JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. 1443

Group 2 - Touring

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer FUJI HEAVY INDUSTRIES LTD.

Serial No. of chassis A522-2001
engine EA52-1001

Recognition is valid from 1st Nov. 1966

Cylinder-capacity 977 cm3 59.6 cu. in.

Model A522 (SUBARU 1000)

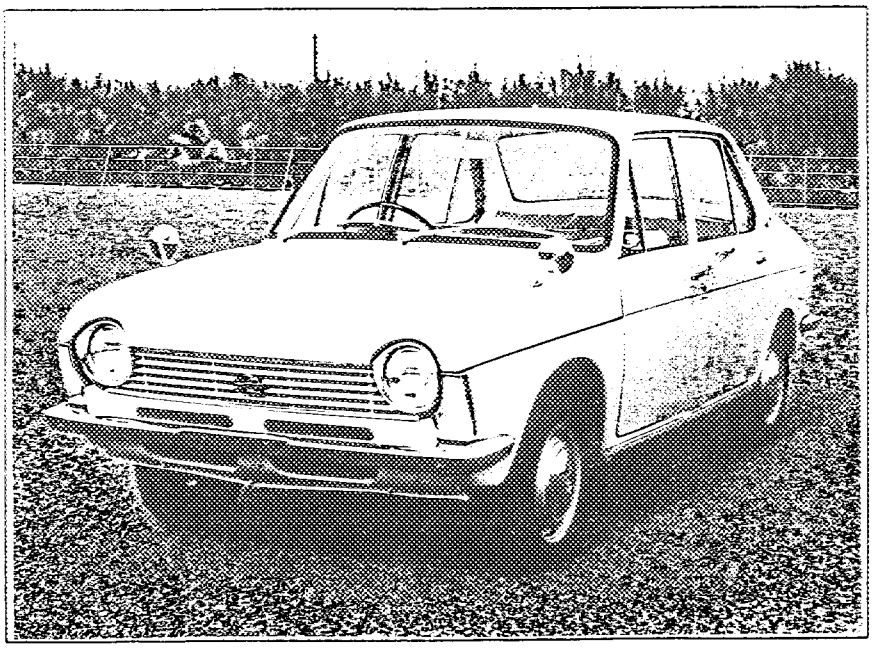
Manufacturer FUJI HEAVY INDUSTRIES LTD.

Manufacturer FUJI HEAVY INDUSTRIES LTD.

List 15/1

The manufacturing of the model described in this recognition form was started on May. 1966 and the minimum production of 1000 identical cars, in accordance with the specifications of this form was reached on Jul. 1966.

Photograph A, 3/4 view of car from front



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

Variants

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	

Normal evolution of the type

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

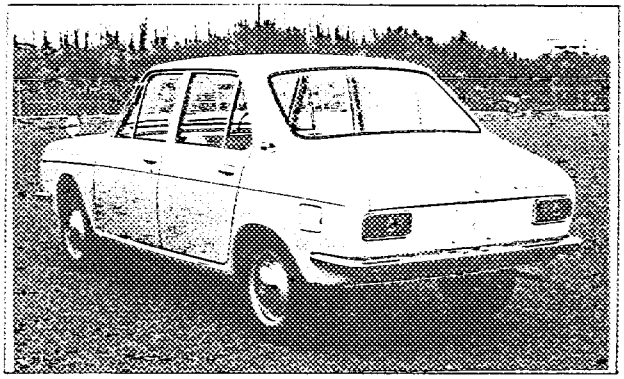
Stamp and signature of the National Sporting Authority

Stamp and signature of the

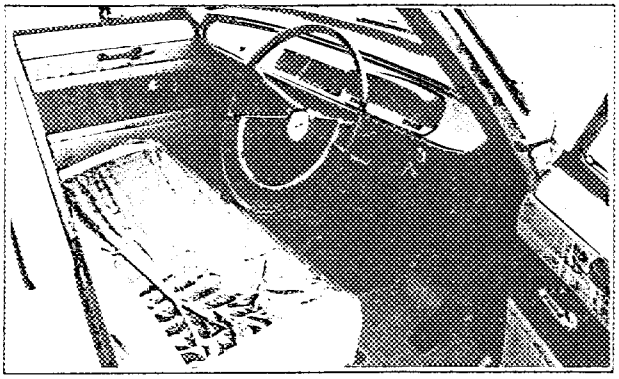
Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F. I. A. Rec. No.

Photograph

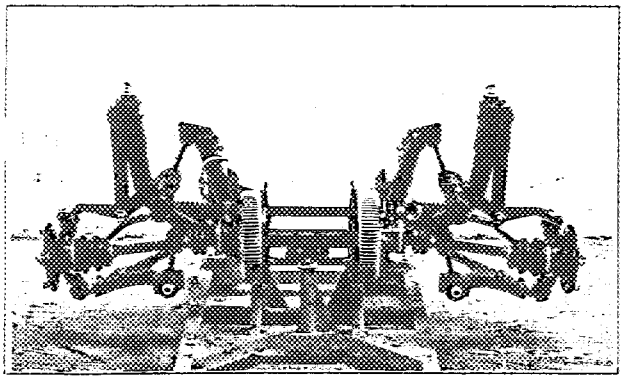
B, 3/4 view of car from rear



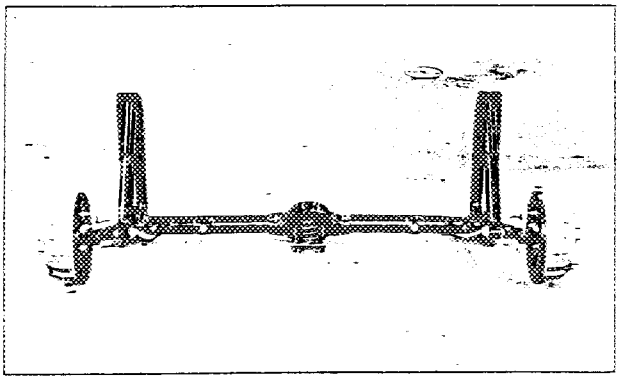
C, interior view of car through driver's door (open or removed)



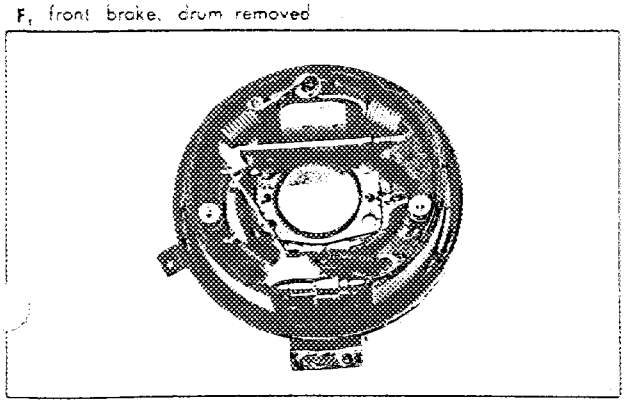
D, front axle complete, removed from car. Without wheels.



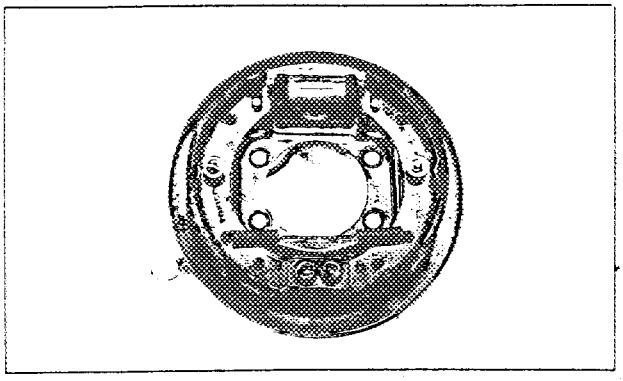
E, Rear axle complete without wheels, removed from car.



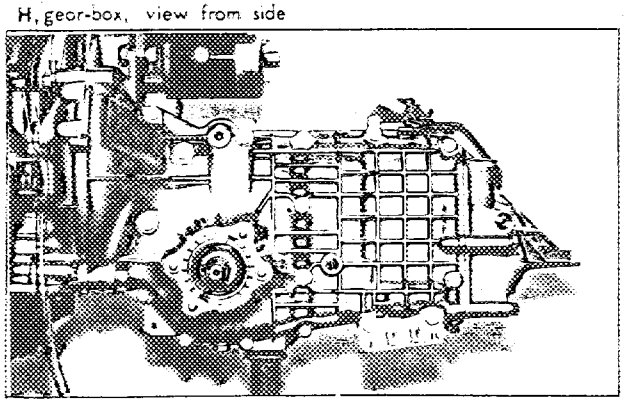
F, front brake, drum removed



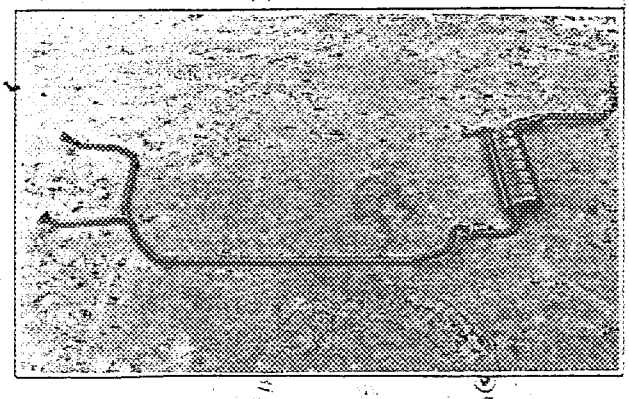
G, rear brake, drum removed



H, gear-box, view from side



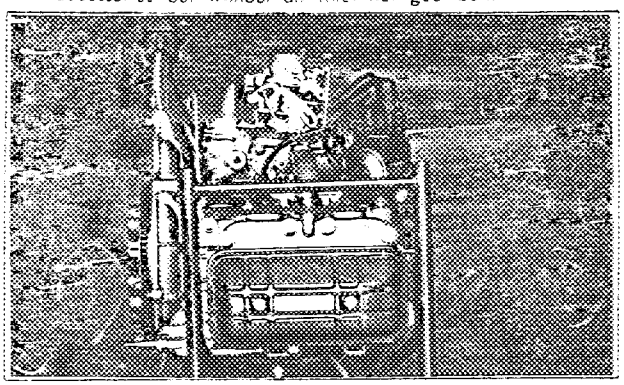
I, silencer + exhaust pipes after exhaust manifold.



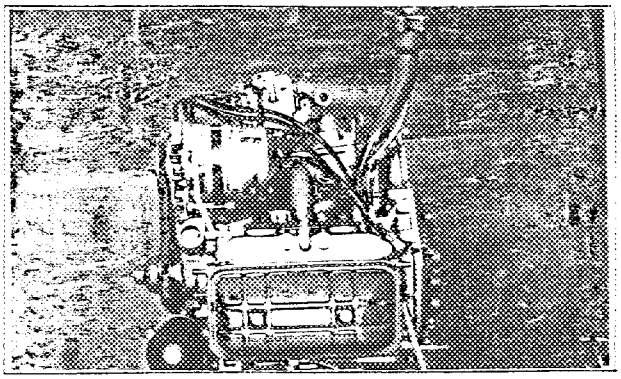
Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) A. Rec. No.

Photograph

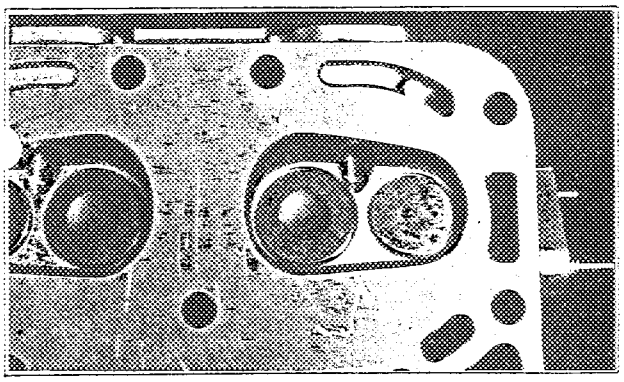
J. engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.



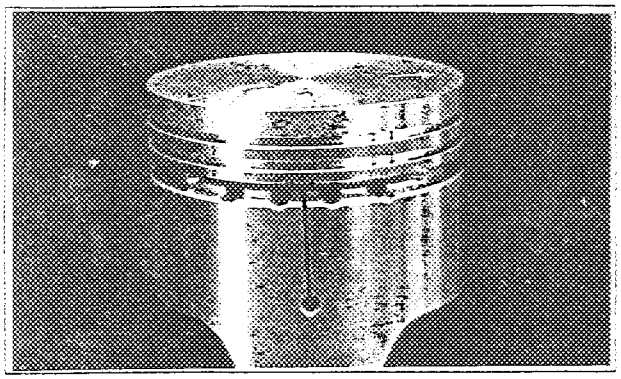
K. Engine unit out of car, from left. With clutch and accessories but without gear-box nor air filter.



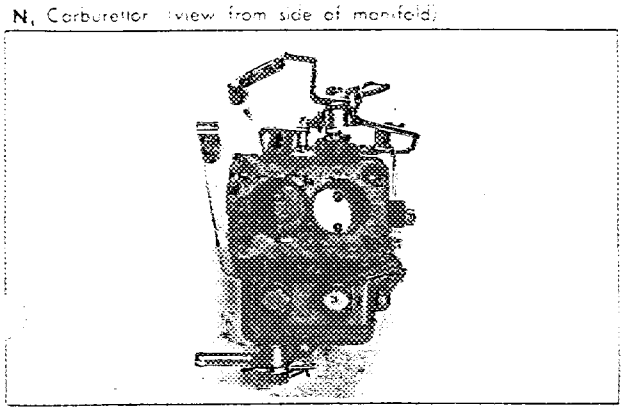
L. combustion chamber



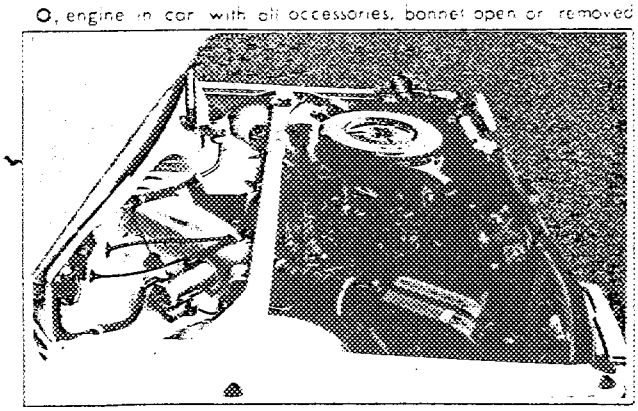
M. piston crown



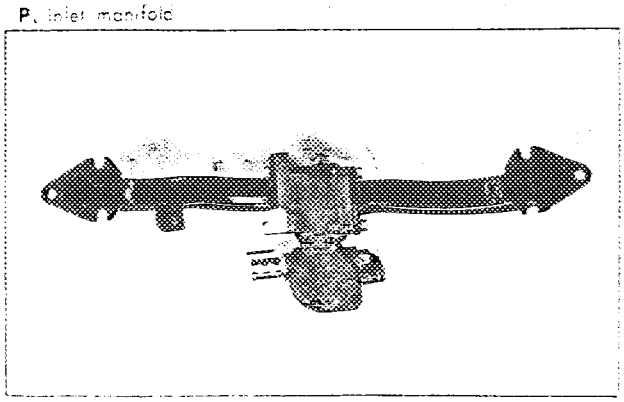
N. Carburettor (view from side of manifold)



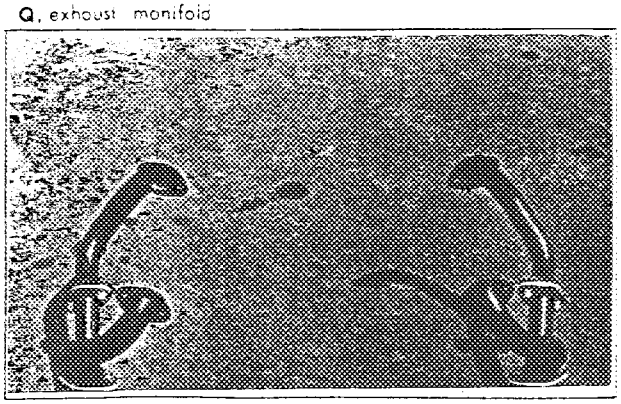
O. engine in car with all accessories, bonnet open or removed



P. inlet manifold



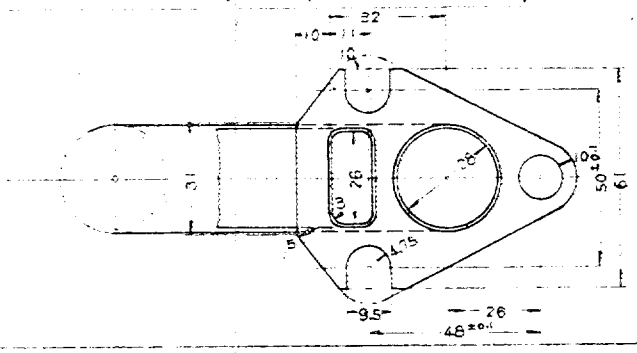
Q. exhaust manifold



Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000)

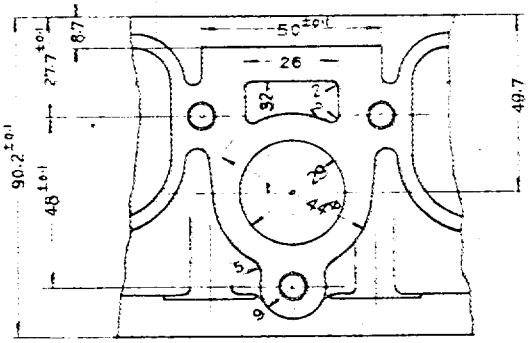
F.I.A. Rec No

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



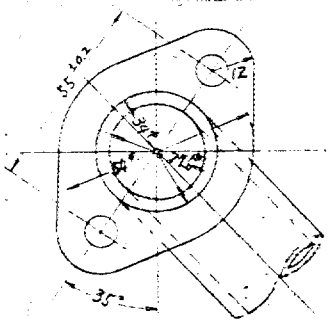
SCALE 1/2

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



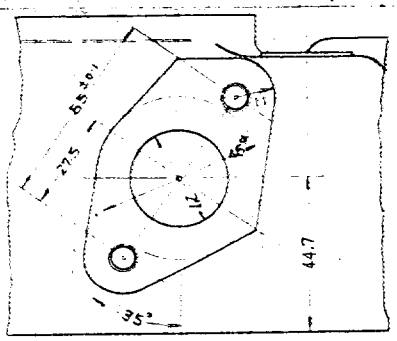
SCALE 1/2

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

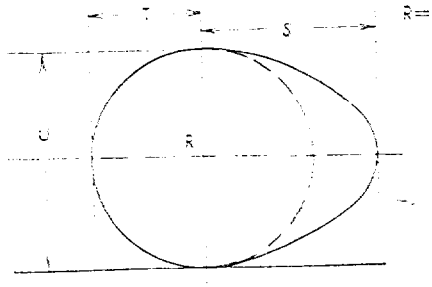


SCALE 1/2

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



SCALE 1/2



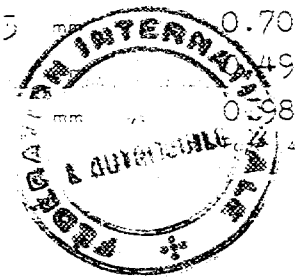
R = centre of camshaft.

Inlet cam

S =	17.893	mm	0.70	inches
T =	12.5	mm	0.49	inches
U =	25	mm	0.98	inches

Exhaust cam

S =	17.893	mm	0.70	inches
T =	12.5	mm	0.49	inches
U =	25	mm	0.98	inches



Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) 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 coversion table hereafter.

CAPACITIES AND DIMENSIONS

1. Wheelbase	2400	mm	94.5	inches	
2. Front track	1225	mm	48.2	inches	*
3. Rear track	1210	mm	47.7	inches	*
4. Overall length of the car	390.0	cm		inches	
5. Overall width of the car	148.0	cm		inches	
6. Overall height of the car	139.0	cm		inches	
7. Capacity of fuel tank (reserve included)	9.5	Gallon US	36	ltrs	
				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:	655	kg	1444	lbs	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 wihch 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^2	1 gallon US	— 3.785 ltrs
1 pound / livre (lb)	— 453.593 gr.	1 hundred weight (cwt)	— 50.802 kg

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) 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 Material (s) 4, 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 Glass.
29. Material (s) of front-door windows Glass.
30. Material (s) of rear-door windows Glass.
31. Sliding system of door windows Vertical, manual.
2. Material (s) of rear-quarter light ———

ACCESSORIES AND UPHOLSTERY

38. Interior heating : yes - ~~no~~ 39. Air-conditioning : ~~yes~~ - no
40. Ventilation : yes - ~~no~~
41. Front seats, type of seats and upholstery Bench, Vinyl leather.
42. Weight of front seat (s), complete with supports and rails, out of the car :

19.4 kg lbs

43. Rear seats, type of seats and upholstery Bench, Vinyl leather.
44. Front bumper, material (s) Steel. Weight 2.9 kg lbs
45. Rear bumper, material (s) Steel. Weight 3.0 kg lbs

WHEELS

50. Type Pressed steel.
51. Weight (per wheel, without tyre) 4.7 kg lbs
52. Method of attachment 4 Bolt and Nut.
53. Rim diameter 330.2 mm 13 inches
54. Rim width 102 mm 4 inches

STEERING

60. Type Rack and pinion.
61. Servo-assistance : ~~yes~~ - no
62. Number of turns of steering wheel from lock to lock 3.3
63. In case of servo-assistance ———

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F. I. A. Rec. No.

SUSPENSION

70. Front suspension (photogr. D), type — Double Wishbone.
71. Type of spring — Torsion bar.
72. Stabiliser (if fitted)
73. Number of shockabsorbers 2 — 74. Type Hydraulic, Telescopic.
78. Rear suspension (photogr. E), type — Single Trailing arm.
79. Type of spring — Torsion bar and Coil spring.
80. Stabiliser (if fitted)
81. Number of shockabsorbers 2 — 82. Type Hydraulic, Telescopic.

BRAKES (photographs F and G)

90. Method of operation — Drum, Hydraulic.
91. Servo-assistance (if fitted), type
92. Number of hydraulic master cylinders — 1

	FRONT		REAR	
93. Number of cylinders per wheel	1		1	
94. Bore of wheel cylinder (s)	23.81 mm	in.	15.88 mm	in.
Drum brakes				
95. Inside diameter	203.2 mm	in.	180 mm	in.
96. Length of brake linings	195 mm	in.	141 mm	in.
97. Width of brake linings	45 mm	in.	35 mm	in.
98. Number of shoes per brake	2		2	
99. Total area per brake	17550 mm²	sq. in.	9870 mm²	sq. in.
Disc brakes				
100. Outside diameter	mm	in.	mm	in.
101. Thickness of disc	mm	in.	mm	in.
102. Length of brake linings	mm	in.	mm	in.
103. Width of brake linings	mm	in.	mm	in.
104. Number of pads per brake				
105. Total area per brake	mm²	sq. in.	mm²	sq. in.

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F.I.A. Rec. No.

ENGINE (photographs J and K)

130. Cycle 4 131. Number of cylinders 4

132. Cylinder arrangement Horizontally opposed.

133. Bore 72 mm 2.83 in. 134. Stroke 60 mm 2.36 in.

135. Capacity per cylinder 244.28 cm³ 14.9 cu. in.

136. Total cylinder-capacity 977 cm³ 59.6 cu. in.

137. Material (s) of cylinder block Aluminium alloy.

138. Material (s) of sleeves (if fitted) Cast iron.

139. Cylinder-head, material (s) Aluminium alloy. Number fitted 2

140. Number of inlet ports 1 per cylinder. 141. Number of exhaust ports 1 per cylinder.

142. Compression ratio 9.0 : 1

143. Volume of one combustion chamber 24 cm³ cu. in.

144. Piston, material Aluminium alloy casting (AC8A) 145. Number of rings 3 (Compression 2, Oil 1)

146. Distance from gudgeon pin centre line to highest point of piston crown

32.5 mm inches

147. Crankshaft : ~~machined~~ / stamped 148. Type of crankshaft : integral / ———

149. Number of crankshaft main bearings 3

150. Material of bearing cap

151. System of lubrication : ~~dry sump~~ / oil in sump

152. Capacity, lubricant 2.7 ltrs (Oil pan) pts quarts US

153. Oil cooler : ~~yes~~ / no 154. Method of engine cooling Water cooled.

155. Capacity of cooling system 6 ltrs pints quarts US

156. Cooling fan (if fitted), dia. cm inches

157. Number of blades of cooling fan

Bearings

158. Crankshaft main, type Plane metals. Dia. 50 mm in.

159. Connecting rod big end, Plane metals. Dia. 45 mm in.

Weights

160. Flywheel (clean) 6.1 kg lbs

161. Flywheel with clutch (all turning parts) 9.8 kg lbs

162. Crankshaft 6.55 kg (with crank-gear) lbs 163. Connecting rod 0.35 kg lbs

164. Piston with rings and pin 0.3 kg lbs

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F.I.A. Rec. No

FOUR STROKE ENGINES

170. Number of camshafts 1 171. Location Crank case.

172. Type of camshaft drive Gear drive.

173. Type of valve operation Pushrods and rockers.

INLET (see page 4) *

180. Material(s) of inlet manifold Carbon steel.

181. Diameter of valves 32 mm 1.26 inches

182. Max. valve lift 7 mm 0.28 in. 183. Number of valve springs 1

184. Type of spring Coil springs. 185. Number of valves per cylinder 2

186. Tappet clearance for checking timing (cold) 0.22±0.02 mm inches

187. Valves open at (with tolerance for tappet clearance indicated) 20° (B.T.D.C.)

188. Valves close at (with tolerance for tappet clearance indicated) 60° (A.B.D.C.)

189. Air filter, type Filter paper.

EXHAUST (see page 4)

195. Material (s) of exhaust manifold

196. Diameter of valves 27.6 mm 1.09 inches

197. Max. valve lift 7 mm 0.28 in. 198. Number of valve springs 1

199. Type of spring Coil spring. 200. Number of valves per cylinder 2

201. Tappet clearance for checking timing (cold) 0.27±0.02 mm inches

202. Valves open at (with tolerance for tappet clearance indicated) 60° (B.T.D.C.)

203. Valves close at (with tolerance for tappet clearance indicated) 20° (A.B.D.C.)

CARBURETTION (photograph N)

210. Number of carburettors fitted 1 211. Type Zenith-Stromberg, down draft.

212. Make Hitachi Ltd. 213. Model DCG 286-100

214. Number of mixture passages per carburettor 2

215. Flange bold diameter of exit port(s) of carburetteor Pri.26 (Secon.28) mm in.

216. Minimum diameter of venturi ~~minimum diam. with piston at maximum height~~

Pri.Big 19/Small 8mm
(Secon.Big 25/Small 8) 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

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

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F.I.A. Rec. No.

ENGINE ACCESSORIES

230. Fuel pump ~~mechanical or~~ electric — 231. No. fitted 1

232. Type of ignition system Battery and ignition coil. — 233. No. of distributors 1

234. No. of ignition coils 1 — 235. No. of spark plugs per cylinder 1

236. Generator, type: dynamo/alternator - number fitted 1 — 237. Method of drive V Belt.

238. Voltage of generator 12 volts — 239. Battery, number 1

240. location Left side of front wheel apron.

241. Voltage of battery 12 volts

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

250. Max. engine output 55 P.S (type of horsepower: JIS) at 6000 rpm

251. Maximum rpm 6000 output at that figure 55 P.S

252. Maximum torque 7.8 kg-m at 3200 rpm

253. Maximum speed of the car 130 km/hour miles / hour

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F.I.A. Rec. No.

DRIVE TRAIN

CLUTCH

260. Type of clutch Single dry disc friction clutch. 261. No of plates 2

262. Dia. of clutch plates cm inches

263. Dia. of linings, inside 12.5 cm in. outside 18.0 cm in.

264. Method of operating clutch Link and Cable.

GEAR BOX (photograph #)

270. Manual, type, make FUJI HEAVY INDUSTRIES LTD.

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

273. Location of gear-shift On Steering column.

274. Automatic, make type

275. No. of forward ratios 276. Location of gear-shift

277.	Manual Ratio	Manual No. teeth	Automatic Ratio	Automatic No. teeth	Alternative manual/automatic Ratio	Alternative manual/automatic No. teeth	Alternative manual/automatic Ratio	Alternative manual/automatic No. teeth
1	3.540	39/11						
2	2.235	38/17						
3	1.524	32/21						
4	1.038	27/26						
5								
6								
reverse	4.100	41/19/10						

278. Overdrive, type

279. Forward gears on which overdrive can be selected

280. Overdrive ratio

FINAL DRIVE

290. Type of final drive Hypoid gears.

291. Type of differential Straight Bevel, 2 pinion.

292. Type of limited slip differential (if fitted)

293. Final drive ratio 4.375

Number of teeth 35/8

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 2000) F.I.A. Rec. No.

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, 143, 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, 255, and photographs I, M and N.

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, 7, 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 equipement affecting preceeding information. This to be stated together with reference number.

FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE

Make FUJI HEAVY INDUSTRIES LTD. Model A522 (SUBARU 1000) F.I.A. Rec. No.

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.: ~~cyls~~ /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 :

JAPAN AUTOMOBILE FEDERATION

Chairman

of Technical Subcommission

Osamu Hirao

FEDERATION INTERNATIONALE DE L'AUTOMOBILE