

F.I.A. Recognition No 5151
Group .. 1 - Tourisme de Série

FEDERATION INTERNATIONALE DE L' AUTOMOBILE

Form of recognition in accordance with
Appendix J to the International Sporting Code.

Manufacturer A.B. Volvo Cylinder-capacity ... 1778 cm3 ... 109 in3
Model 144S
Serial No of chassis ... 1 Manufacturer A.B. Volvo
engine ... 1 Manufacturer A.B. Volvo
Recognition is valid from .. 1st April 67 List .. 16/1 ..

The manufacturing of the model described in this recognition form was started on 15/8 1966
and the minimum production of .. 5000 .. identical cars, in accordance with the specifica-
tions of this form was reached on .. 28/2 .. 1967

Photograph A, 3/4 view of car from front



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

Variants

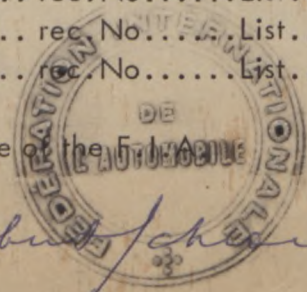
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Normal evolution of the type

Stamp and signature of the
National Sporting Authority



Stamp and signature of the F.I.A.



Make

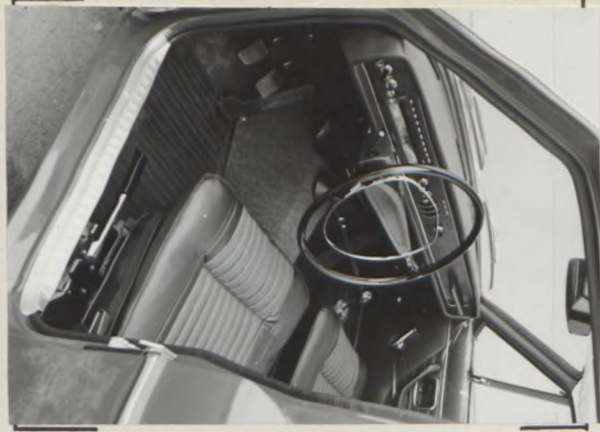
Model

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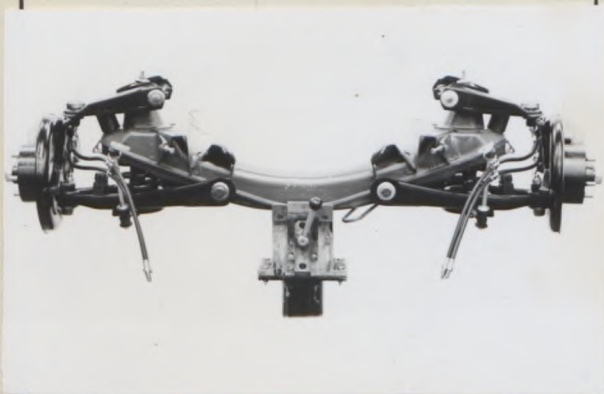
Photograph B



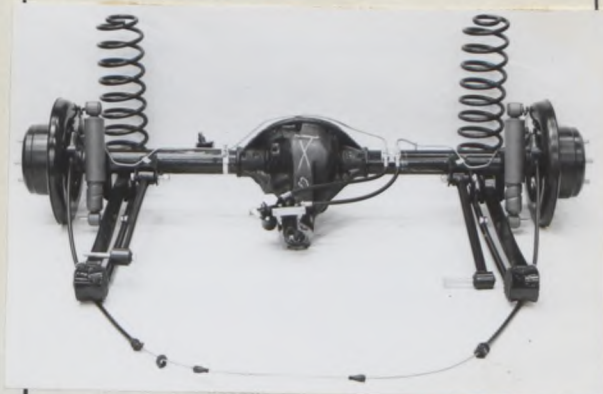
Photograph C



Photograph D



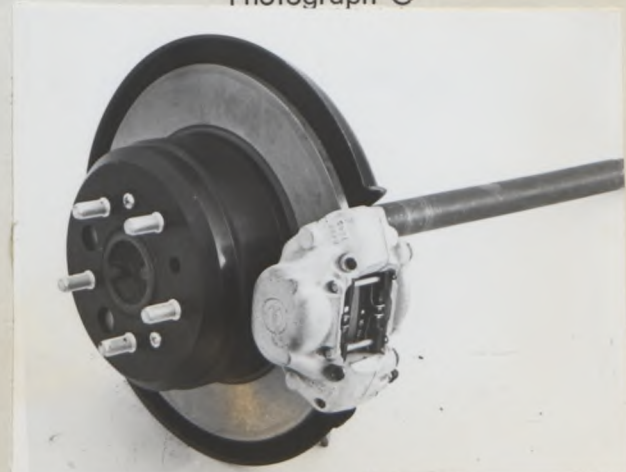
Photograph E



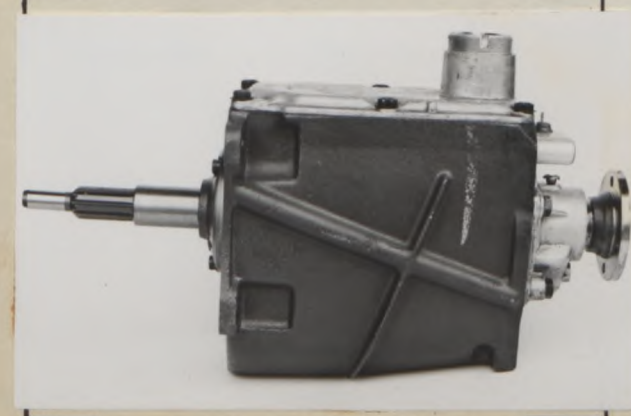
Photograph F



Photograph G



Photograph H



Photograph I

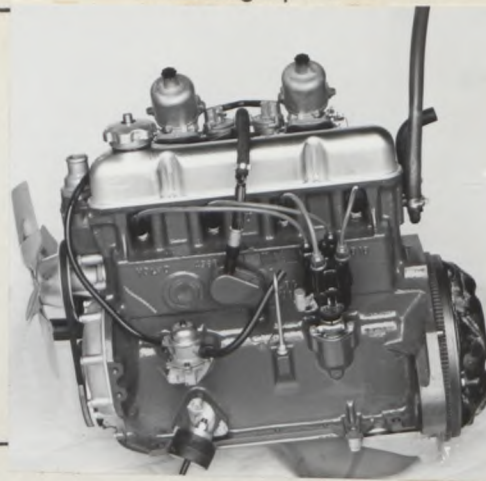


Make

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Photograph K



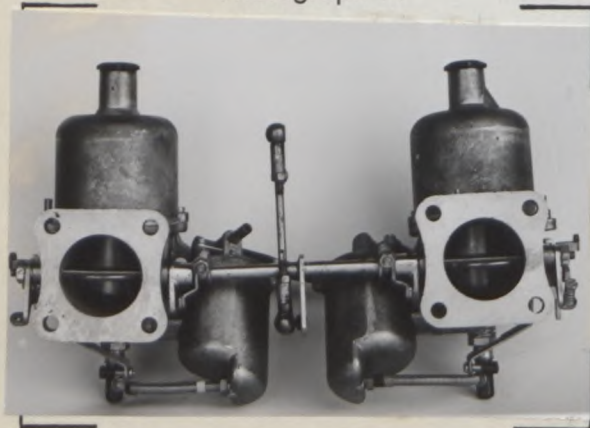
Photograph L



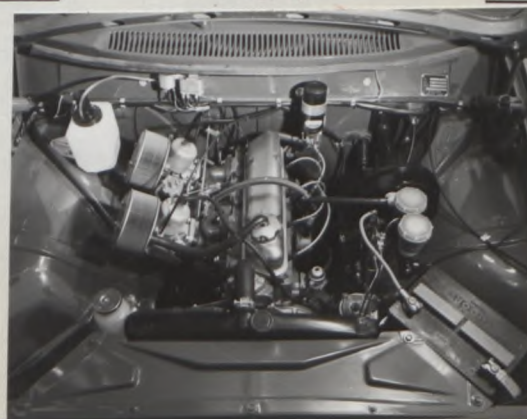
Photograph M



Photograph N



Photograph O



Photograph P

Photograph Q

inlet manifold



Make

Model

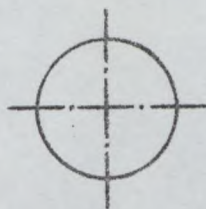
F.I.A. Rec.No

Drawing inlet manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



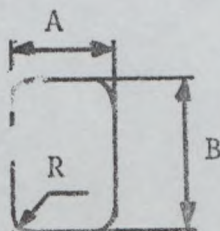
$$\varnothing 36 \pm 0,31$$

Drawing of entrance to inlet port of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



$$\varnothing 36 \pm 0,31$$

Drawing exhaust manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.

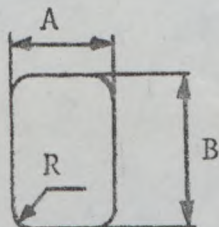


$$A = 27 \pm 0,8$$

$$B = 40 \pm 0,8$$

$$R = 5 \pm 0,8$$

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



$$A = 25 \pm 0,8$$

$$B = 38 \pm 0,8$$

$$R = 4 \pm 0,8$$



Make

Model

F.I.A. Rec.No

IMPORTANT - the underlined items must be stated in two measuring systems, one of which must be the metric system. See conversion table hereafter.

CAPACITIES AND DIMENSIONS

- | | | | | |
|---|-------------|-----------|----------------|-------------|
| 1. <u>Wheelbase</u> | 2600 | mm | 102 1/2 | inches |
| 2. <u>Front track</u> | 1350 | mm | 53 1/8 | inches * |
| 3. <u>Rear track</u> | 1350 | mm | 53 1/8 | inches * |
| 4. Overall length of the car | 464 | cm | | inches |
| 5. Overall width of the car | 174 | cm | | inches |
| 6. Overall height of the car | 146 | cm | | inches |
| 7. <u>Capacity of fuel tank</u> (reserve included) | 15 | Gallon US | 58 | ltrs |
| | | | 13 | Gallon Imp. |
| 8. Seating capacity | 5 | | | |
| 9. <u>Weight</u> , total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools: | 1113 | kg | 2454 | lbs |
| | | | 21,9 | cwt |

*) 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 recognizable 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.

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 square inch/pouce carré	-	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 (l b)	-	453.593 gr.	1 hundred weight (cwt)	-	50.802 kg



CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction : ~~separate~~ / unitary construction21. Unitary construction, material (s) *Steel*

Separate construction

22. Material (s) of chassis

23. Material (s) of coachwork

24. Number of doors *4* Material (s) *sheet-metal*25. Material (s) of bonnet *sheet-metal*26. Material (s) of boot lid *sheet-metal*27. Material (s) of rear-window *tempered glass*28. Material (s) of windscreen *laminated glass*29. Material (s) of front-door windows *tempered glass*30. Material (s) of rear-door windows *tempered glass*31. Sliding system of door windows *window winders*32. Material (s) of rear-quarter light *tempered glass*

ACCESSORIES AND UPHOLSTERY

38. Interior heating : yes - ~~no~~39. Air-conditioning : ~~yes~~ - no40. Ventilation : yes - ~~no~~41. Front seats, type of seat and upholstery *separate seats, vinyl*

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

18 kg

lbs

43. Rear seats, type of seat and upholstery *berch, vinyl*44. Front bumper, material (s) *anodized aluminium* Weight *8* kg

lbs

45. Rear bumper, material (s) *anodized aluminium* Weight *7* kg

lbs

WHEELS

50. Type *disc wheels*51. Weight (per wheel, without tyre) *7,9* kg

lbs

52. Method of attachment *with 5 nuts*53. Rim diameter *381* mm *15* inches54. Rim width *114* mm *4 1/2* inches

STEERING

60. Type *cam and roller*61. Servo-assistance : ~~yes~~ - no62. Number of turns of steering wheel from lock to lock *4,1*

63. In case of servo-assistance



SUSPENSION

70. Front suspension (photogr. D), type *individual*
 71. Type of spring *coil*
 72. Stabiliser (fitted) *yes*
 73. Number of shockabsorbers *2*
 74. Type *telescopic*
 78. Rear suspension (photogr. E), type *rigid axle*
 79. Type of spring *coil*
 80. Stabiliser (if fitted) *-*
 81. Number of shockabsorbers *2*
 82. Type *telescopic*

BRAKES (photographs F and G)

90. Method of operation *hydraulic, split circuit brake system*
 91. Servo-assistance (if fitted), type *vacuum servo*
 92. Number of hydraulic master cylinders *tandem master cylinder*

	FRONT		REAR	
93. Number of cylinders per wheel	<i>4</i>		<i>2</i>	
94. Bore of wheel cylinder (s)	<i>4 x 36</i> mm	in.	<i>2 x 36</i> mm	in.
Drum brakes				
95. Inside diameter	mm	in.	mm	in.
96. Length of brake linings	mm	in.	mm	in.
97. Width of brake linings	mm	in.	mm	in.
98. Number of shoes per brake				
99. Total area per brake	mm ²	sq.in.	mm ²	sq.in.
Disc brakes				
100. Outside diameter	<i>272</i> mm	in.	<i>295</i> mm	in.
101. Thickness of disc	<i>12,8</i> mm	in.	<i>9,6</i> mm	in.
102. Length of brake linings	<i>75</i> mm	in.	<i>57</i> mm	in.
103. Width of brake linings	<i>50</i> mm	in.	<i>42,5</i> mm	in.
104. Number of pads per brake	<i>2</i>		<i>2</i>	
105. Total area per brake	<i>7300</i> mm ²	sq.in.	<i>4650</i> mm ²	sq.in.



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ENGINE (photographs J and K)

130. Cycle *4-stroke*
131. Number of cylinders *4*
132. Cylinder arrangement *in line*
133. Bore *84,14 ± 0,01* mm *3,313* in.
134. Stroke *80,0 ± 0,01* mm *3,15* in.
135. Capacity per cylinder *444,5* cm³ *27,13* cu.in.
136. Total cylinder-capacity *1778* cm³ *109* cu.in.
137. Material (s) of cylinder block *cast iron*
138. Material (s) of sleeves (if fitted)
139. Cylinder-head, material (s) *cast iron* Number fitted
140. Number of inlet ports *4*
141. Number of exhaust ports *4*
142. Compression ratio *10,0:1*
143. Volume of one combustion chamber *49,5* cm³ cu.in.
144. Piston, material *light alloy*
145. Number of rings *3*
146. Distance from gudgeon pin centre line to highest point of piston crown
46±0,1 mm inches
147. Crankshaft : ~~moulded~~ / stamped
148. Type of crankshaft : integral / ...
149. Number of crankshaft main bearings *5*
150. Material of bearing cap *cast iron*
151. System of lubrication : ~~dry sump~~ / oil in sump
152. Capacity, lubricant *3,75* ltrs pts quarts US
153. Oil cooler: ~~yes~~ / no
154. Method of engine cooling *water*
155. Capacity of cooling system *86* ltrs pints quarts US
156. Cooling fan (if fitted), dia *33,5* cm inches
157. Number of blades of cooling fan *4*

Bearings

158. Crankshaft main, type Dia. *63,45* mm *copper-lead-indium* in.
159. Connecting rod big end, type Dia. *54,1* mm *copper-lead-indium* in.

Weights

160. Flywheel (clean) *9,9* kg lbs
161. Flywheel with clutch (all turning parts) *15,9* kg
162. Crankshaft *16,7* kg lbs
163. Connecting rod *0,680* kg lbs
164. Piston with rings and pin *0,588* kg lbs



FOUR STROKE ENGINES

170. Number of camshafts *1*
 171. Location *cylinder block*
 172. Type of camshaft drive *gears*
 173. Type of valve operation *push rod*

INLET (see page 4)*

180. Material (s) of inlet manifold *cast iron*
 181. Diameter of valves *40* mm *1,58* inches
 182. Max. valve lift *10,2* mm *0,40* in.
 183. Number of valve springs *1*
 184. Type of spring *coil*
 185. Number of valves per cylinder *1*
 186. Tappet clearance for checking timing (cold) *1,44* mm inches
 187. Valves open at (with tolerance for tappet clearance indicated) *0° T.D.C.*
 188. Valves close at (with tolerance for tappet clearance indicated) *40° A.B.D.C.*
 189. Air filter, type *paper*

EXHAUST (see page 4)

195. Material (s) of exhaust manifold *cast iron*
 196. Diameter of valves *35* mm *1,38* inches
 197. Max. valve lift *10,2* mm *0,40* in.
 198. Number of valve springs *1*
 199. Type of spring *coil*
 200. Number of valves per cylinder *1*
 201. Tappet clearance for checking timing (cold) *1,44* mm inches
 202. Valves open at (with tolerance for tappet clearance indicated) *40° B.B.D.C.*
 203. Valves close at (with tolerance for tappet clearance indicated) *0° A.T.D.C.*

CARBURETION (photograph N)

210. Number of carburettors fitted *2*
 211. Type *horizontal*
 212. Make *SU*
 213. Model *HS-6*
 214. Number of mixture passages per carburettor *1*
 215. Flange hole diameter of exit port (s) of carburettor *44,5* mm in.
 216. Minimum diameter of venturi / minimum diam. with piston at maximum height

mm

inches

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

inches

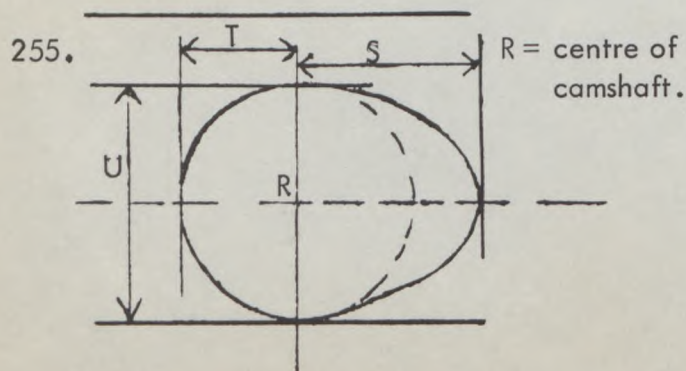


ENGINE ACCESSORIES

230. Fuel pump : mechanical ~~and/or electric~~
 231. No fitted /
 232. Type of ignition system *coil*
 233. No of distributors /
 234. No of ignition coils /
 235. No of spark plugs per cylinder /
 236. Generator, type : dynamo / ~~alternator~~ - number fitted /
 237. Method of drive *belt driven*
 238. Voltage of generator *12* volts
 239. Battery, number /
 240. Location *engine compartment left front*
 241. Voltage of battery *12* volts

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

250. Max. engine output *115hp* (type of horsepower: *SAE*) at *6000* rpm
 251. Maximum rpm *6000* output at that figure *115*
 252. Maximum torque *15,5 kgm* *SAE* at *4000* rpm
 253. Maximum speed of the car km/hour miles/hour



Inlet cam		
S =	<i>21,3</i> mm	<i>0,83</i> inches
T =	<i>14,6</i> mm	inches
U =	<i>29,418</i> mm	inches
Exhaust cam		
S =	<i>21,3</i> mm	<i>0,83</i> inches
T =	<i>14,6</i> mm	inches
U =	<i>29,418</i> mm	inches



Make

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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, 236, 250, 251, 252, 253, 255, and photographs I, M and N. and page 4.

During the scrutineering of cars entered in group 4 (Sportcars) 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.

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



DRIVE TRAIN
CLUTCH

260. Type of clutch *dry disc*

261. No of plates *1*

262. Dia. of clutch plates *21,6* cm

inches

263. Dia. of linings, inside *14,0* cm

in. outside *21,6* cm in.

264. Method of operating clutch *mechanical*

GEAR BOX (photograph H)

270. Manual type, make *Volvo M40 or M41*

Method of operation *manual*

271. No of gear-box ratios forward *4*

272. Synchronized forward ratios *4*

273. Location of gear-shift *centre floor lever*

274. Automatic, make type

275. No of forward ratios

276. Location of gear-shift

277.	Manual		Automatic		Alternative manual/automatic			
	Ratio	No teeth	Ratio	No teeth	Ratio	No teeth	Ratio	No teeth
1	<i>3,13:1</i>	<i>33:15</i>						
2	<i>1,99:1</i>	<i>28:20</i>						
3	<i>1,36:1</i>	<i>23:22</i>						
4	<i>1:1</i>							
5								
6								
reverse								

278. Overdrive, type *M41 gearbox with electrically-operated overdrive*

279. Forward gears on which overdrive can be selected *No 4*

280. Overdrive ratio *0,756:1*

FINAL DRIVE

290. Type of final drive *hypoid*

291. Type of differential *rigid axle*

292. Type of limited slip differential (if fitted)

293. Final drive ratio *with M40 gearbox 4,1:1. With M41 gearbox 4,56:1*

Number of teeth *41:10* *41:9*

