

CAMS

5TH CATEGORY - HISTORIC RACING

GROUP Na/Nb/Nc

APPROVED VEHICLE SPECIFICATION

This form details the approved specifications of individual vehicle models in the 5th Category Historic car group. To be issued with an Historic Log Book, cars need to comply with these specifications, the physical appearance shown in the illustrations and the general historic rules as detailed in the current CAMS Manual of Motor Sport.

Make of Car: Volvo **Model:** 122/ Amazon

Period of Original Manufacture: 1956/1970*

CAMS Historic Group: Na/Nb/Nc (Dependent upon year model)

Date of Issue of this Document: 16th April 2004

- * Introduced 1956 - B16 Engine
- 1961 - B18 Engine (Disc front brakes)
- 1969 - B20 Engine



SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description:	Unitary Construction	Period of Manufacture:
Manufacturer:	Volvo	1956 - 70
Chassis no. from:		
Chassis no. location:	Bulkhead - Engine Bay	
Material:	Steel	
Comments:		

1.2 FRONT SUSPENSION

Description:	Independent - Upper & Lower Wishbones	
Spring medium:	Coil	
Damper Type:	Telescopic	Adjustable: Permitted
Anti-sway bar:	Fitted	Adjustable: No
Suspension adjustable:	No	Method:
Comments:		

1.3 REAR SUSPENSION

Description:	Live Axle - Trailing Arms	
Spring medium:	Coil	
Damper type:	Telescopic	Adjustable:
Anti-sway bar:	Not Fitted	Adjustable:
Suspension adjustable:	No	Method:
Comments:		

1.4 STEERING

Type:	Cam & Roller	Make: Volvo
Comments:		

1.5 BRAKES

	Front	Rear
Type:	Drum(to 1961) Disc (from 1961)	Drum
Dimensions:	Drum 294mm-Disc 276mm	294mm
Material of drum/disc	Cast Iron	Cast iron
No. cylinders/pots per wheel:	2	2
Actuation:	Hydraulic	Hydraulic
Caliper: Make, Material, Type:	Volvo - Cast Iron	
Master cylinder make:	Volvo	Type: Tandem
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	Dual Master Cylinders Permitted.	

SECTION 2 - ENGINE

2.1 ENGINE

Make: Volvo
Model: B16/B18/B20
No. cylinders: 4
Cylinder Block-material: Cast Iron
Bore - Original: 79.37/84.14/88.9mm
Stroke - original: 80mm
Capacity - original: 1582/1780/1986cc
Cooling method: Water
Identifying marks:
Comments: ** For Nb cars, refer engine regulations related to capacity increase.

Configuration: In Line
Two/Four Stroke: 4 Stroke
Max. allowed: 80.87/ **/ 90.4mm
Max. allowed: 80/ **/ 80mm
Max. allowed: 1642/**/2052cc

2.2 CYLINDER HEAD

Make: Volvo
No. of valves/cylinder- **Inlet:** 1 **Exhaust:** 1
No. of ports total: 8 **Inlet:** 4 **Exhaust:** 4
No. of camshafts: 1 **Location:** Block **Drive:** Gear
Valve actuation: Pushrod
Spark plugs/cylinder: 1
Identifying marks:
Comments:

2.3 LUBRICATION

Method ((Wet/Dry Sump): Wet Sump **Oil tank location:**
Dry sump pump type: **Location (If Appl.):**
Oil cooler standard (Yes/No): No **Location (If Appl.):**
Comments: Oil Cooler Permitted

2.4 IGNITION

Type: Coil & Distributor
Make: Bosch
Comments:

2.5 FUEL FEED (Induction)

Carburettor/s : **Fuel Inj'n :**
Make : SU **Make :**
Type/Model : H or HS **Type/Model :**
No. Fitted : 2 **S/Charged (Yes/No):**
Size : **Make (If Applic.):**
Comments: Carburettors may be replaced by others of period type, limited to a maximum of one choke per cylinder.

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Volvo **Type:** Diaphragm **Diameter:** 216mm
No. of Plates: 1
Method of Actuation : Hydraulic
Comments: Clutch and method of actuation are free

3.2 TRANSMISSION

Type: 4 Speed Synchro. (O/D Optional)
Make: Volvo (O/D Laycock) **Model:**
No. forward speeds: 4 (+O/D if fitted) **Gearbox location:** Behind Engine
Gearchange type and location: Floor - Direct
Case material: Cast iron **Identifying marks:**
Comments:

3.3 FINAL DRIVE

Make: Volvo **Model :** Amazon
F/R/All Wheel Drive: Rear
Ratios: Free
Differential Type : Hypoid Bevel **Make:** Volvo
Comments: LSD Permitted

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: 1 **Location:** Gearbox to Final Drive
Description: Tailshaft with Universal Joints
Comments:

3.5 WHEELS & TYRES

Wheel type:	Original: Pressed Steel	Material: Original: Steel
	Allowed: Steel or Period Alloy	Allowed: Steel or Alloy
Fixture method:	Bolt On	No. studs: 5
	FRONT	REAR
Wheel dia. & rim width	4 x 15	4 x 15
	Original:	
	Allowed: 5x15(Na) 6 x15(Nb) 7 x 15(Nc)	5 x 15(Na) 6 x 15(Nb) 7 x 15 Nc)
Tyre Section		
	Allowed:	
Min. Asp.Ratio Allowed :	65% (Na) 60% (Nb/c)	65%(Na) 60% (Nb/c)
Comments:		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location: Rear **Capacity:** 45 Litres
Fuel pump, type and location: Mechanical **Make:**
Comments:

4.2 ELECTRICAL SYSTEM

Voltage: 12 **Dynamo/Alternator fitted:**
Battery Location: Engine Bay **Either- dependant upon model**
Comments:

4.3 BODYWORK

Type: 2 or 4 Door Saloon **Material:** Steel
No. of seats: 4 **No. doors:** 2 or 4
Comments:

4.4 DIMENSIONS

Track - Front: 1315mm **Rear:** 1315mm
Wheelbase: 2600mm **Overall length:** 4450mm
Dry weight: 1013kg
Comments:

4.5 SAFETY EQUIPMENT

Fire extinguisher required: Refer Schedule H
Seat belt required: Refer Schedule J
Rollbar required: Refer Schedule J and Art.3 General Regulations
Electrical cut off switch required: Required
Safety fuel tank optional/required: Optional

RP:mr-Specblnk.doc

15 OCT. 1965

F.I.A. Recognition No 5612
Group 1.1.1. Tourisme de Série.

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer	AB. VOLVO	Cylinder-capacity	1778.....cm3	109.....in3
Serial No of chassis	144.400	Model	122 S 2-DOORS	
Serial No of engine	496820-101	Manufacturer	AB. VOLVO	
Recognition is valid from	1/1/1965	Manufacturer	AB. VOLVO	
		List	14	

The manufacturing of the model described in this recognition form was started on August 18, 1965, and the minimum production of 5,000.... identical cars, in accordance with the specifications of this form was reached on NOVEMBER 1, 1965....

Photograph A, 3/4 view of car from front



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

<u>Variants</u>	<u>Normal evolution of the type</u>
on19 .. rec.No..... List	on19 .. rec.No.....List.....
on19 .. rec.No..... List	on19 .. rec.No.....List.....
on19 .. rec.No..... List	on19 .. rec.No.....List.....
on19 .. rec.No..... List	on19 .. rec.No.....List.....
on19 .. rec.No..... List	on19 .. rec.No.....List.....

Stamp and signature of the
National Sporting Authority

Stamp and signature of the F.I.A.

KUNGL. AUTOMOBIL KLUBBEN
The Swedish Motorist

[Handwritten signature]



Make **Volvo**

Model **122 G 2-doors**

F.I.A. Rec. N°

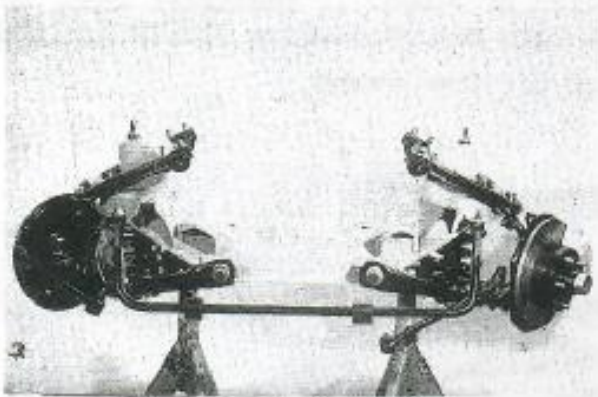
Photograph B



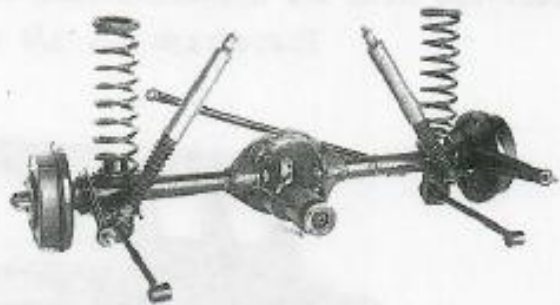
Photograph C



Photograph D

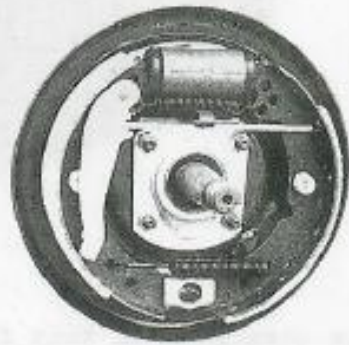
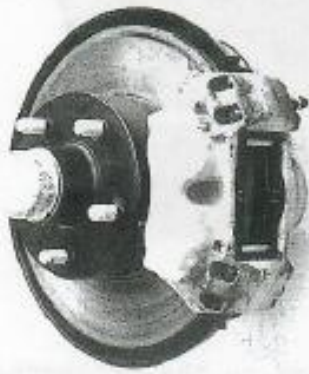


Photograph E



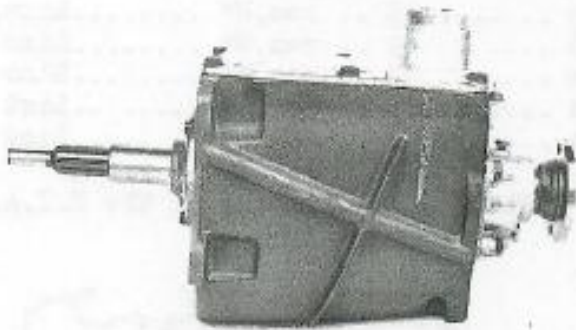
Photograph F

Photograph G



Photograph H

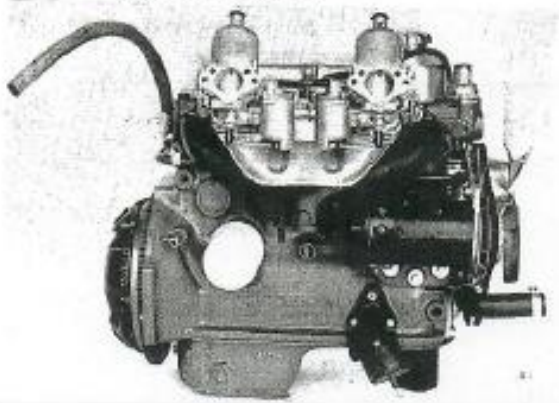
Photograph I



Make **Volvo**

Model **1225 2-doors** F.I.A. Reg. No

Photograph J



Photograph K



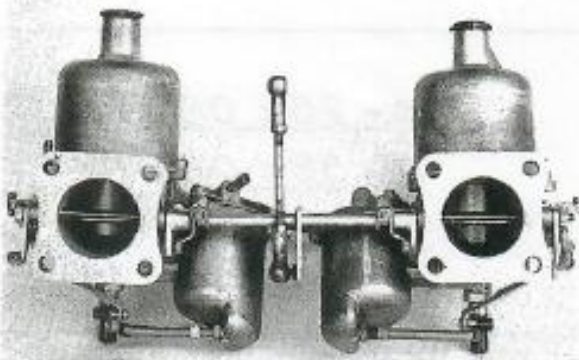
Photograph L



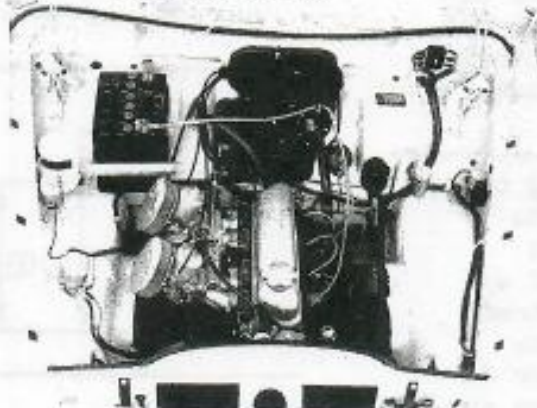
Photograph M



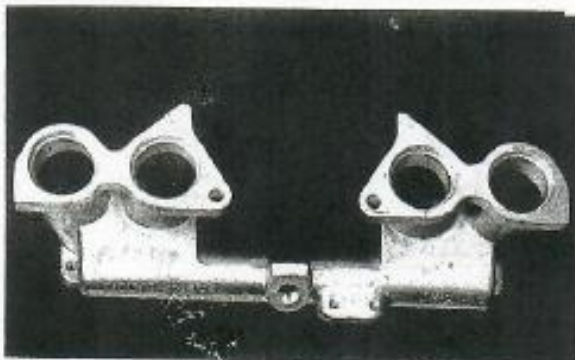
Photograph N



Photograph O



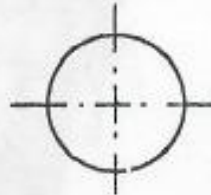
Photograph P



Photograph Q



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



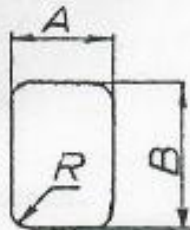
$\underline{\underline{\phi 36 \pm 0,31}}$

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



$\underline{\underline{\phi 36 \pm 0,31}}$

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

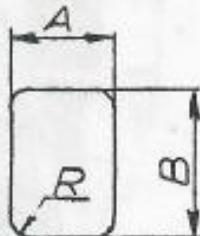


$\underline{\underline{A = 27 \pm 0,8}}$

$\underline{\underline{B = 40 \pm 0,8}}$

$\underline{\underline{R = 5 \pm 0,8}}$

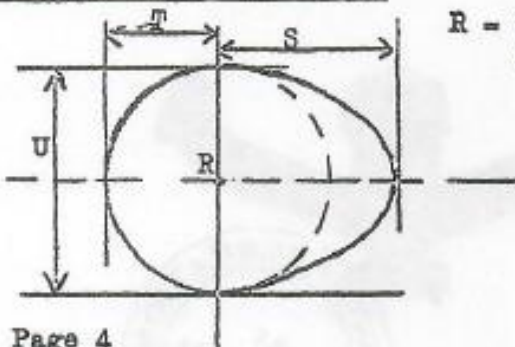
Drawing of exit to exhaust port of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



$\underline{\underline{A = 25 \pm 0,8}}$

$\underline{\underline{B = 38 \pm 0,8}}$

$\underline{\underline{R = 4 \pm 0,8}}$



R = centre of camshaft.

Inlet cam

S = 21,3 mm 0,83 inches

T = 15,3 mm 0,61 inches

U = 30,752 mm 1,21 inches

Exhaust cam

S = 21,3 mm 0,83 inches

T = 15,3 mm 0,61 inches

U = 30,752 mm 1,21 inches



Make VOLVO

Model 122 S 2-DOORS

F.I.A. Rec. N°

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. Wheelbase 2600 mm 102 1/2 inches
- 2. Front track 1315 mm 51 3/4 inches *
- 3. Rear track 1315 mm 51 3/4 inches *
- 4. Overall length of the car 445 cm inches
- 5. Overall width of the car 162 cm inches
- 6. Overall height of the car 150,5 cm inches
- 7. Capacity of fuel tank (reserve included) 45 ltrs
12 Gallon US 10 Gallon Imp.
- 8. Seating capacity 5
- 9. Weight, total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools :
1013 kg 2239 lbs 19.9 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 chocking 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 (lb)	- 453.593 gr.	1 hundred weight	- 50.802 kg



Make VOLVO

Model 122 S 2-doors

F.I.A. Rec. No

CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction : ~~separate~~ / unitary construction

21. Unitary construction, material(s) STEEL

Separate construction

22. Material(s) of chassis

23. Material(s) of coachwork

24. Number of doors 2 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 - no

40. Ventilation : yes - no

41. Front seats, type of upholstery VINYL

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

PER CHAIR 14,6 kg

lbs

43. Rear seats, type of upholstery VINYL

44. Front bumper, material(s) CHROME-PLATED STEEL

Weight 9,6 kg

lbs

45. Rear bumper, material(s) CHROME-PLATED STEEL

Weight 9,6 kg

lbs

WHEELS

50. Type DISC WHEELS

51. Weight (per wheel, without tyre)

6,9 kg

52. Method of attachment WITH 5 NUTS

53. Rim diameter 381 mm

15" inches

54. Rim width 101 mm

4" inches

STEERING

60. Type CAM AND ROLLER

61. Servo-assistance : yes - no

62. Number of turns of steering wheel from lock to lock

63. In case of servo-assistance --



Make Volvo

Model 122 S 2-doors

F.I.A. Rec. No

SUSPENSION

70. Front suspension (photogr. D), type individual

71. Type of spring coil

72. Stabiliser (if fitted) Yes

73. Number of shock absorbers 2 74. Type Telescopic

78. Rear suspension (photogr. E), type rigid axle

79. Type of spring coil

80. Stabiliser (if fitted) -

81. Number of shock absorbers 2 82. Type Telescopic

BRAKES (photographs F and G)

90. Method of operation Hydraulic

91. Servo-assistance (if fitted), type Vacuum servo, optional

92. Number of hydraulic master cylinders 1

	FRONT		REAR	
93. Number of cylinders per wheel 3			1	
94. Bore of wheel cylinder(s) (2) 1 1/2", (1) 2. 1/8"	mm	in.	25,4 mm	in.
Drum brakes				
95. Inside diameter	mm	in.	229 mm	in.
96. Length of brake linings	mm	in.	220 x 2 mm	in.
97. Width of brake linings	mm	in.	50 mm	in.
98. Number of shoes per brake			2	
99. Total area per brake	mm ²	sq. in.	420 mm ²	sq. in.
Disc brakes				
100. Outside diameter	276,5 mm	in.	mm	in.
101. Thickness of disc	12,7 mm	in.	mm	in.
102. Length of brake linings 105-65	mm	in.	mm	in.
103. Width of brake linings	55 mm	in.	mm	in.
104. Number of pads per brake	2			
105. Total area per brake	185 mm ²	sq. in.	mm ²	sq. in.



Make VOLVO

Model 122 2-DOORS

F.I.A. Rec. N°

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 $80 \pm 0,1$ mm $3,15$ in.
135. Capacity per cylinder 444,5 cm³ 27,04 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 1
140. Number of inlet ports 4 141. Number of exhaust ports 4
142. Compression ratio 8,7
143. Volume of one combustion chamber 51,3 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 \pm 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 3,85 litre pts quarts US
153. Oil cooler: yes / no 154. Method of engine cooling WATER
155. Capacity of cooling system 8,5 litre pints quarts US
156. Cooling fan (if fitted), dia. 33,5cm inches
157. Number of blades of cooling fan 4
- Bearings
158. Crankshaft main, type WHITE METAL Dia. 63,45 mm 1
159. Connecting, big end, type COPPER-LEAD-INDIUM Dia. 54,1 mm 1
rod
- Weights
160. Flywheel (clean) 9,9 kg lbs
161. Flywheel with clutch (all turning parts) 15,9 kg lbs
162. Crankshaft 16,7 kg lbs 163. Connecting rod 0,680 kg lbs
164. Piston with rings and pin 0,588 kg



Make VOLVO

Model 122 2-DOORS

F.I.A. Rec. N°

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 ALUMINIUM
181. Diameter of valves 40 mm 1,58" inches
182. Max. valve lift 8,9 mm 0,35" 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) 1,15 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 8,9 mm 0,35" 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) 1,15 mm inches
202. Valves open at (with tolerance for tappet clearance indicated) 38° B.B.D.C.
203. Valves close at (with tolerance for tappet clearance indicated) 2° 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 1 3/4" 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

*) for additional information concerning two-stroke engines and super-charged engines see page 13.



Make Volvo

Model 122 S 2-doors

F.I.A. Rec. N°

ENGINE ACCESSORIES

230. Fuel pump : mechanical ~~and/or electric~~ 231. N° fitted 1
232. Type of ignition system Coil 233. N° of distributors 1
234. N° of ignition coils 1 235. N° of spark plugs per cylinder 1
236. Generator, number fitted 1 237. Method of drive belt driven
238. Voltage of generator 12 volts 239. Battery, number 1
240. Location under bonnet against the firewall
241. Voltage of battery 12 volts

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

250. Max. engine output 95 hp (type of horsepower: SAE) at 5400 rpm
251. Maximum rpm 5400 output at that figure 95
252. Maximum torque 14,8 kgm at 3500 rpm
253. Maximum speed of the car km/hour miles/hour



Make VOLVO

Model 122 2-DOORS

F.I.A. Rec. N°

DRIVE TRAIN

CLUTCH

260.Type of clutch DRY DISC

261.N° of plates 1

262.Dia. of clutch plates 215,9 mm 8 1/2 inches

263.Dia. of linings, inside 139,7 mm in. outside 215,9 mm in.

264.Method of operating clutch HYDRAULIC

GEAR BOX (photograph H)

270.Manual type, make VOLVO M 40.

271.N° of gear-box ratios forward 4 272.Synchronised forward ratios 4

273.Location of gear-shift CENTRE FLOOR LEVER

274Automatic, make type

275.N° of forward ratios 276.Location of gear-shift

277.	Manual		Automatic		Alternative manual/automatic			
	Ratio	N° teeth	Ratio	N° teeth	Ratio	N° teeth	Ratio	N° teeth
1	3,13	33:15						
2	1,99	28:20						
3	1,36	23:22						
4	1							
5								
6								
reverse	3,25							

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 RIGID AXLE

292.Type of limited slip differential (if fitted),

293.Final drive ratio 4,1 | 4,56

Number of teeth 41:10 | 41:9



Make VOLVO

Model 122 S 2-DOORS

F.I.A. Rec. N°

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, 184, 186, 187, 188, 189, 199, 201, 202, 203, 212, 213, 215, 216, 222, 225, 230, 250, 251, 252, 253, and photographs I, M and N.

During the scrutineering of cars entered in group 4 (Sports cars) 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 preceding information. This to be stated together with reference number.

OPTIONAL EQUIPMENT:

Ref: 53 Wider rims 4 1/2" Weight: 8,0 kg

- Only valid in group 2.



Make

Model

F.I.A. Rso. N°

TWO STROKE ENGINES

300. System of cylinder scavenging

301. Type of lubrication

302. Inlet ports, length measured around cylinder wall mm inches

303. Height inlet port mm in. 304. Area mm2 sq.in.

305. Exhaust ports, length measured around cylinder wall mm inches

306. Height exhaust port mm in. 307. Area mm2 sq.in.

308. Transfer port, length measured around cylinder wall mm inches

309. Height transfer port mm in. 310. Area mm2 sq.in.

311. Piston ports, length measured around piston mm inches

312. Height piston port mm in. 313. Area mm2 sq.in.

314. Method of precompression 315. Precompression cyl.: yes/no

316. Bore mm inches 317. Stroke mm inches

318. Distance from top of cyl. block to highest point of exhaust port : mm inches

319. Distance from top of cyl. block to lowest point of inlet port : mm inches

320. Distance from top of cyl. block to highest point of transfer port : mm inches

321. Drawing of cylinder ports.

330. Supercharging - state full details hereafter :



Page