F.I.A. Recognition No. 5137

Series

Group 1 - Special Production Touring Cars



ROYAL AUTOMOBILE CLUB

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

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

	Cylinder-capacity 1159 cm. ³ 70.7 in. ³
Manufacturer Vauxhall Motors Limited	Model Viva/Epic 'SL 90' '67.
Serial No. of chassis/body HBH 7500001	Manufacturer Vauxhall
Serial No. of engine HB 22 2001 Code 460	Manufacturer Vauxhall
Recognition is valid from 14 Jan 1967	List 15/2
Recognition is valid from 154 Jan 1967 The manufacturing of the model described in this recognition	gnition form started on 8th August 19.66
and the minimum production of 5000	
this form was reached on "22-11-66 19	

Photograph A, 3 view of car from front



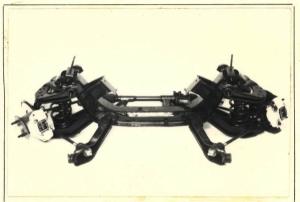


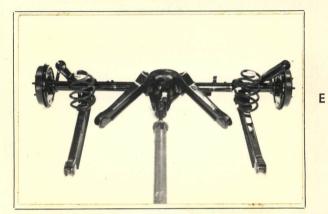
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D





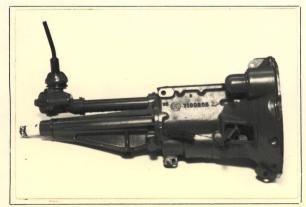


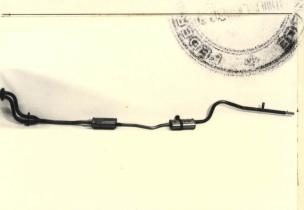




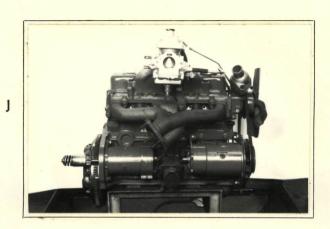


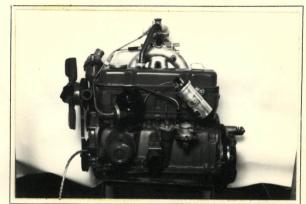
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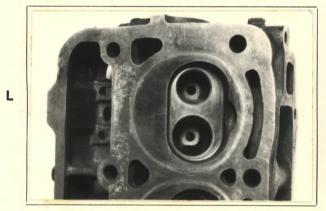


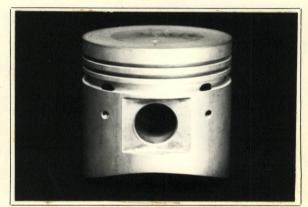


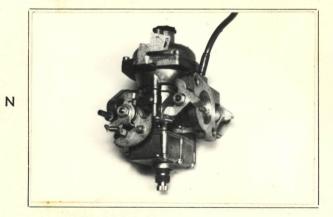
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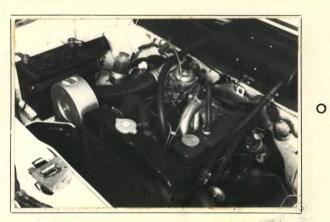














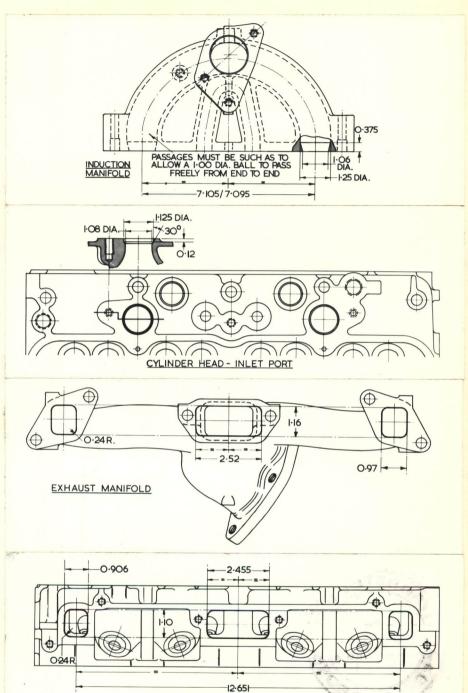


Drawing inlet manifold ports, side of cylinderhead. Indicate scale or dimensions and manufacturing tolerance.

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.



CYLINDER HEAD - EXHAUST PORTS

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

Make Vauxhall

Model HBH 1901

F.I.A. Rec. No. 57.3.7

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

3. Rear track

1295

mm. 51.0 inches

1295

mm.

51.0 inches



Rocker Panel to Ground Front and Rear 223.5 mm. 8.8 in.



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

137.41 cm. 54.1 inches

7. Capacity of fuel tank (reserve included)

36.37 Itrs.

9.61 gall. U.S.

8.0 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:

780.6

kg.

1721

lbs.

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

A STATE OF THE PARTY OF THE PAR								
l 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	Itrs.
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.

21.7

lbs.

CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction: xxeparate/unitary con	construction
--	--------------

21. Unitary construction, material(s) Steel

22. Separate construction, Material(s) of chassis

23. Material(s) of coachwork Steel

24. Number of doors Two 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 — xxx 39. Air conditioning: xxx— no

40. Ventilation : yes — xx 41. Front seats, type of seat and upholstery Blown PVC

9.843

kg.

42. Weight of front seat(s), complete with supports and rails, out of the car: Tubular Frame

43. Rear seats, type of seat and upholstery Blown PVC - Spring Case

44. Front bumper, material(s) Steel Weight 7-076 3.209 lbs.

45. Rear bumper, material(s) Steel Weight 3.299 kg. lbs. NTERN

WHEELS

50. Type Disc

51. Weight (per wheel, without tyre) 4.6

52. Method of attachment 4 Stud

53. Rim diameter 304.8 mm. 12.0 ins. 54. Rim width 127

STEERING

- 60. Type Rack and Pinion
- 61. Servo-assistance: XXX-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

93.	Number of cylinders per wheel	Two	FRONT		One REAR	
94.	Bore of wheel cylinder(s)	48.26	mm. 1.90	inches	17.78mm. 0.70 ii	nches
	Drum Brakes					
95.	Inside diameter		mm.	inches	203.20mm. 8.00 ii	nches
96.	Length of brake linings		mm.	inches	159.51mm. 6.28 ii	nches
97.	Width of brake linings		mm.	inches	31.75 mm. 1.25 ii	nches
98.	Number of shoes per brake				Two	
99.	Total area per brake		mm. ²	sq. in.	10136 mm. ² 15;71 s	q. in.
					0.000	

213.36 mm. 8.4

inches

Disc Brakes 100. Outside diameter

104	Number of pade per brake	Three	
103	. Width of brake linings	mm.	inches
102	Length of brake linings	mm.	inches
101	. Thickness of disc	9.53 mm375	inches

104. Number of pads per brake

105. Total area per brake 5032.6 mm.2 7.8 sq. in.

mmoe inches

mmoe inches

mm.

mches

inches

mm.²

sq. in.

Four

in.

lbs.

lbs.

L AUTOMOBILI

ENGINE (photographs J and K)

130. Cycle 4 - Stroke 131. Number of cylinders

132. Cylinder Arrangement Vertical - In Line

133. Bore 77.77 mm. 3.062 in. 134. Stroke 60.96 mm. 2.40 in.

135. Capacity per cylinder 289.7 cm.³ 17.679 cu. in.

136. Total cylinder capacity 1158.8 cm.³ 70.714 cu. in.

137. Material(s) of cylinder block Cast Iron 138. Material(s) of sleeves (if fitted) Not Fitted

139. Cylinder head, material(s) Cast Iron Number fitted One

140. Number of inlet ports Two 141. Number of exhaust ports Three

142. Compression ratio 9.0:1

143. Volume of one combustion chamber 28.23 .30 cm.1.723+.018 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

37.59 mm.

1.48 in.

149. Number of crankshaft main bearings Three

150. Material of bearing cap Cast Iron

151. System of lubrication: xxxxxxxxxx/oil in sump

152. Capacity, lubricant 3.124 ltrs. 5.5 pts. 3.3 quarts U.S.

153. Oil cooler: xxex/no 154. Method of engine cooling Water

155. Capacity of cooling system 5.79 ltrs. 10.2 pts. 6.12 quarts U.S.

156. Cooling fan (if fitted) dia. 24.13 cm. 9.5 in.

157 Number of blades of cooling fan Four

Bearings

158. Crankshaft main, type White Metal - Upper dia.53.99/54.00 m.m. 2.1255/60 in.

Aluminium Tin Alloy - Lower

Aluminium Tin Alloy - Lower
159. Connecting rod big end, type Copper/Lead-Aluminium dia.45.01/45.04 m.m. 1.7722/34

Weights

160. Flywheel (clean) (With Ring Gear)

161. Flywheel with clutch (all turning parts) 10.25

162. Crankshaft10.67 kg. 23.52 lbs. 163. Connecting rod .51 kg. 1.12 lbs.

164. Piston with rings and pin .49 kg. 1.071 lbs.

FOUR STROKE ENGINES

170. Number of camshafts One 171. Location Cylinder Block

172. Type of camshaft drive Endless Chain at Front

173. Type of valve operation Push Rod

INLET (see page 4)*

180. Material(s) of inlet manifold Aluminium Alloy Casting

181. Diameter of valves 33.604 mm. 1.323 ins.

182. Max. valve lift 8.6 mm. .339 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) • 2032 mm. • 008 ins.

187. Valves open at (with tolerance for tappet clearance indicated) 39° BTDC

188. Valves close at (with tolerance for tappet clearance indicated) 73° ABDC

189. Air filter, type Oil Wetted or Paper Element

EXHAUST (see page 4)*

195. Material(s) of exhaust manifold Cast Iron

196. Diameter of valves 30.048 mm. 1.183 ins.

197. Max. valve lift 8.6 mm. .339 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) .2032 mm. .008 ins.

202. Valves open at (with tolerance for tappet clearance indicated) 71° BBDC

203. Valves close at (with tolerance for tappet clearance indicated) 41° ATDC

CARBURETION (photograph N)

210. Number of carburettors fitted One 211. Type Variable Choke

212. Make Zenith/Stromberg 213. Model 150 - CD

214. Number of mixture passages per carburettor Single Venturi

215. Flange hole diameter of exit port(s) of carburettor 38.1 mm. 1.50 ins.

25.4

a automon

ins.

216. Minimum diameter of venturi/minimum diam., with piston at maximum height (example: SU)

INJECTION (if fitted)

220. Make of pump 221. Number of plungers

222. Model or type of pump 223. Total number of injector

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 occeleration
- 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/xicaror-number
- 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

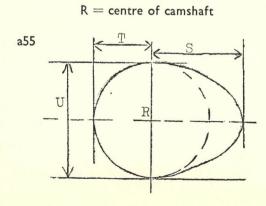
ENGINE AND CAR PERFORMANCES (as declared by manufacturer in catalogue)

- 250. Max. engine output
- 68.9 (type of horsepower: BHP (Gross)) at
- 5.800 r.p.m.

- 251. Max. r.p.m.
- 6.800
- output at that figure Not Available for Publication

- 252. Max. torque
- 68.7 lb/ft.
- 4200 at r.p.m.

- 253. Max. speed of the car
 - 139.5
- km./hour
- 86.7 miles/hour



Inlet cam

S =19.844

T =13.741 U = 27.619

Exhaust cam

S =19.844

T =13.741 U =27.619

mm mm mm.

inches .541 inches

mm.

mm.

1.087 inches

inches

inches

inches

cm.

cm.

DRIVE TRAIN

CLUTCH

260. Type of clutch Diaphragm

261. No. of plates One

262. Dia. of clutch plates

15.875

6.25 ins.

ins.

263. Dia. of linings, inside

11.43

cm. 4.50

outside

15.875

6.25 ins.

264. Method of operating clutch Mechanical

GEAR BOX (photograph H)

270. Manual type, make Vauxhall

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

type

275. No. of forward ratios

276. Location of gear shift

277.	Manual			matic	Alternative manual/automatic				
2//.	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth	
1	0 = 4 = 3								
	3.765:1								
2	2.213:1	29/20				Í			
3	1.404:1	23/25				!			
4	Dire	ect							
5	-	-							
6	-	-		7,0					
reverse	3.707:1	14/34		İ				İ	

- 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

292. Type of limited slip differential (if fitted)

293. Final drive ratio 4.125 (or 3.9)

Number of teeth 8/33 (or 9/35 Option Code 338)

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.

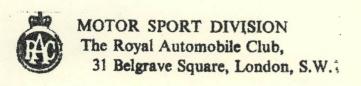
During the scrutineering of cars entered in group 4 (Sportscars) only the following items of the present recognition form are to be taken into consideration: 1, 2, 3, 9, 20, 21, 22, 23, 24, 25, 26, 70, 71, 78, 79, 90, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 147, 148, 149, 150, 158, 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.

No.	Reference No.	Group 1
		Heavy duty Suspension - Code 357
1.	71. 79. 78.	7198454 Front Spring RH (Fitted to LH side) 7198458 Rear Spring - 2 off 7192353 Rear axle Assy. 9/35 7192352 Rear Axle Assy. 8/33
		Increased Dia Wheels - Code 462 & 463 Group 2
2.	50.	6396895 Wheel - Discs 4 x 13 WB Dia. 330.2 mm. 13 ins. Width 133 mm. 5.24 ins.
		NOTE: When these wheels are used the must be reduced by .62 inches.



Manufacturer Vauxhall Mtrs. Ltd.

Model Vauxhall Viva/Epic HBD90

F.I.A. Recognian No. 5/37

Amendment No. 1

5137/1/1

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

HBD 1

1



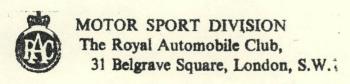
Photograph A $\frac{3}{4}$ view of car from front.

Group 2 only

Date amendment is valid from 1st Jan. 1968.

Crist 1968/1





Manufacturer Vauxhall Mtrs. Ltd.

Model Vauxhall Viva/Epic HBD90

F.I.A. Recogni on No. 5/37

Amendment to. 2

5137/1/1V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No. HBD 1

2





Photograph B $\frac{3}{4}$ view of car from rear

Photograph C interior view of car through drivers door.

3

Identical with Viva/Epic SL90 Code 460 (F.I.A. Recognition No. 5137). Apart from trim styles and materials.

4

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

762 KG

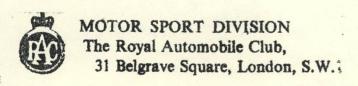
1680 LBS

15 CWT.

Date amendment is valid from 1st form. 1968

With 1968/1

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



Manufacturer Vauxhall Motors Ltd.

Model Vauxhall Viva/Epic

F.I.A. Recogni on No. 5137 BV

Amend-ient to. 3

5137/1/1

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No. HBB

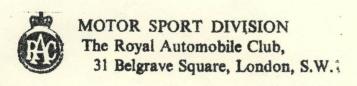
GROUP 2 ONLY

1 (Photo A)



Photograph A. 3 view of car from front.

Date amendment is valid from 154 fam. 1968 fg. high 1968 /1



Manufacturer Vauxhall Motors Ltd

Model Vauxhall Viva/Epic

F.I.A. Recogni on No. 5137 BV

Amendment to. 4

5137/1/11

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

HBB

Group 2

2



PHOTOGRAPH B 3 VIEW OF CAR FROM REAR



PHOTOGRAPH C INTERIOR VIEW OF CAR THROUGH DRIVERS DOOR (OPEN OR REMOVED)

3

IDENTICAL WITH VIVA/EPIC (F.I.A. RECOGNITION NO'S. 5137) APART FROM BRABHAM KIT.

4

9 - WEIGHT-TOTAL WEIGHT OF CAR WITH NORMAL EQUIPMENT - WATER - OIL AND SPARE WHEEL BUT WITHOUT FUEL OR REPAIR TOOLS.

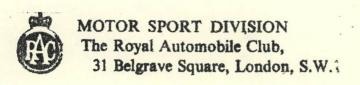
784.7 KG.

1730 LBS.



Date amendment is valid from 1st Jan. 1968

Cust 1968/1



Manufacturer Vauxhall Motors Ltd Model Vauxhall Viva/Epic F.I.A. Recogni on No. 5137 BV

Amendment to. 5

5137/1/10

Amendment to Form of Recognition

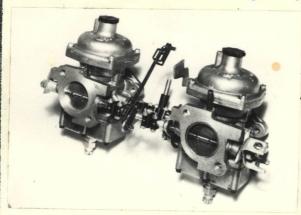
FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

group 2

Photo (N) and Photo (O)





(Photo (P)



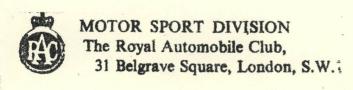
Photograph (0) 1-560 dia. 7.00 1-13Odia. INDUCTION MANIFOLD

Photograph (P)

Manufacturing Tolerance • 0.580 + 0.020 inche

Date amendment is valid from 1st fan. 1968.

Wish 1968/1



Manufacturer Vauxhall Motors Ltd Model Vauxhall Viva/Epic

F.I.A. Recogni on No. 5137 BV

Amendment to. 6

5137/1/1V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No. HBB

Group 2

Photo (I)



Photograph 1

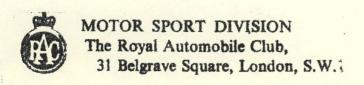
Photo (J) and Photo (K)



Photograph J



Date amendment is valid from 1st Jan 1968, hift 1968/



Manufacturer Vouxholl Motors Ltd.

Model Vivo (HBH)

F.I.A. Recognic on No. 5137

Amendment to # 2/2 V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

Underbody Shield Part No. C.C.I.



Dimensions

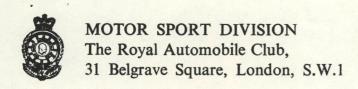
A - 10 inches 254 mm.
B - 43 inches 1092 mm.
C - 20 inches 508 mm.
D - 12 inches 305 mm.

E - Hole centres 14 inches 355 mm. $16\frac{1}{2}$ inches 420 mm.

1. inches thick 2.540 mm.

Date amendment is valid from 1st May 1968 hill 1968/6

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



Manufacturer Vauxhall Motors Ltd. Model VIVA/EPIC S.L.

F.I.A. Recognition No. 5137

Amendment No. 23/3V

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

HBH FOUR DOOR MODEL

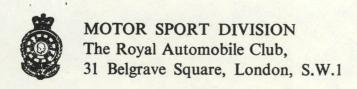


PHOTOGRAPH A. 3 VIEW OF CAR, FROM FRONT

Date amendment is valid from 1st Jan. 1969

hist 1969/1

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



Manufacturer Vauxhall Motors Ltd. Model Viva/Epic S.L.

F.I.A. Recognition No. 513

Amendment No.

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

HBH FOUR DOOR MODEL Reference No.

2





PHOTOGRAPH B. 3 VIEW OF CAR FROM REAR

PHOTOGRAPH C. INTERIOR VIEW OF CAR THROUGH DRIVERS DOOR

- IDENTICAL WITH VIVA/EPIC S.L. (F.I.A. RECOGNITION NO. 5138 AMENDMENTS 1 AND 2), APART FROM THE NUMBER OF DOORS.
- 9 WEIGHT TOTAL WEIGHT OF CAR WITH NORMAL EQUIPMENT WATER, OIL 4. AND SPARE WHEEL BUT WITHOUT FUEL OR REPAIR TOOLS.

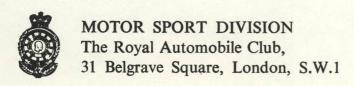
774.7 KG. 1708 LBS.

15.25 CWTS.

Date amendment is valid from 1st Jan. 1969

Rist 1969/

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



Manufacturer Vauxhall Motors Ltd. Model Viva/Epic S.L. 90

F.I.A. Recognition No. 5137

Amendment No. 5/5 U

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No. HBH 90 FOUR DOOR MODEL

1

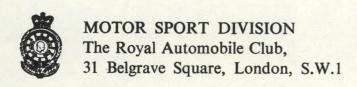


PHOTOGRAPH A. 3 VIEW OF CAR FROM FRONT

Date amendment is valid from 1st July 1969

Gift 1969/5

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



Manufacturer Vauxhall Motors Ltd.

Model Viva/Epic S.L. 90

F.I.A. Recognition No. 5137

Amendment No. 5/5

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No. HBH 90 FOUR DOOR MODEL

2.





PHOTOGRAPH B. 3 VIEW OF CAR
FROM REAR

PHOTOGRAPH C. INTERIOR VIEW OF CAR THROUGH DRIVERS DOOR

.3.

IDENTICAL WITH VIVA/EPIC S.L. 90 (F.I.A. RECOGNITION NO. 5137 AMENDMENTS 1 AND 2), APART FROM THE NUMBER OF DOORS.

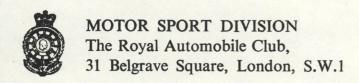
4.

9 - WEIGHT - TOTAL WEIGHT OF CAR WITH NORMAL EQUIPMENT - WATER, OIL AND SPARE WHEEL BUT WITHOUT FUEL OR REPAIR TOOLS.

787.4 KG. 1736 LBS.

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

Date amendment is valid from 1st July 1969 high 1969 /5



Manufacturer VAUXHALL MOTORS LTD.

Model VIVA - HBH 90

F.I.A. Recognition No. 5137

Amendment No. 6/16

Amendment to Form of Recognition

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

No.

Reference No.

CAPACITIES AND DIMENSIONS

FRONT TRACK 52.20 INS. 1326 MM.

PRODUCTION CHANGE

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

Date amendment is valid from 1/1/70