 170, 171, 172, 173, 185, 200, 270, 271, 274, 275, 290, 291, 292 and photographs A, B, D, E, F, G, H, J, K and O.

The vehicle described in this form has been subject to the following amendments :

on.....	19.....	rec. no.....	List.....	on.....	19.....	rec. no.....	List.....
on.....	19.....	rec. no.....	List.....	on.....	19.....	rec. no.....	List.....
on.....	19.....	rec. no.....	List.....	on.....	19.....	rec. no.....	List.....
on.....	19.....	rec. no.....	List.....	on.....	19.....	rec. no.....	List.....
on.....	19.....	rec. no.....	List.....	on.....	19.....	rec. no.....	List.....

Optional equipment affecting preceding information. This to be stated together with reference number.

- 92 Tandem master cylinder (Code 494)  
Heavy duty suspension (Code 357)
- 71 8810415 Front spring (2 off)
- 79 8810416 RH 8810457 LH Rear spring
- 78 Heavy duty axle
- 7 Fuel tank Part No. 7211279  
54.5 litres 14.4 U.S. Galls. 12 Imp Galls.

Manufacturing Tolerances

- 1. For all machined surfaces allow .075%
- 2. For all non-machined surfaces allow 2%
- 3. For weights of all part-machined parts allow 2.5%
- 4. For weights of all completely machined parts allow 1.25%

