F.I.A. Recognition No. 5097

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

Manufacturer Vauxhall Motors Limited,

Serial No. of chassis/body FCH 5001001

Serial No. of engine 31 FC/2001

Recognition is valid from

Cylinder-capacity 1595 cm.³ 97.4 in.³

Model FCH - VX 4/90 '66

Manufacturer Vauxhall

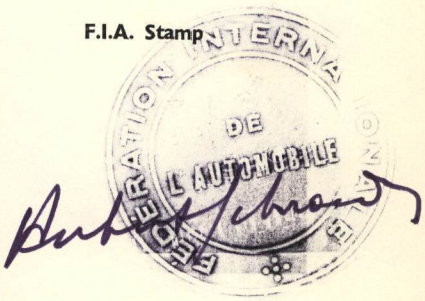
Manufacturer Vauxhall

List

The manufacturing of the model described in this recognition form started on 1st October, 1964 and the minimum production of 5000 identical cars, in accordance with the specifications of this form was reached on 1st June, 1965

Photograph A, ¾ view of car from front

F.I.A. Stamp

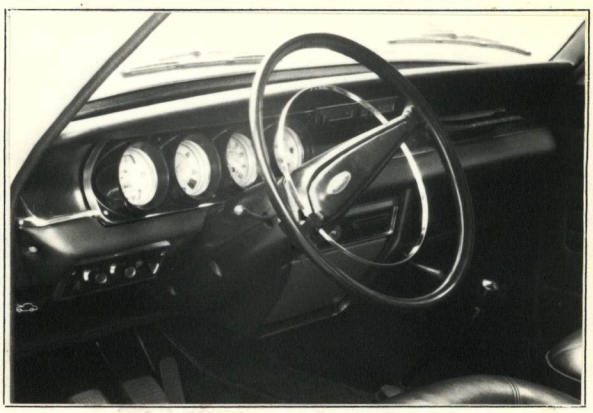


R.A.C. Stamp

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

B

C



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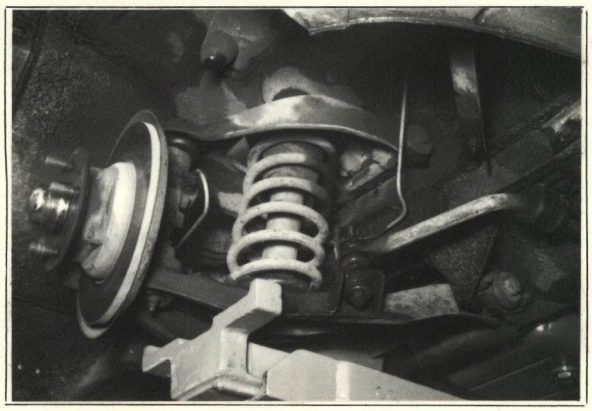

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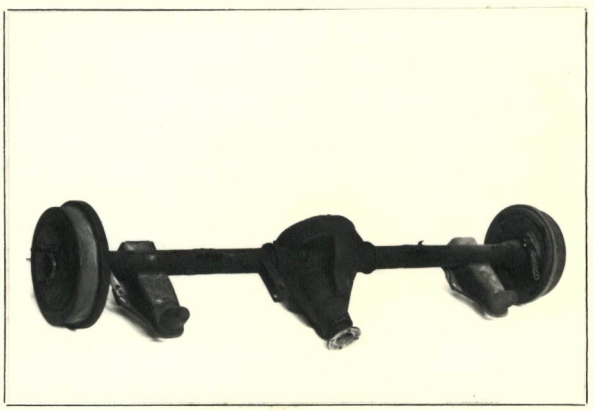

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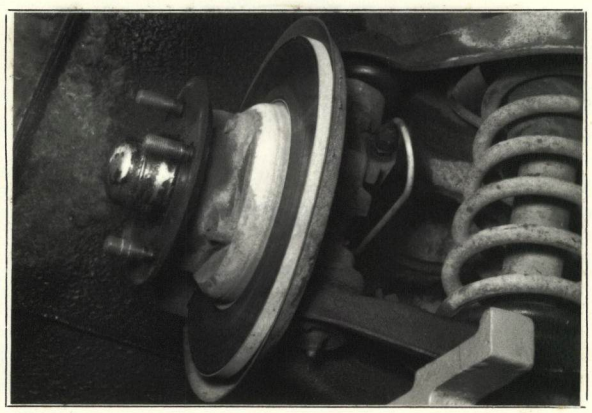

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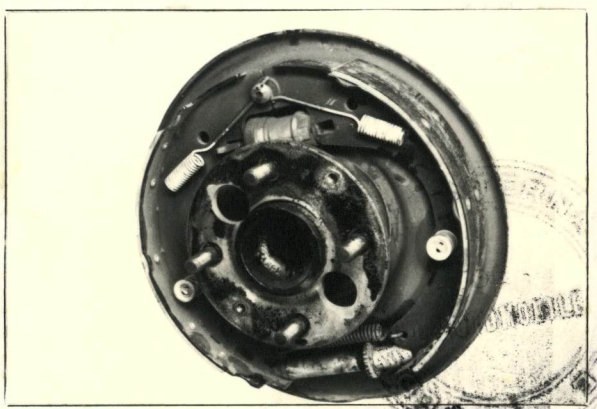

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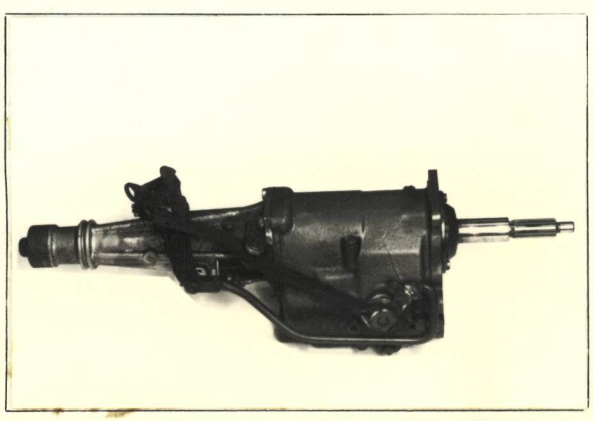

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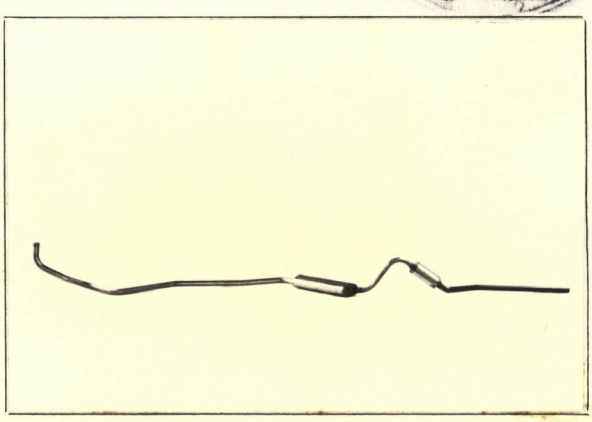

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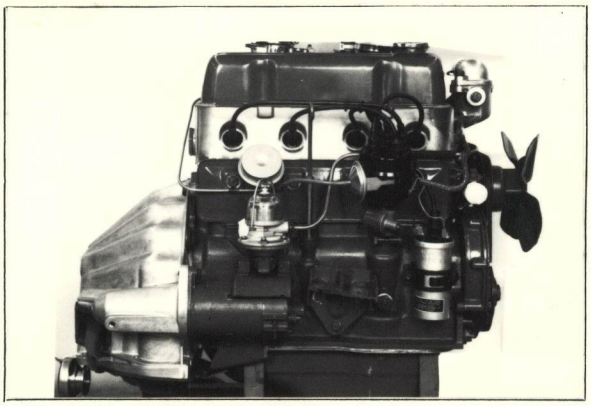
J



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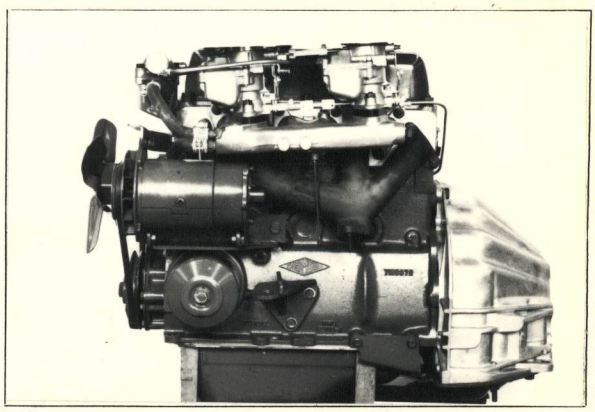

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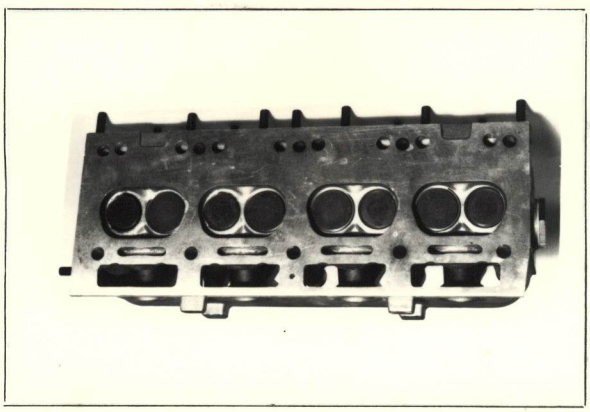

M

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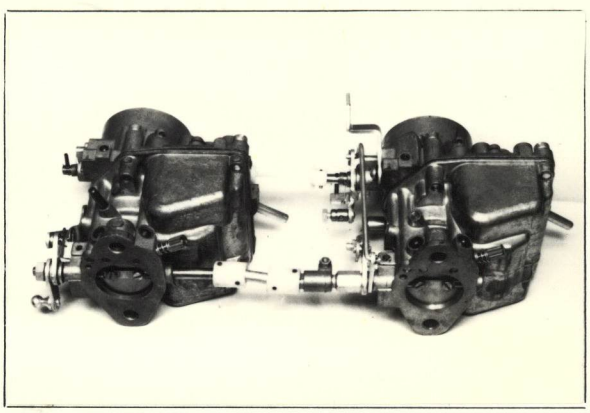

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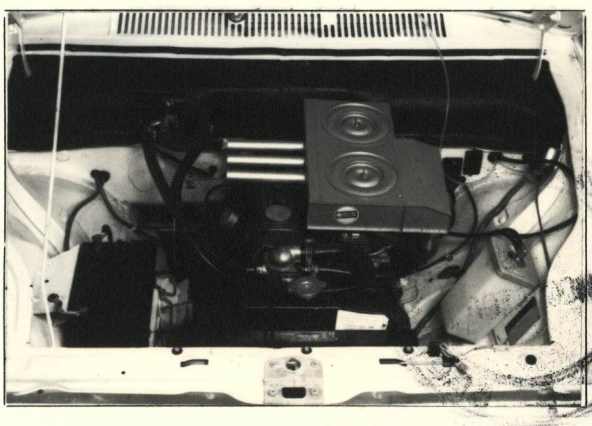

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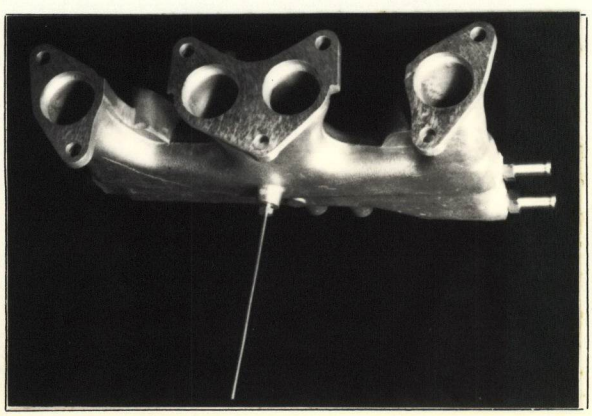

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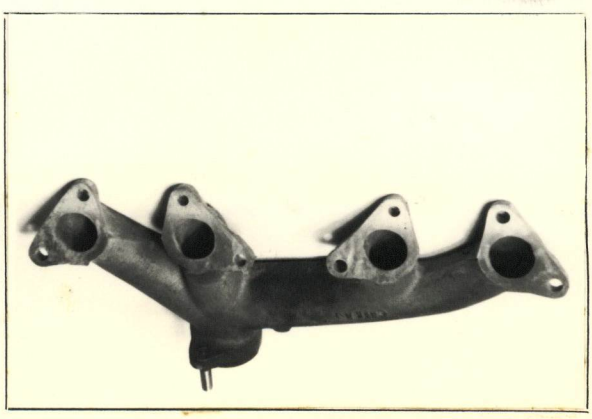
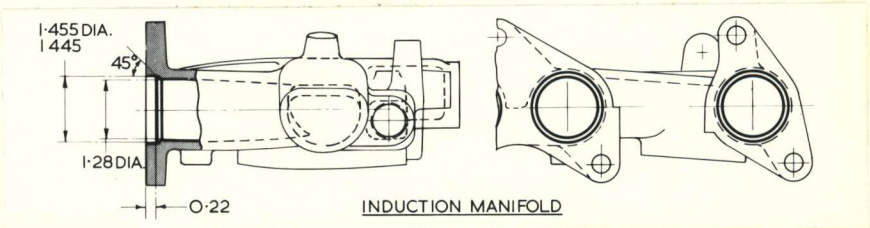
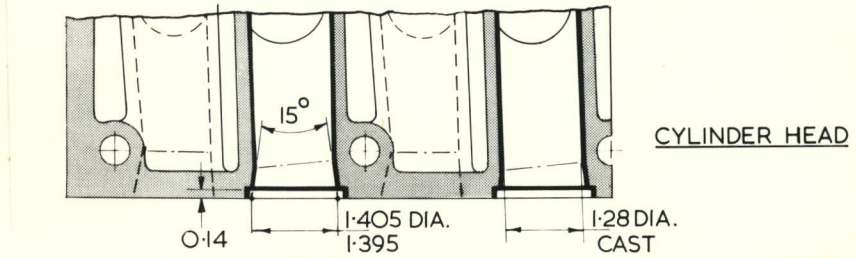


Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

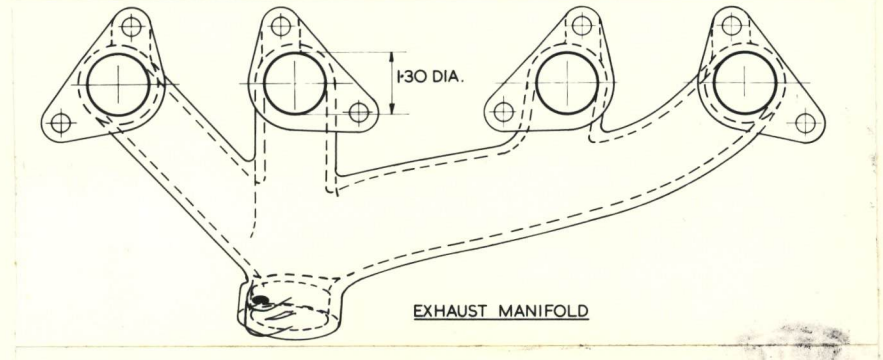
Drawing inlet manifold ports, side of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.



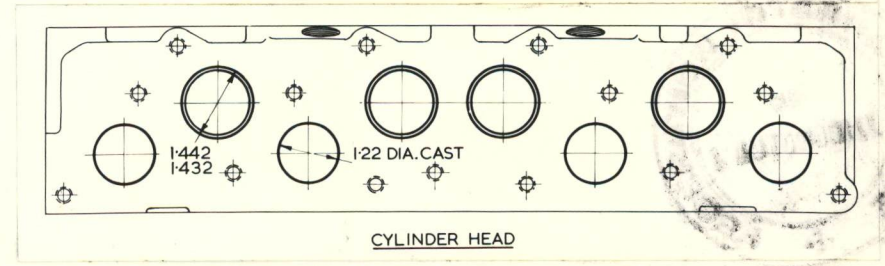
Drawing of entrance to inlet port of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.



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.



Allowable variation on dimensions is ± .25 mm. ± .01 in. unless otherwise specified.

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

NOTE 1.

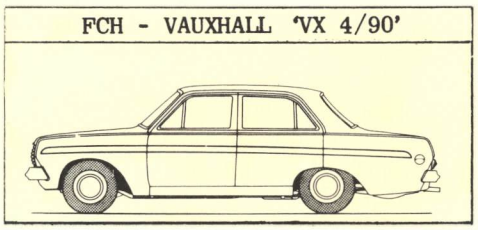
All dimensions must be given in two measuring systems, see Note 3.

CAPACITIES AND DIMENSIONS

1. Wheelbase 2540 mm. 100 inches

2. Front track 1295.4 mm. 51 inches

3. Rear track 1336 mm. 52.6 inches



Rocker panel to ground front and rear 195.6 mm. 7.7 ins.

See Note 2

4. Overall length of the car 443.7 cm. 174.7 inches

5. Overall width of the car 164.3 cm. 64.7 inches

6. Overall height of the car 140.2 cm. 55.2 inches

7. Capacity of fuel tank (reserve included)

46 ltrs. 12.1 gall. U.S. 10.1 gall. Imp.

8. Seating Capacity. Four

9. Weight. Total weight of the car with normal equipment, water, oil, and spare wheel but without fuel or repair tools :

980 kg. 2160 lbs. 19.3 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	— 0.9464	ltrs.
1 foot/pied	— 30.4794	cm.	1 pint (pt)	— 0.568	ltrs.
1 sq. inch/pouce carre	— 6.452	$cm.^2$	1 gallon Imp.	— 4.546	ltrs.
1 cubic inch/pouce cube	— 16.387	$cm.^3$	1 gallon US	— 3.785	ltrs.
1 pound/livre (lb)	— 453.593	gr.	1 hundred weight (cwt.)	— 50.802	kg.

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction: ~~separate~~/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 Glass
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 — ~~no~~
39. Air conditioning : ~~yes~~ — no
40. Ventilation : yes — ~~no~~
41. Front seats, type of seat and upholstery Blown P.V.C. Tubular frame
42. Weight of front seat(s), complete with supports and rails, out of the car : 15.47 kg. 34.1 lbs.
43. Rear seats, type of seat and upholstery Blown P.V.C. - spring case
44. Front bumper, material(s) Steel Weight 4.41 kg. 9.725 lbs.
45. Rear bumper, material(s) Weight 4.24 kg. 9.344 lbs.

WHEELS

50. Type Disc
51. Weight (per wheel, without tyre) 5.53 kg. 12.2 lbs.
52. Method of attachment Stud
53. Rim diameter 330.2 mm. 13.0 ins. 54. Rim width 127 mm. 5.0 ins.

STEERING

60. Type Recirculating ball
61. Servo-assistance : ~~yes~~ — no
62. Number of turns of steering wheel from lock to lock 4 or 4.5 (alternative sources of supply)
63. In case of servo-assistance

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

SUSPENSION

70. Front suspension (photograph D), type Independant wishbone
71. Type of spring Coil
72. Stabiliser (if fitted) Fitted
73. Number of shock absorbers Two 74. Type Double acting - Telescopic
78. Rear suspension (photograph E), type Beam axle
79. Type of spring Semi elliptical leaf
80. Stabiliser (if fitted) -
81. Number of shock absorbers Two 82. Type Double acting - telescopic

BRAKES (photographs F and G)

90. Method of operation Hydraulic
91. Servo-assistance (if fitted), type Direct acting vacuum
92. Number of hydraulic master cylinders One
93. Number of cylinders per wheel Two

	FRONT		REAR	
94. Bore of wheel cylinder(s)	48.26 mm. 1.90 inches		12.70 mm. 0.50 inches	
Drum Brakes				
95. Inside diameter	mm.	inches	228.6 mm. 9.0	inches
96. Length of brake linings	mm.	Primary inches	187.5 mm. 7.38	inches
		Secondary	236.2 9.3	
97. Width of brake linings	mm.	inches	44.45 mm. 1.75	inches
98. Number of shoes per brake			Two	
99. Total area per brake	mm.²	sq. in.	18839 mm.² 29.2	sq. in.
Disc Brakes				
100. Outside diameter	230.12 mm. 9.06	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.² 7.8	sq. in.	mm.²	sq. in.

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

ENGINE (photographs J and K)

130. Cycle 4 - stroke
131. Number of cylinders Four
132. Cylinder Arrangement Vertical in line
133. Bore 81.64 mm. 3.214 in.
134. Stroke 76.2 mm. 3.0 in.
135. Capacity per cylinder 400 - 398.2 cm.³ 24.41/24.32 cu. in.
136. Total cylinder capacity 1600 - 1592.8 cm.³ 97.64/97.2 cu. in.
137. Material(s) of cylinder block Chromium cast iron
138. Material(s) of sleeves (if fitted)
139. Cylinder head, material(s) Aluminium
Number fitted One
140. Number of inlet ports Four
141. Number of exhaust ports Four
142. Compression ratio 9.3
143. Volume of one combustion chamber 40.98 - 38.73 cm.³ 2.5-2.36 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 44.45 mm. 1.75 in.
147. Crankshaft : moulded/~~stamped~~
148. Type of crankshaft: integral/Yes
149. Number of crankshaft main bearings Three
150. Material of bearing cap Cast iron
151. System of lubrication : ~~dry sump~~/oil in sump
152. Capacity, lubricant 4.27 ltrs. 7.52 pts. 4.5 quarts U.S.
153. Oil cooler : ~~yes~~/no
154. Method of engine cooling Water
155. Capacity of cooling system 7.53 ltrs. 13.26 pts. 7.96 quarts U.S.
156. Cooling fan (if fitted) dia. 27.94 cm. 11.00 in.
157 Number of blades of cooling fan Four

Bearings

158. Crankshaft main, type 2 White metal, centre - Alum./Tin dia. 53.9 m.m. 2.1218 in.
159. Connecting rod big end, type Aluminium/Tin dia. 47.6 m.m. 1.873 in.

Weights

160. Flywheel (clean) (with starter ring) 10.09 kg. 22.24 lbs.
161. Flywheel with clutch (all turning parts) 15.71 kg. 34.63 lbs.
162. Crankshaft 15.5 kg. 34.17 lbs.
163. Connecting rod .616 kg. 1.36 lbs.
164. Piston with rings and pin .571 kg. 1.26 lbs.

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

FOUR STROKE ENGINES

170. Number of camshafts One
171. Location Cylinder Block
172. Type of camshaft drive Chain at front
173. Type of valve operation O.H. - push rod

INLET (see page 4)*

180. Material(s) of inlet manifold Aluminium
181. Diameter of valves 36.5 mm. 1.437 ins.
182. Max. valve lift 8.5 mm. in.
183. Number of valve springs One
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) 29.6° BTDC
188. Valves close at (with tolerance for tappet clearance indicated) 76.1° ABDC
189. Air filter, type Paper element

EXHAUST (see page 4)*

195. Material(s) of exhaust manifold Cast iron
196. Diameter of valves 31.8 mm. 1.25 ins.
197. Max. valve lift 8.5 mm. in.
198. Number of valve springs One
199. Type of spring Helical coil
200. Number of valves per cylinder One
201. Tappet clearance for checking timing (cold) .127 mm. .005 ins.
202. Valves open at (with tolerance for tappet clearance indicated) 71.6° BBDC
203. Valves close at (with tolerance for tappet clearance indicated) 34.1° ATDC

CARBURETION (photograph N)

210. Number of carburettors fitted Two
211. Type Down draft
212. Make Zentih
213. Model 34 IV
214. Number of mixture passages per carburettor Single choke
215. Flange hole diameter of exit port(s) of carburettor 34 mm. 1.339 ins.
216. Minimum diameter of venturi/~~minimum diam. with piston at maximum height~~ (example : SU)
24 mm. .945 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.

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

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 85.5 (type of horsepower: BHP (gross)) at 5.200 r.p.m.

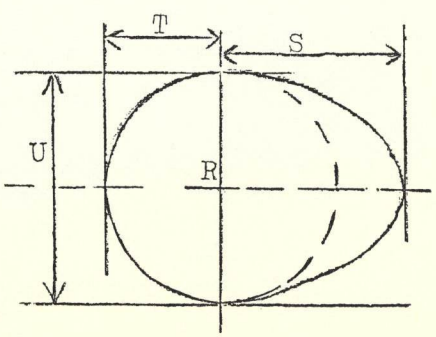
251. Max. r.p.m. 6,000 output at that figure Not available for publication

252. Max. torque 98.7 lb./ft. (gross) at 3.200 r.p.m.

253. Max. speed of the car 144 km./hour 90 miles/hour

R = centre of camshaft

a55



Inlet cam

S =	21.89	mm.	.862	inches
T =	15.97	mm.	.629	inches
U =	31.95	mm.	1.258	inches

Exhaust cam

S =	21.89	mm.	.862	inches
T =	15.97	mm.	.629	inches
U =	31.95	mm.	1.258	inches

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

DRIVE TRAIN

CLUTCH

260. Type of clutch Coil

261. No. of plates One

262. Dia. of clutch plates 20.32 cm. 8.00 ins.

263. Dia. of linings, inside 14.60 cm. 5.75 ins.

outside 20.32 cm. 8.00 ins.

264. Method of operating clutch Mechanical

GEAR BOX (photograph H)

270. Manual type, make Vauxahall Method of operation Lever - direct

271. No. of gear-box ratios forward 4 272. Synchronized forward ratios 4

273. Location of gear-shift Central - floor

274. Automatic, make General Motors type Powerglide

275. No. of forward ratios Two - variable 276. Location of gear shift Column

277.	Manual		Automatic		Alternative manual/automatic			
	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth
1	3.285:1	33/13	1.82:1	to 4.73:1				
2	2.130:1	28/17	1:1	to 2.6:1				
3	1.335:1	22/21						
4	DIRECT							
5	-	-						
6	-	-						
reverse	3.050:1	33/14	1.82:1	to 4.73:1				

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 Bevel

292. Type of limited slip differential (if fitted) Borg Warner

293. Final drive ratio 3.9 or (4.125 option - code 276) Number of teeth 10/39 or 11 (8/33 option - code 276)

Make Vauxhall Model VX 4/90 F.I.A. Rec. No. 5097

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 15 JAN 1967 rec. no. 5085 List 5/2 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.

6369157 - Front crossmember guard - code 153 Group 2
7153521/2- Front and rear special shock absorbers - code 316

6364429) - Front springs (increased ground clearance) - code 301
6350325)

7175060 - Heavy duty generator and pulley assy. - code 385

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Manufacturer Vauxhall Motors Ltd.

Model VX 4/90

F.I.A. Recognition No. 1

Amendment No. 5097 1/ET

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

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.	Reference No.	ERRATA
1.	182	Should read .335"
2.	189	Should read "Paper element"
3.	197	Should read .335"
4.		Evolution for VX 4/90 '67

Photograph A.

Date amendment is valid from 1st Jan. 1967. Cutt 15/2

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

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

Manufacturer Vauxhall Motors Ltd.

Model VX 4/90

Amendment No. 2

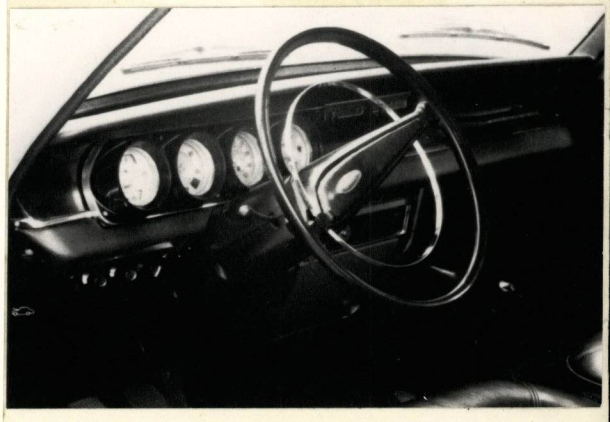
F.I.A. Recognition No. 5097 1/ET

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No. Reference No.

4. Cont/....



Photograph B. Photograph C.

Identical with '66 model apart from minor styling and mechanical revisions.

5. 9. Weight - Total weight of car with normal equipment, water, oil and spare wheel but without fuel or repair tools.

991.6 Kg. 2186 lbs. 19.5 cwts.

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

Date amendment is valid from 1st Jan. 1967. Cust 15/2