



F.I.A. Recognition No. 5564

Group 1

# 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 2279 cm.<sup>3</sup> 139 in.<sup>3</sup>

Manufacturer Vauxhall Motors Limited Model HC Viva Magnum 2300

Serial No. of chassis/body 90000 onward Manufacturer Vauxhall Motors Limited

Serial No. of engine 3000000 Manufacturer Vauxhall Motors Limited

Recognition is valid from 1.6.74 List

The manufacturing of the model described in this recognition form started on APRIL 19 72  
and the minimum production of 5,000 identical cars, in accordance with the specifications of  
this form was reached on MARCH, 19 73.

Photograph A, 3/4 view of car from front



F.I.A. Stamp

R.A.C. Stamp

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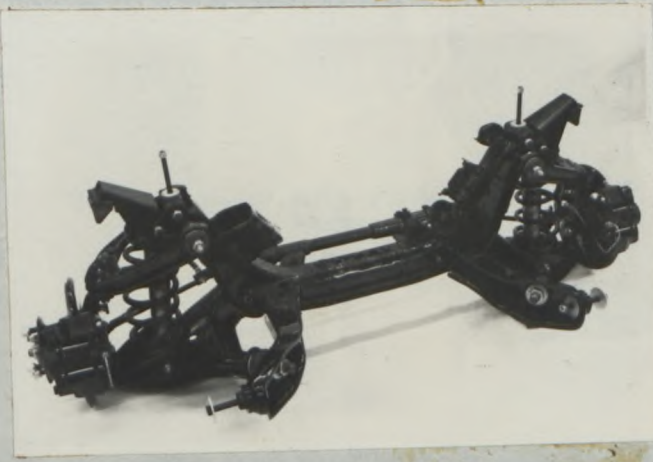
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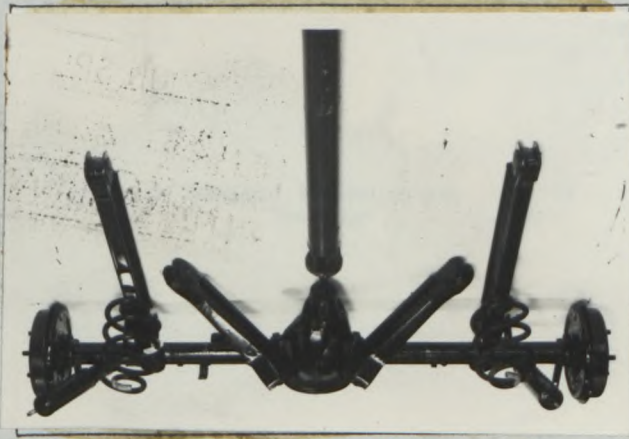
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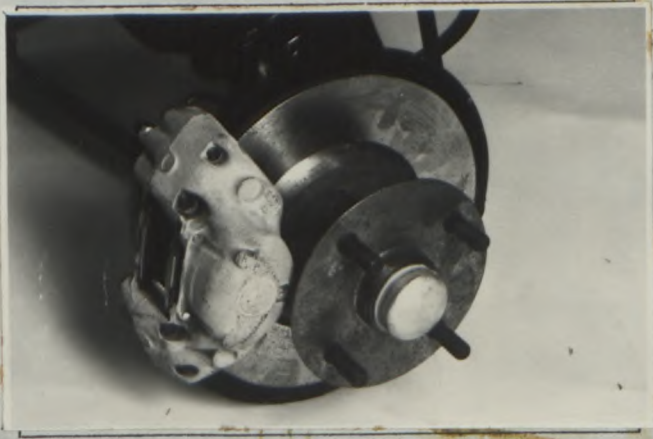
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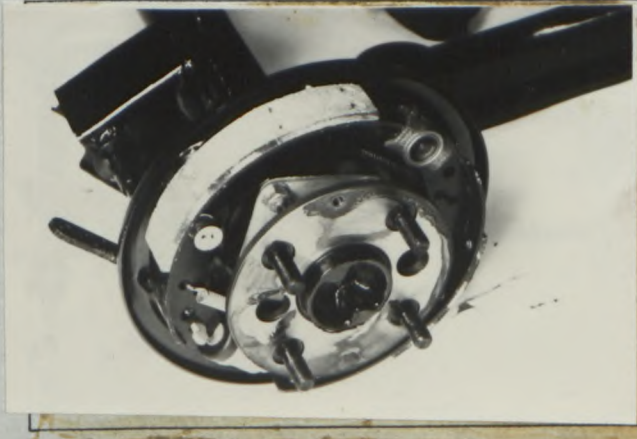
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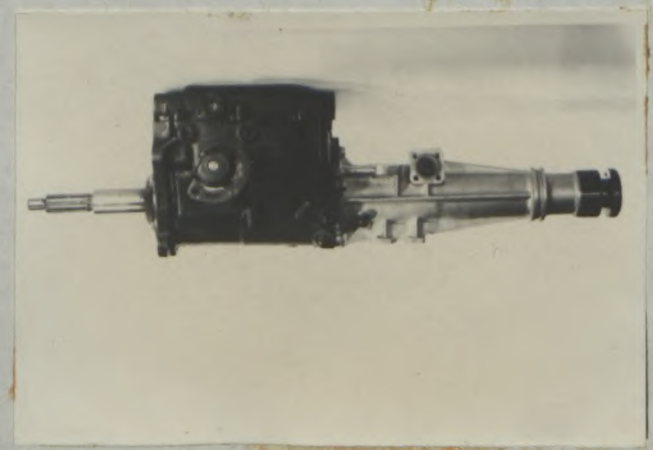
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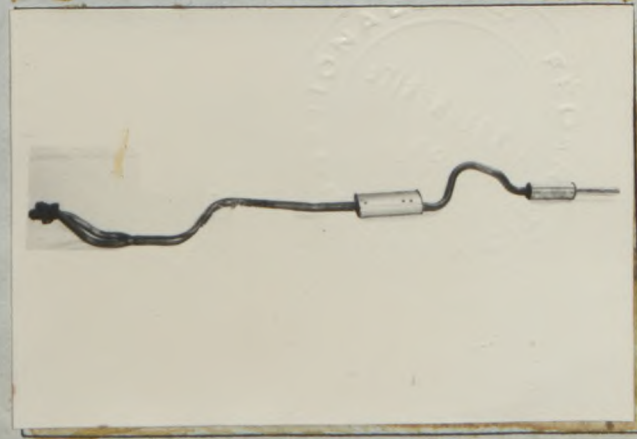
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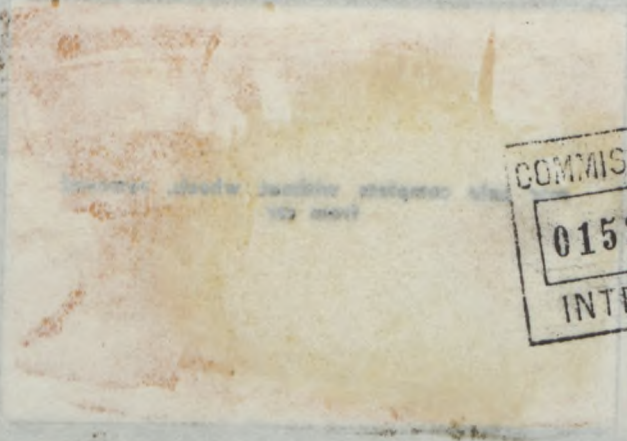


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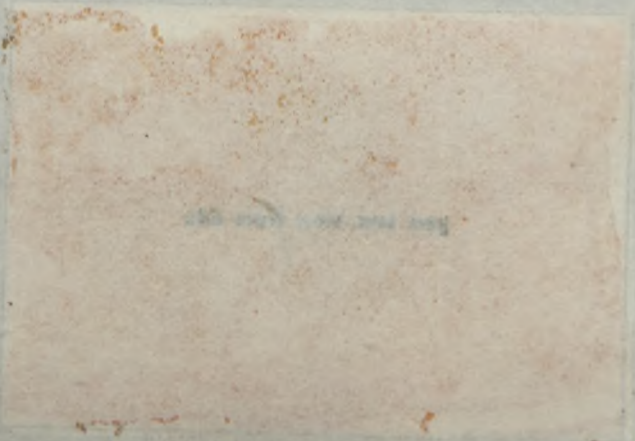
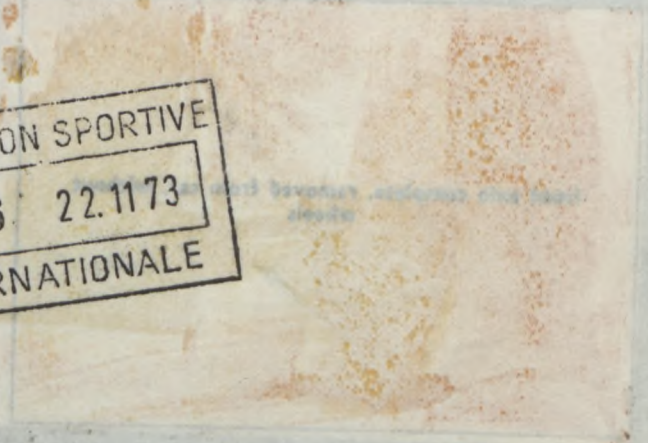


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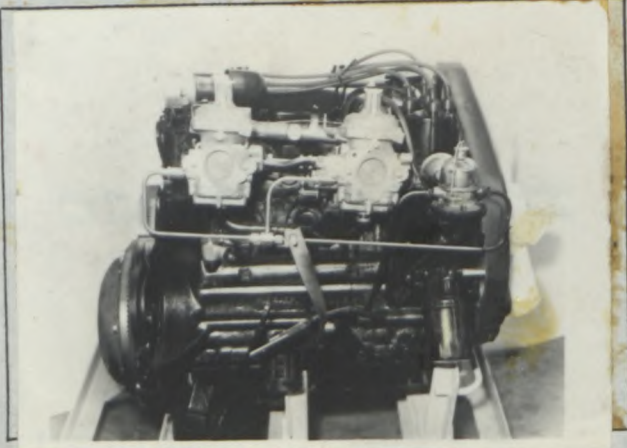




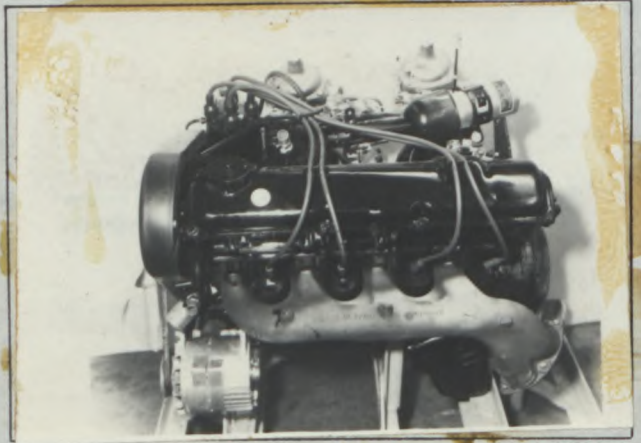
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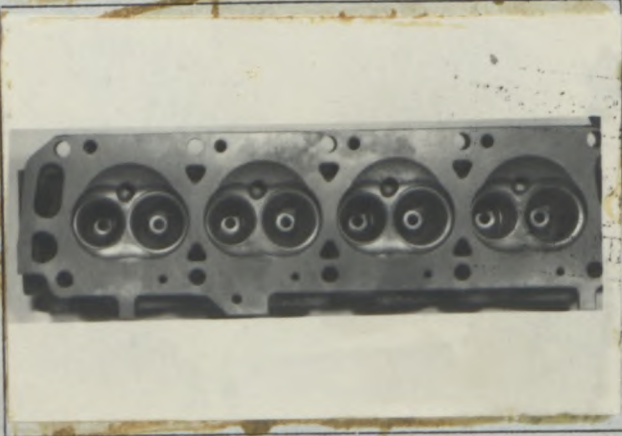
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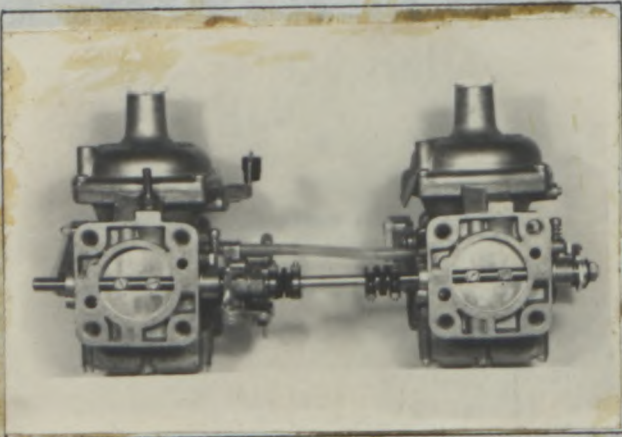
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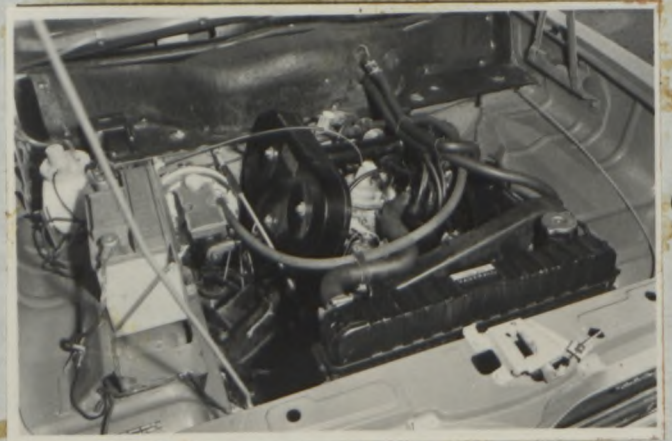
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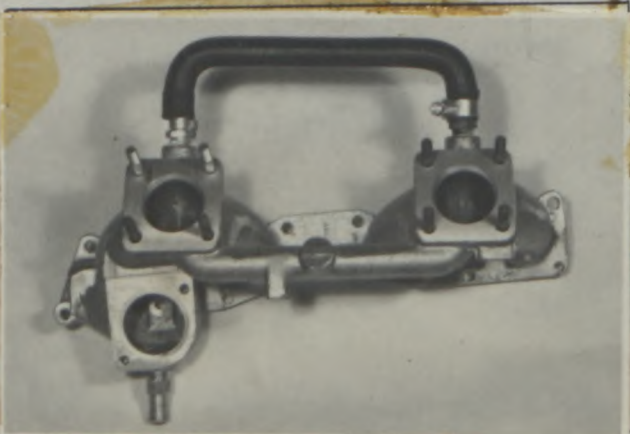
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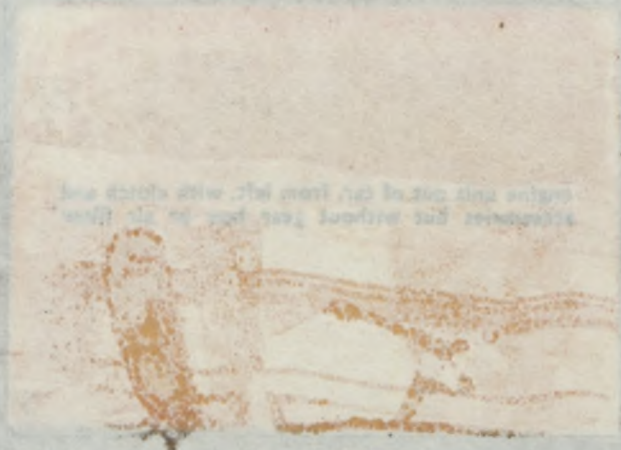


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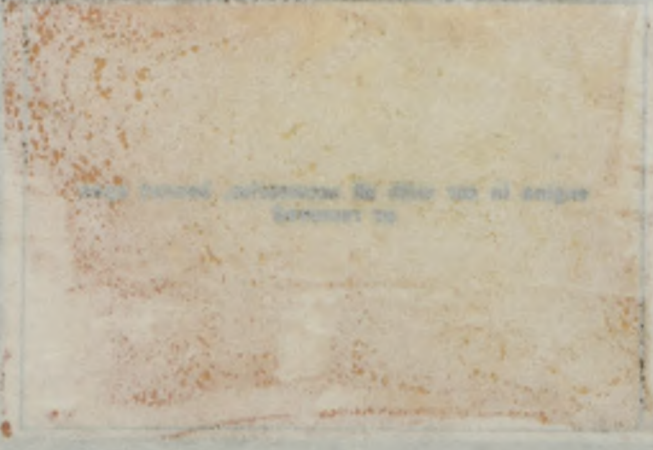


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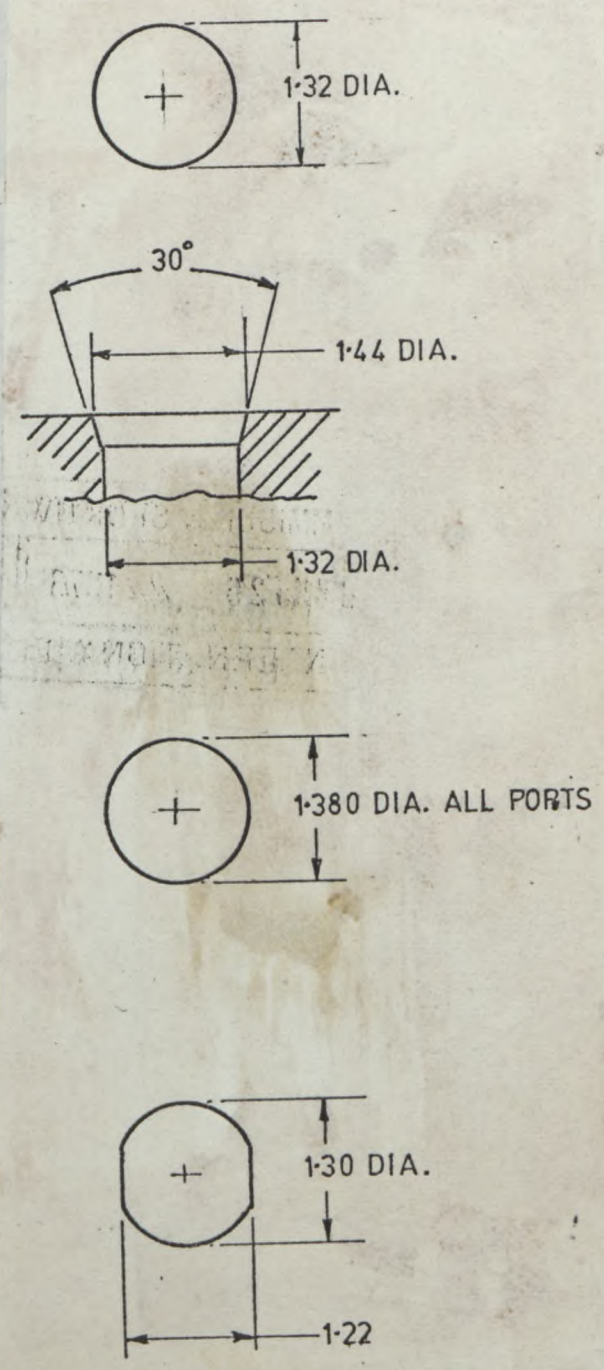


Drawing inlet manifold ports, side of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.

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

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

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



Note Code 052 Exhaust emission.

Tolerances : ± .030 inches .76 mm Port and manifold areas fully fettled to 2% tolerance.



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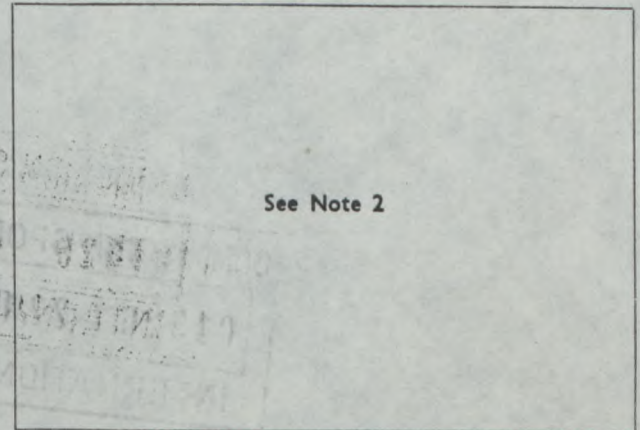
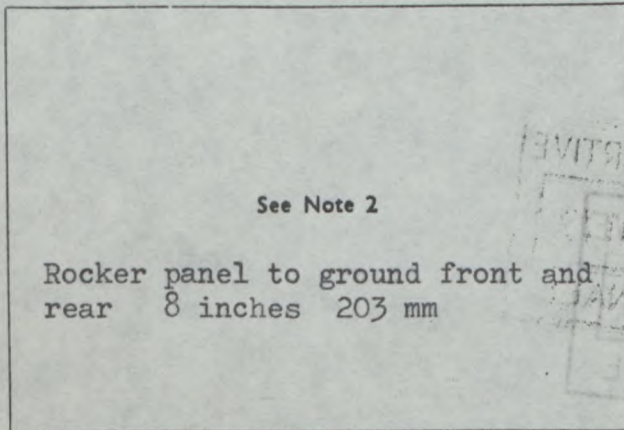
Model HC Viva Magnum 2300 F.I.A. Rec. No. 5564

**NOTE 1.**

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

**CAPACITIES AND DIMENSIONS**

- |                |      |      |     |        |        |
|----------------|------|------|-----|--------|--------|
| 1. Wheelbase   |      | 2461 | mm. | 97     | inches |
| 2. Front track | 1345 | mm.  | 53  | inches |        |
| 3. Rear track  |      | 1320 | mm. | 52     | inches |



- |  |      |       |      |            |        |            |
|--|------|-------|------|------------|--------|------------|
| 4. Overall length of the car   |      | 413   | cm.  | 163        | inches |            |
| 5. Overall width of the car  |      | 164   | cm.  | 65         | inches |            |
| 6. Overall height of the car   |      | 132   | cm.  | 52         | inches |            |
| 7. Capacity of fuel tank (reserve included)  | 54.5 | ltrs. | 14.4 | gall. U.S. | 12     | 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 : | 1015 | kg.   | 2238 | lbs.       | 19.9   | cwts.      |
| 10. Width of car at axles front and rear   | 158  | cm    | 62   | inches     |        |            |

**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              | — | 0.9464 | ltrs. |
| 1 foot/pied             | — | 30.4794 | cm.              | 1 pint (pt)             | — | 0.568  | ltrs. |
| 1 sq. inch/pouce carre  | — | 6.452   | cm. <sup>2</sup> | 1 gallon Imp.           | — | 4.546  | ltrs. |
| 1 cubic inch/pouce cube | — | 16.387  | cm. <sup>3</sup> | 1 gallon US             | — | 3.785  | ltrs. |
| 1 pound/livre (lb)      | — | 453.593 | gr.              | 1 hundred weight (cwt.) | — | 50.802 | kg.   |

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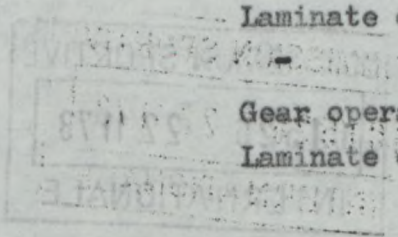
Make Vauxhall Motors

Model HC Viva Magnum 2300

F.I.A. Rec. No. 5564

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

- 20. Chassis/body construction: separate/unitary construction **Steel**
- 21. Unitary construction, material(s) **-**
- 22. Separate construction, Material(s) of chassis **Steel**
- 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 **Laminate or toughened glass**
- 28. Material(s) of windscreen **Laminate or toughened glass**
- 29. Material(s) of front-door windows **Laminate or toughened glass**
- 30. Material(s) of rear-door windows **Laminate or toughened glass**
- 31. Sliding system of door windows **Gear operated drop glass**
- 32. Material(s) of rear-quarter light **Laminate or toughened glass**



**ACCESSORIES AND UPHOLSTERY**

- 38. Interior heating : yes ~~no~~
- 39. Air conditioning : ~~yes~~ — no
- 40. Ventilation : yes ~~no~~
- 41. Front seats, type of seat and upholstery **Tubular frame blown P.V.C.**
- 42. Weight of front seat(s), complete with supports and rails, out of the car :
 

|        |         |
|--------|---------|
| 14 kg. | 31 lbs. |
|--------|---------|
- 43. Rear seats, type of seat and upholstery
- 44. Front bumper, material(s) **Steel** Weight **3.6 kg.** **8 lbs.**
- 45. Rear bumper, material(s) **Steel** Weight **3.1 kg.** **7 lbs.**

**WHEELS**

- 50. Type **Disc**
- 51. Weight (per wheel, without tyre) **6.8 kg.** **15 lbs.**
- 52. Method of attachment **4 stud**
- 53. Rim diameter **330 mm.** **13 ins.** 54. Rim width **127 mm.** **5 ins.**

**STEERING**

- 60. Type **Rack and Pinion**
- 61. Servo-assistance : ~~Yes~~ — no
- 62. Number of turns of steering wheel from lock to lock **3.1**
- 63. In case of servo-assistance

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**SUSPENSION**

- 70. Front suspension (photograph D), type **Independant - Wishbone**
- 71. Type of spring **Coil**
- 72. Stabiliser (if fitted) **Torsion**
- 73. Number of shock absorbers **2**
- 74. Type **Telescopic Double Acting**
- 78. Rear suspension (photograph E), type **Beam Axle Link**
- 79. Type of spring **Coil**
- 80. Stabiliser (if fitted) **Torsion**
- 81. Number of shock absorbers **2**
- 82. Type **Telescopic Double Acting**

**BRAKES** (photographs F and G)

- 90. Method of operation **Hydraulic**
- 91. Servo-assistance (if fitted), type **Vacuum servo**
- 92. Number of hydraulic master cylinders **One-dual tandem**

|                                   |             | FRONT |          | REAR |        |
|-----------------------------------|-------------|-------|----------|------|--------|
|                                   |             | mm.   | inches   | mm.  | inches |
| 93. Number of cylinders per wheel | <b>Two</b>  |       |          |      |        |
| 94. Bore of wheel cylinder(s)     | <b>50.8</b> |       | <b>2</b> |      |        |

**Drum Brakes**

|                               |  |                  |         |             |                  |             |         |
|-------------------------------|--|------------------|---------|-------------|------------------|-------------|---------|
| 95. Inside diameter           |  | mm.              | inches  | <b>228</b>  | mm.              | <b>9</b>    | inches  |
| 96. Length of brake linings   |  | mm.              | inches  | <b>179</b>  | mm.              | <b>7.06</b> | inches  |
| 97. Width of brake linings    |  | mm.              | inches  | <b>44.5</b> | mm.              | <b>1.75</b> | inches  |
| 98. Number of shoes per brake |  |                  |         |             |                  |             |         |
| 99. Total area per brake      |  | mm. <sup>2</sup> | sq. in. | <b>166</b>  | mm. <sup>2</sup> | <b>25.8</b> | sq. in. |

**Disc Brakes**

|                               |            |                  |              |         |                  |  |         |
|-------------------------------|------------|------------------|--------------|---------|------------------|--|---------|
| 100. Outside diameter         | <b>255</b> | mm.              | <b>10.03</b> | inches  | mm.              |  | inches  |
| 101. Thickness of disc        | <b>9.6</b> | mm.              | <b>0.38</b>  | 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 |            |                  |              |         |                  |  |         |
| 105. Total area per brake     | <b>574</b> | mm. <sup>2</sup> | <b>88.9</b>  | sq. in. | mm. <sup>2</sup> |  | sq. in. |

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**ENGINE** (photographs J and K)

- |   |                                      |   |                                     |
|---|--------------------------------------|---|-------------------------------------|
| 130. Cycle  | 4 stroke                             | 131. Number of cylinders                | 4                                   |
| 132. Cylinder Arrangement   | 45° in line                          |   |                                     |
| 133. Bore   | 97.59 mm. 3.842 in.                  | 134. Stroke                             | 76.2 mm. 3 in.                      |
| 135. Capacity per cylinder  |                                      |   | 569.7 cm. <sup>3</sup> 34.7 cu. in. |
| 136. Total cylinder capacity  |                                      |   | 2279 cm. <sup>3</sup> 139 cu. in.   |
| 137. Material(s) of cylinder block  | Chromium Cast Iron                   | 138. Material(s) of sleeves (if fitted) | -                                   |
| 139. Cylinder head, material(s)   | Chromium Cast Iron                   | Number fitted                           | One                                 |
| 140. Number of inlet ports  | 4                                    | 141. Number of exhaust ports            | 4                                   |
| 142. Compression ratio  | 8.5                                  |   |                                     |
| 143. Volume of one combustion chamber                                       |                                      |   | 50 cm. <sup>3</sup> 3 cu. in.       |
| 144. Piston, material   | Aluminium Alloy                      | 145. Number of rings                    | 3                                   |
| 146. Distance from gudgeon pin centre line to highest point of piston crown |                                      |   | 42 mm. 1.63 in.                     |
| 147. Crankshaft: moulded/stamped  |                                      | 148. Type of crankshaft: integral/...   | Yes.....                            |
| 149. Number of crankshaft main bearings                                     | 5                                    |   |                                     |
| 150. Material of bearing cap  | Cast Iron                            |   |                                     |
| 151. System of lubrication: <del>dry sump</del> /oil in sump                |                                      |   |                                     |
| 152. Capacity, lubricant  | 5 ltrs. 8.75 pts. 5.26 quarts U.S.   |   |                                     |
| 153. Oil cooler: <del>yes</del> /no   |                                      | 154. Method of engine cooling           | Water                               |
| 155. Capacity of cooling system   | 7.98 ltrs. 14.0 pts. 8.4 quarts U.S. |   |                                     |
| 156. Cooling fan (if fitted) dia.   |                                      |   | 36 cm. 14 in.                       |
| 157. Number of blades of cooling fan  | 5                                    |   |                                     |

**Bearings**

- |                                   |                         |      |                   |
|-----------------------------------|-------------------------|------|-------------------|
| 158. Crankshaft main, type        | White Metal/Copper Lead | dia. | 63.5 m.m. 2.5 in. |
| 159. Connecting rod big end, type | Copper Lead Tin         | dia. | 50.8 m.m. 2.0 in. |

**Weights**

- |   |                  |                     |                  |
|---|------------------|---------------------|------------------|
| 160. Flywheel (clean)                         |                  | 9.2 kg. 20.3 lbs.   |                  |
| 161. Flywheel with clutch (all turning parts) |                  | 15 kg. 33 lbs.      |                  |
| 162. Crankshaft                               | 17 kg. 37.6 lbs. | 163. Connecting rod | .78 kg. 1.7 lbs. |
| 164. Piston with rings and pin                |                  | .83 kg. 1.8 lbs.    |                  |

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### 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 inverted bucket tappet**

### INLET (see page 4)\*

180. Material(s) of inlet manifold **Aluminium**  
181. Diameter of valves **43 mm. 1.68 ins.**  
182. Max. valve lift **10.6 mm. .420 in.** 183. Number of valve springs **Two**  
184. Type of spring **Coil** 185. Number of valves per cylinder **One**  
186. Tappet clearance for checking timing (cold/warm) **.10 mm. .004 ins.**  
**.18 mm. .007 ins.**  
187. Valves open at (with tolerance for tappet clearance indicated) **31° 36 BTDC**  
188. Valves close at (with tolerance for tappet clearance indicated) **63° 36 ABDC**  
189. Air filter, type **Paper element**

### EXHAUST (see page 4)\*

195. Material(s) of exhaust manifold **Cast Iron**  
196. Diameter of valves **36 mm. 1.42 ins.**  
197. Max. valve lift **10.6 mm. .420 in.** 198. Number of valve springs **Two**  
199. Type of spring **Coil** 200. Number of valves per cylinder **One**  
201. Tappet clearance for checking timing (cold/warm) **.18 mm. .007 ins.**  
**.25 mm. .010 ins.**  
202. Valves open at (with tolerance for tappet clearance indicated) **63° 36 BBDC**  
203. Valves close at (with tolerance for tappet clearance indicated) **31° 36 ABDC**  
204. Diameter outlet orifice exhaust manifold **48 mm. 1.92 TWIN ins.**

### CARBURETION (photograph N)

210. Number of carburettors fitted **Two** 211. Type **Variable Choke**  
212. Make **Zenith** 213. Model **175 CD**  
214. Number of mixture passages per carburettor **Single V**  
215. Flange hole diameter of exit port(s) of carburettor **44.5 mm. 1.750 ins.**  
216. Minimum diameter of venturi/minimum diam., with piston at maximum height (example: SU) **31.7 mm. 1.25 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.

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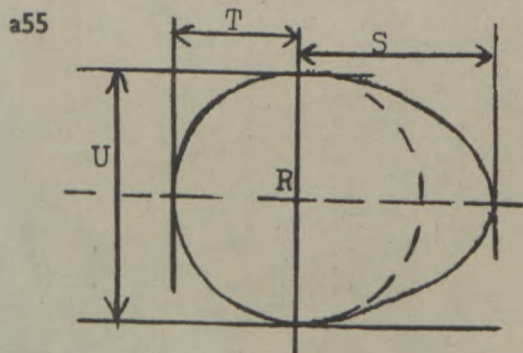
**ENGINE ACCESSORIES**

- 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 128 (type of horsepower: GROSS B.H.P. ) at 5500 r.p.m.
- 251. Max. r.p.m. output at that figure Not published
- 252. Max. torque 150 LB/FT at 3300 r.p.m.
- 253. Max. speed of the car km./hour miles/hour Not published
- 254. Reboring Dimension <sup>max.</sup> .040 ins 1 mm .255 resultant cylinder capacity. 2327 cm<sup>3</sup>
- 256. Volume of combustion chamber in head 50 cm<sup>3</sup> 3 cu.in. 142 cu.ins.
- 257. Thickness of head gasket after tightening 1.28 mm .050 ins 258 piston dimension 3.809 ins. Mean 96.76 mm

R = centre of camshaft



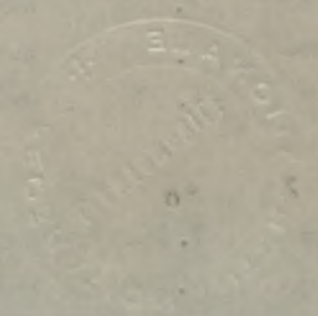
Inlet cam

|     |      |     |       |        |
|-----|------|-----|-------|--------|
| S = | 29.5 | mm. | 1.162 | inches |
| T = | 19   | mm. | .750  | inches |
| U = | 38.1 | mm. | 1.500 | inches |

Exhaust cam

|     |      |     |       |        |
|-----|------|-----|-------|--------|
| S = | 29.5 | mm. | 1.162 | inches |
| T = | 18.8 | mm. | .750  | inches |
| U = | 37.7 | mm. | 1.487 | inches |

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**DRIVE TRAIN**

**CLUTCH**

- 260. Type of clutch Diaphragm
- 261. No. of plates One
- 262. Dia. of clutch plates 21.6 cm. 8.5 ins.
- 263. Dia. of linings, inside 15.9 cm. 6.25 ins.
- outside 21.4 cm. 8.44 ins.
- 264. Method of operating clutch Cable Linkage

**GEAR BOX** (photograph H)

- 270. Manual type, make Vauxhall Method of operation Lever
- 271. No. of gear-box ratios forward 4
- 272. Synchronized forward ratios 4
- 273. Location of gear-shift Floor central
- 274. Automatic, make General Motors type Code 501
- 275. No. of forward ratios 3
- 276. Location of gear shift Floor central

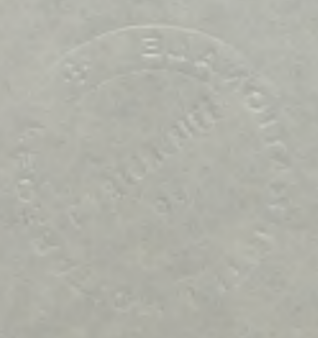
| 277.    | Manual  |           | Automatic |           | Alternative manual/automatic |           |       |           |
|---------|---------|-----------|-----------|-----------|------------------------------|-----------|-------|-----------|
|         | Ratio   | No. teeth | Ratio     | No. teeth | Ratio                        | No. teeth | Ratio | No. teeth |
| 1       | 3.3-1   | 33/13     | 2.4 TO    | 4.8 TO 1  | 2.52-1                       | 30/14     |       |           |
| 2       | 2.145-1 | 33/20     | 1.48 TO   | 2.9 TO 1  | 1.76-1                       | 27/18     |       |           |
| 3       | 1.414-1 | 25/23     | 1-1 TO    | 2-1       | 1.35-1                       | 23/20     |       |           |
| 4       | DIRECT  |           |           |           |                              |           |       |           |
| 5       |         |           |           |           |                              |           |       |           |
| 6       |         |           |           |           |                              |           |       |           |
| reverse | 3.063-1 | 21/33     | 1.92-1 TO | 3.84 TO 1 |                              |           |       |           |

- 278. Overdrive, type
- 279. Forward gears on which overdrive can be selected
- 280. Overdrive ratio

**FINAL DRIVE**

- 290. Type of final drive Hypoid
- 291. Type of differential 2 pinion
- 292. Type of limited slip differential ((if fitted in series-production) Friction
- 293. Final drive ratio 3.455-1
- Number of teeth 11/38

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Viva Magnum 2300  
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**IMPORTANT:**

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..... |
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| 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.

**Territory options**

Coachlines Decals - Viva, Magnum, Firenze,  
Single piece propellor shaft.

- 50 Type disc
- 51 Weight 6.8 Kg 15 lbs
- 52 Method of attachment 4 stud
- 53 Rim diameter 13 ins
- 54 Rim width 140 mm 5.5 ins
- 78 Heavy duty suspension. No visible differences
- 293 Heavy duty final drive ratio 3.727 11/41

**Tolerances**

- 1 Machined surfaces 1%
- 2 Non machined surfaces 2%
- 3 Weight of part machined surfaces 2.5%
- 4 Weights of machined parts 1.5%



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01526 22.1173  
INTERNATIONALE





MOTOR SPORT DIVISION  
The Royal Automobile Club,  
31 Belgrave Square, London, S.W.1

Manufacturer Vauxhall Motors  
Model HC Viva Magnum 2300  
F.I.A. Recognition No. 5566  
Amendment No. 1/1V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE GROUP 2

Photographs must be 3"X2" and a matt finish



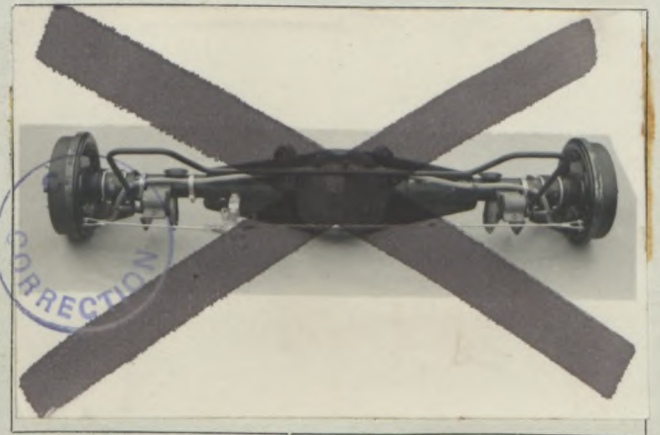
Supplementary instrument panel



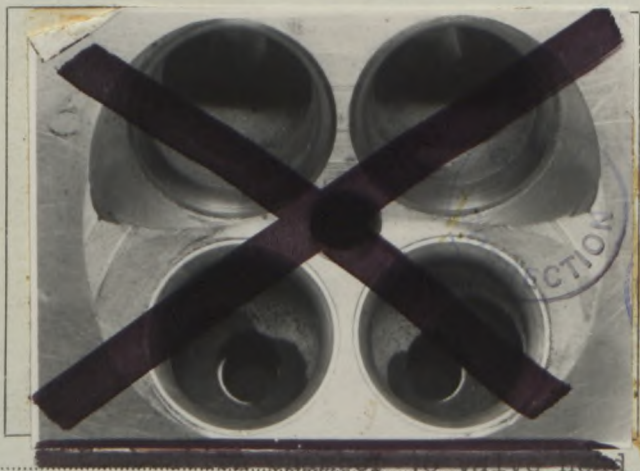
Instrument panel cowl



Aluminium differential cover



Rally axle



5 speed gearbox

Date amendment is valid from 1.5.76

"valable en Groupe 2 uniquement"

Stamp of F.I.A./R.A.C.

"valid for Group 2 only"

1/1

*[Handwritten signature]*

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INTERNATIONALE





MOTOR SPORT DIVISION  
The Royal Automobile Club,  
31 Belgrave Square, London, S.W.1

Manufacturer Vauxhall Motors  
Model HC Viva Magnum 2300  
F.I.A. Recognition No. 5564  
Amendment No. 1/1V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE GROUP 2

Photographs must be 3"X2" and a matt finish



5 cm wing extension



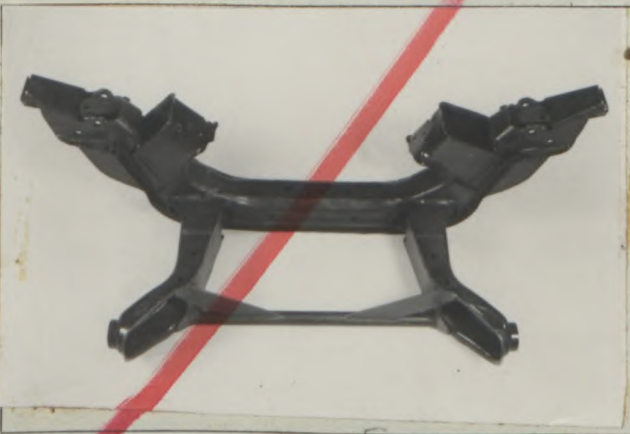
5 cm wing extension



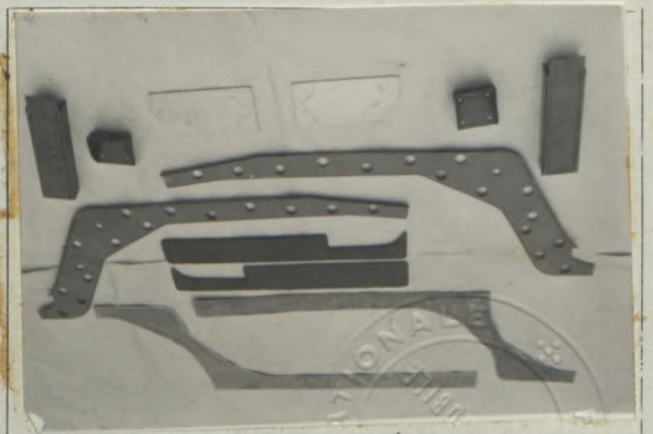
5 cm wing extension



5 cm wing extension



Rally front suspension



Supplementary chassis kit

Date amendment is valid from 1.5.74

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