



JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. 1594
Group 2

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer	Isuzu Motors Limited	Cylinder-capacity	1584 cm ³ 96.66 cu. in.
Serial No. of chassis	PR91-4209444	Model	Isuzu PR91 (Bellett1600GT)
Serial No. of engine	G161-358868	Manufacturer	Isuzu Motors Limited
Recognition is valid from	1/4/70	Manufacturer	Isuzu Motors Limited
		List	70/4

The manufacturing of the model described in this recognition form was started on July, 1969 and the minimum production of 1000 identical cars, in accordance with the specifications of this form was reached on December, 1969.

Photograph A. 3/4 view of car from front



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

Variants				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	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
Federation Internationale de l'Automobile



Make ISUZU

Model PR91

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

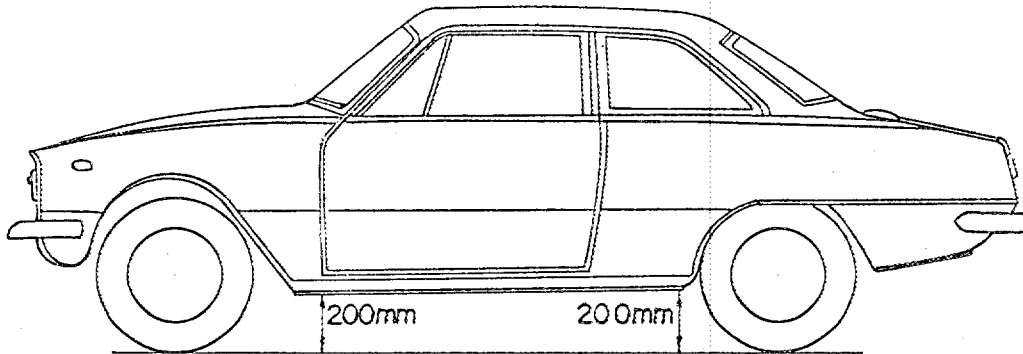
CAPACITIES AND DIMENSIONS

1. <u>Wheelbase</u>	2350 mm	92.5	inches
2. <u>Front track</u>	1260 mm	49.6	inches *
3. <u>Rear track</u>	1230 mm	48.5	inches *
4. Overall length of the car	401.5	cm	inches
5. Overall width of the car	149.5	cm	inches
6. Overall height of the car	133.5	cm	inches
7. <u>Capacity of fuel tank</u> (reserve included)		40	ltrs
	10.5	Gallon US	Gallon Imp.
8. Seating capacity	4		
9. <u>Weight</u> , total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools:	890 kg	1965 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.

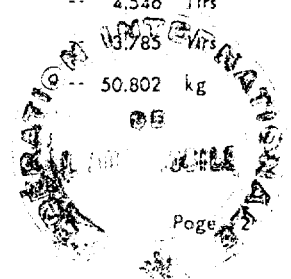
Specify ground clearance in relation to the track and give drawing of two fixed points of the vehicle's structure at which measurements are taken.

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 (lb)	-- 453.593 gr.	1 hundred weight (cwt)	-- 50.802 kg



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CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction : ~~SEPARATE~~ / unitary construction
21. Unitary construction, material (s) **Steel**
Separate construction
22. Separate Constructions: Material(s) of chassis
23. Material (s) of coachwork
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 **Glass**
29. Material (s) of front-door windows **Glass**
30. Material (s) of rear-door windows
31. Sliding system of door windows **Vertical, Manual**
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 seats and upholstery **Separate, Vinyl**
42. Weight of front seat (s), complete with supports and rails, out of the car :
12.5 kg x 2 lbs
43. Rear seats, type of seats and upholstery **Bench, Vinyl**
44. Front bumper, material (s) **Steel** Weight **6.0 kg lbs**
45. Rear bumper, material (s) **Steel** Weight **6.0 kg lbs**

WHEELS

50. Type **Pressed steel**
51. Weight (per wheel, without tyre) **6.0 kg lbs**
52. Method of attachment **4 nuts**
53. Rim diameter **330.2 mm 13.0 inches**
54. Rim width **114.3 mm 4.5 inches**

STEERING

60. Type **Rack and pinion**
61. Servo-assistance : ~~Yes~~ - no
62. Number of turns of steering wheel from lock to lock **2.9**
63. In case of servo-assistance



SUSPENSION

- 70. Front suspension (photogr. D), type Independent, Wishbone
- 71. Type of spring Coil
- 72. Stabiliser (if fitted) Torsion bar
- 73. Number of shockabsorbers 2
- 74. Type Hydraulic telescopic
- 78. Rear suspension (photogr. E), type Independent, Swing axle
- 79. Type of spring Coil and Transverse Leaf
- 80. Stabiliser (if fitted)
- 81. Number of shockabsorbers 2
- 82. Type Hydraulic telescopic

BRAKES (photographs F and G)

- 90. System Hydraulic
- 91. Servo-assistance (if fitted), type
- 92. Number of hydraulic master cylinders 2

	FRONT		REAR	
93. Number of cylinders per wheel	2		1	
94. Bore of wheel cylinder (s)	57.2 mm	in.	22.2 mm	in.
Drum brakes				
95. Inside diameter	mm	in.	203.2 mm	in.
96. Length of brake linings	mm	in.	195.0 mm	in.
97. Width of brake linings	mm	in.	37.1 mm	in.
98. Number of shoes per brake			2	
99. Total area per brake	mm ²	sq. in.	14,430 mm ²	sq. in.
Disc brakes				
100. Outside diameter	237 mm	in.	mm	in.
101. Thickness of disc	10 mm	in.	mm	in.
102. Length of brake linings	60 mm	in.	mm	in.
103. Width of brake linings	45 mm	in.	mm	in.
104. Number of pads per brake	2			
105. Total area per brake	5,400 mm ²	sq. in.	mm ²	sq. in.



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ENGINE (photographs J and K)

130. Cycle	4	131. Number of cylinders	4
132. Cylinder arrangement	In line		
133. <u>Bore</u>	82 mm	134. <u>Stroke</u>	75 mm
	3.228 in.		2.953 in.
135. <u>Capacity per cylinder</u>			396 cm ³
			24.17 cu. in.
136. <u>Total cylinder-capacity</u>			1584 cm ³
			96.66 cu. in.
137. Material (s) of cylinder block	Cast Iron		
138. Material (s) of sleeves (if fitted)			
139. Cylinder-head, material (s)	Aluminum		Number fitted 1
140. Number of inlet ports	4	141. Number of exhaust ports	4
142. Compression ratio	9.7		
143. Volume of one combustion chamber			41.5 cm ³
			cu. in.
144. Piston, material	Aluminum	145. Number of rings	3
146. Distance from gudgeon pin centre line to highest point of piston crown	37.2 mm		
			inches
147. Crankshaft : cast / stamped		148. Type of crankshaft : integral cast	
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	3.2 ltrs		pts
			quarts US
153. Oil cooler : yes / no		154. Method of engine cooling	Water
155. Capacity of cooling system	6 ltrs		quarts US
			pints
156. Cooling fan (if fitted), dia.	34 cm		inches
157. Number of blades of cooling fan	7		
Bearings			
158. Crankshaft main, type	Plain	Dia.	56 mm in.
159. Connecting rod big end, type	Plain	Dia.	49 mm in.
Weights			
160. Flywheel (clean)	6.0 kg		lbs
161. Flywheel with clutch (all turning parts)		11.5 kg	lbs
162. Crankshaft	15.5 kg	163. Connecting rod	0.68 kg lbs
164. Piston with rings and pin	0.53 kg		lbs



FOUR STROKE ENGINES

- 170. Number of camshafts **1** 171. Location **Cylinder head**
- 172. Type of camshaft drive **Chain**
- 173. Type of valve operation **Rocker arm**

INLET (see page 8) *

- 180. Material(s) of inlet manifold **Aluminum**
- 181. Diameter of valves **41 mm** **1.614 inches**
- 182. Max. valve lift **10.4 mm** in. 183. Number of valve springs **2**
- 184. Type of spring **Coil** 185. Number of valves per cylinder **1**
- 186. Tappet clearance for checking timing (cold) **0.10 mm** inches
- 187. Valves open at (with tolerance for tappet clearance indicated) **B.T.D.C. 31° ± 3°**
- 188. Valves close at (with tolerance for tappet clearance indicated) **A.B.D.C. 67° ± 3°**
- 189. Air filter, type **Dry**

EXHAUST (see page 8)

- 195. Material (s) of exhaust manifold **Cast Iron**
- 196. Diameter of valves **32 mm** **1.26 inches**
- 197. Max. valve lift **10.4 mm** **0.41 in.** 198. Number of valve springs **2**
- 199. Type of spring **Coil** 200. Number of valves per cylinder **1**
- 201. Tappet clearance for checking timing (cold) **0.15 mm** inches
- 202. Valves open at (with tolerance for tappet clearance indicated) **B.B.D.C. 59° ± 3°**
- 203. Valves close at (with tolerance for tappet clearance indicated) **A.T.D.C. 23° ± 3°**

CARBURETION (photograph N)

- 210. Number of carburetors fitted **2** 211. Type **Side draught (SU)**
- 212. Make **HITACHI** 213. Model **HJD 42W**
- 214. Number of mixture passages per carburetor **1**
- 215. Flange hole diameter of exit port(s) of carburetor **42 mm** in.
- 216. Minimum dimensions of mixture passage(s) with piston at max. height (example: SU) **34 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.

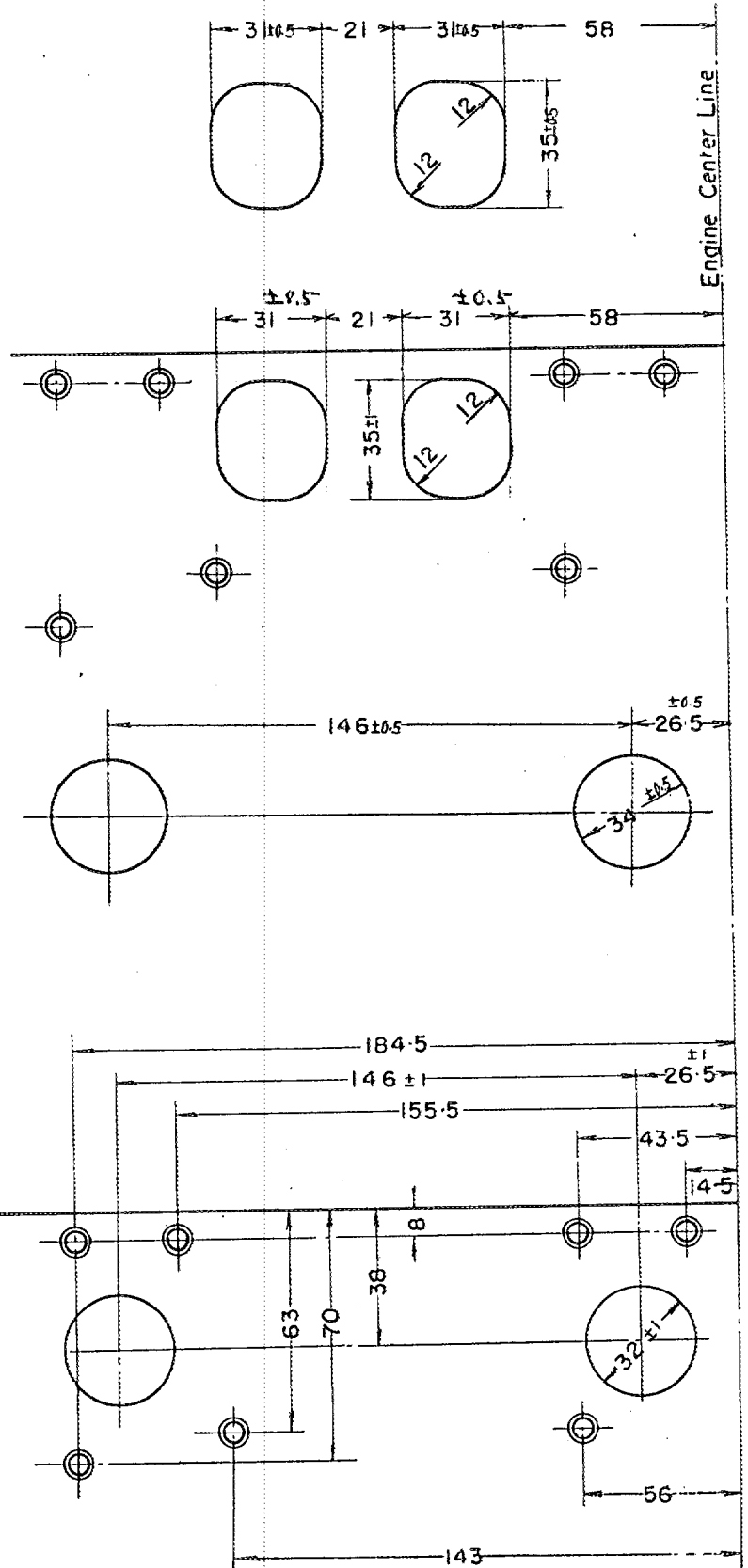


Drawing inlet manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.

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

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

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



Unit: mm

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DRIVE TRAIN

CLUTCH

- 260. Type of clutch **Dry plate** 261. No. of plates **1**
- 262. Dia. of clutch plates **20.3** cm inches
- 263. Dia. of linings, inside **14.6** cm in. outside **20.3** cm in.
- 264. Method of operating clutch **Mechanical**

GEAR BOX photograph H)

- 270. Manual type, make **ISUZU** Method of operation **Mechanical**
- 271. No. of gear-box ratios forward **4** 272. Synchronized forward ratios **1, 2, 3 & 4**
- 273. Location of gear-shift **Floor**
- 274. Automatic, make type
- 275. No. of forward ratios 276. Location of gear-shift

277.	Manual		Automatic		Ratio	Alternative manual		Automatic	
	Ratio	No. teeth	Ratio	No. teeth		No. teeth	Ratio	No. teeth	
1	3.207	$\frac{28}{19} \times \frac{37}{17}$			2.487	$\frac{27}{20} \times \frac{35}{19}$			
2	1.989	$\frac{28}{19} \times \frac{27}{20}$			1.671	$\frac{27}{20} \times \frac{26}{21}$			
3	1.356	$\frac{28}{19} \times \frac{23}{25}$			1.242	$\frac{27}{20} \times \frac{23}{25}$			
4	1.000				1.000				
5									
6									
reverse	3.592	$\frac{28}{19} \times \frac{39}{16}$			3.291	$\frac{27}{20} \times \frac{39}{16}$			

- 278. Overdrive, type
- 279. Forward gears on which overdrive can be selected
- 280. Overdrive ratio

FINAL DRIVE

- 290. Type of final drive **Hypoid gear**
- 291. Type of differential **Bevel gear**
- 292. Type of limited slip differential (if fitted)
- 293. Final drive ratio **3.727 , 4.100**
Number of teeth **41/11 , 41/10**

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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, 184, 186, 187, 188, 189, 199, 201, 202, 203, 212, 213, 215, 216, 222, 225, 230, 250, 251, 252, 253, and photographs I, M, N, and page 8

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.

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

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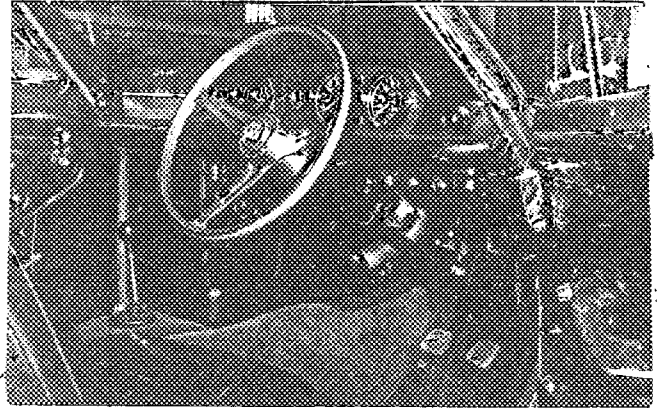
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Photograph

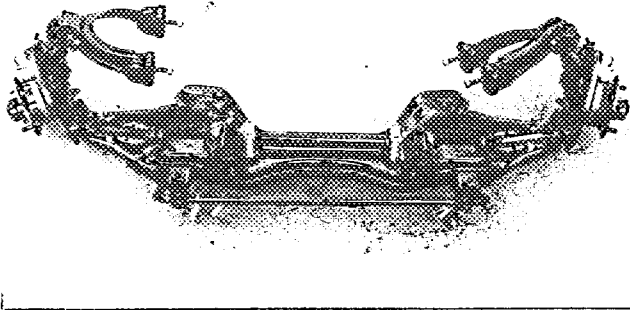
B, 3/4 view of car from rear



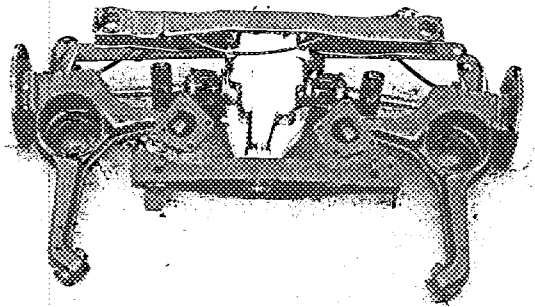
C, interior view of car through driver's door (open or removed) with dashboard



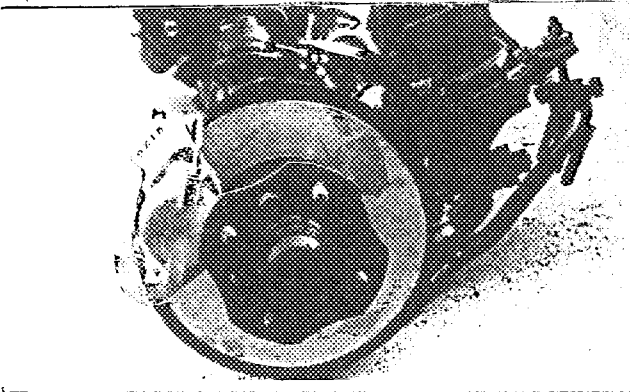
D, front axle complete, removed from car. Without wheels.



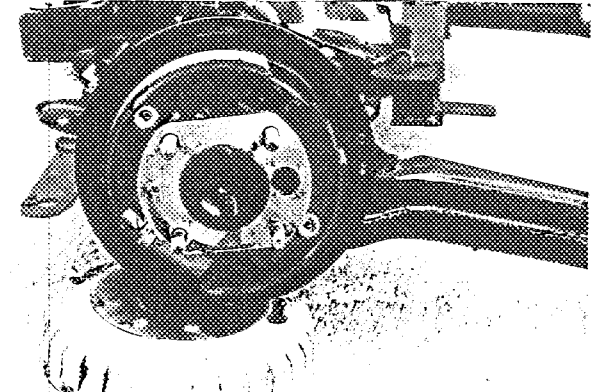
E, Rear axle complete without wheels, removed from car.



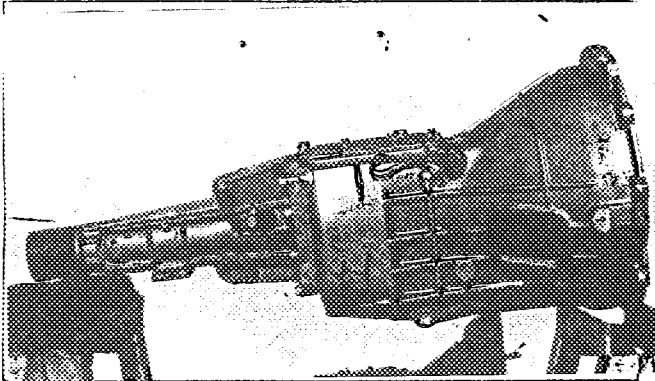
F, front brake, drum removed or disc with caliper(s)



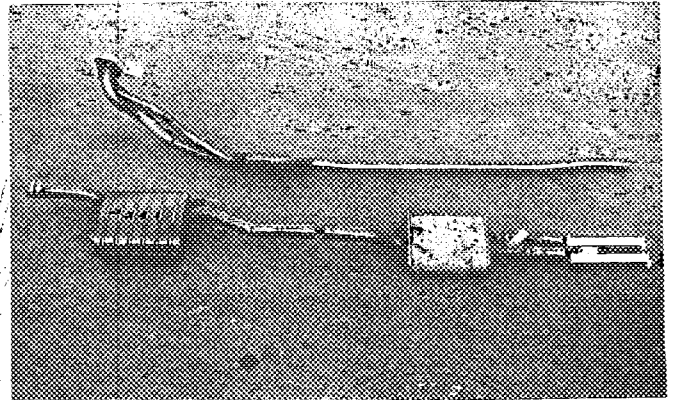
G, rear brake, drum removed or disc with caliper(s)



H, gear-box, view from side

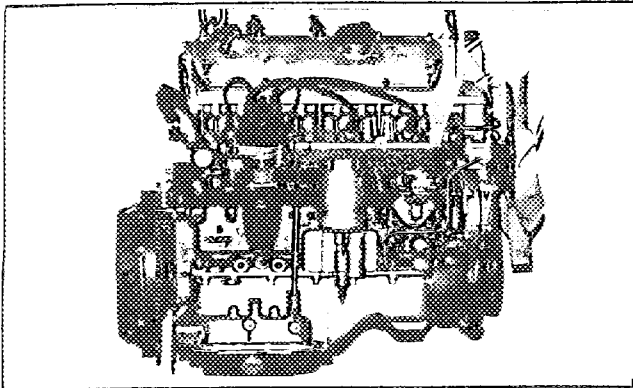


I, silencer + exhaust pipes after exhaust manifold.



Make ISUZU

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

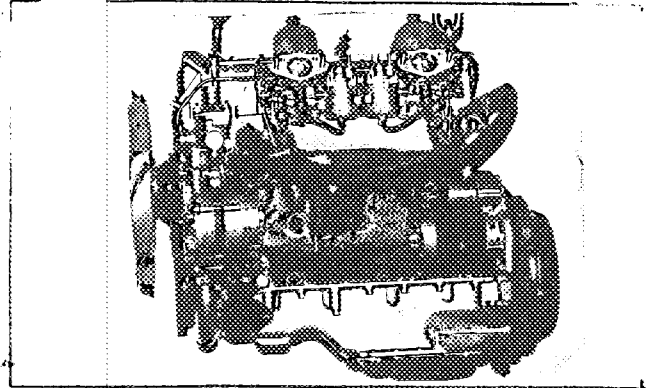


Photograph

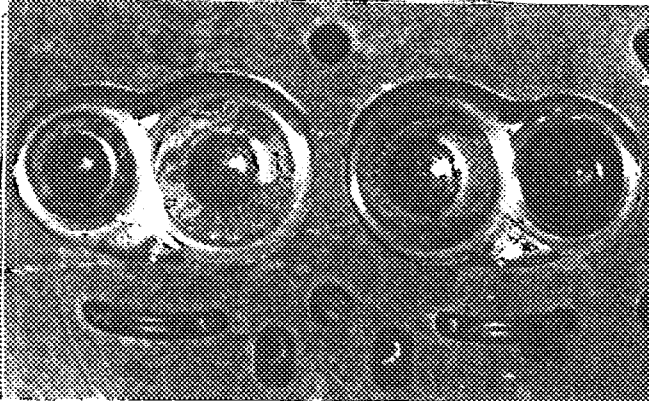
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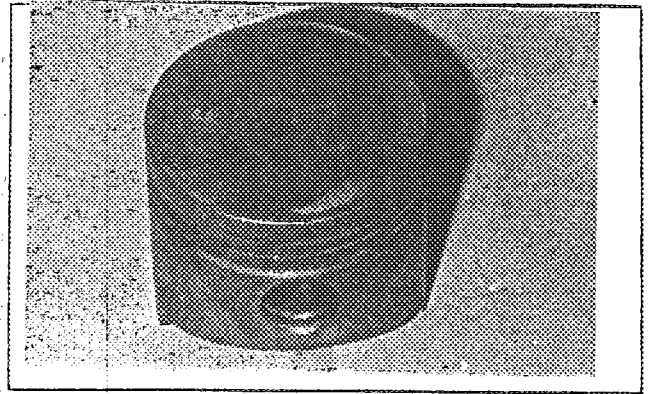
Engine unit out of car, from left. With clutch and accessories but without gear-box nor air filter.



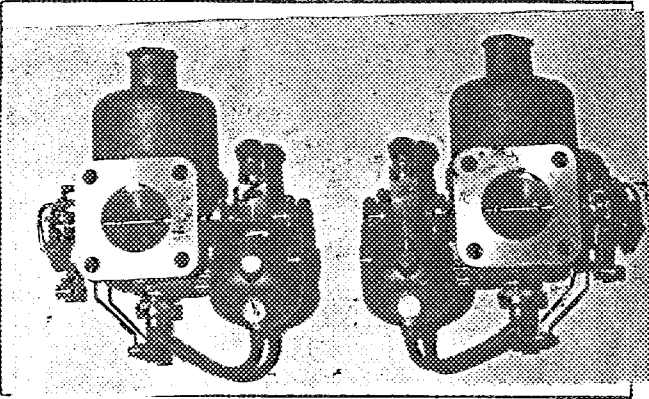
L, combustion chamber



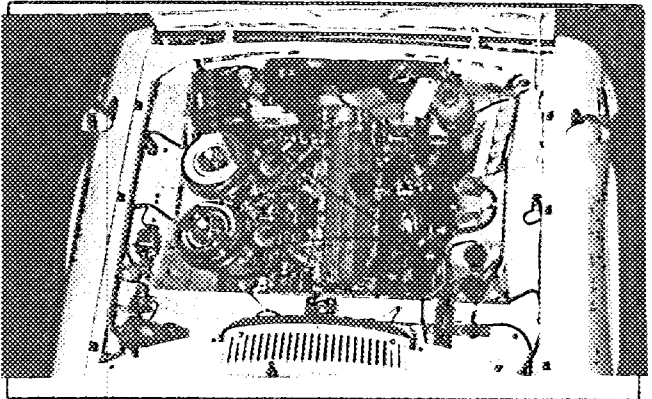
M, piston crown



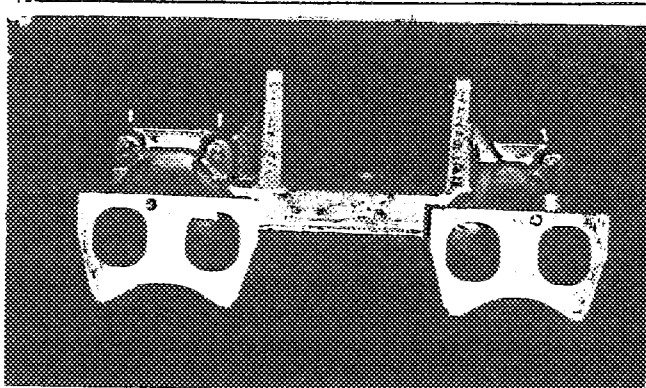
N, Carburettor (view from side of manifold)



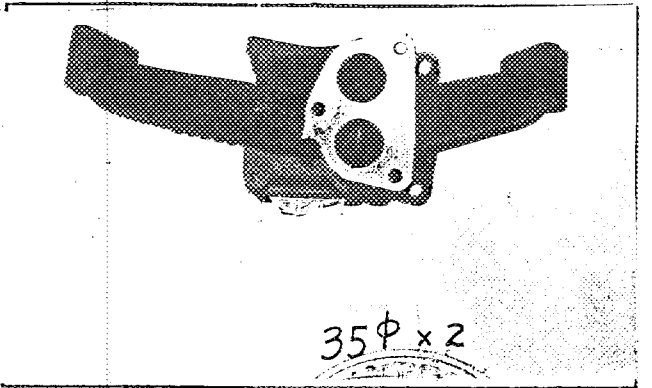
O, engine in car with all accessories, bonnet open or removed.



P, inlet manifold

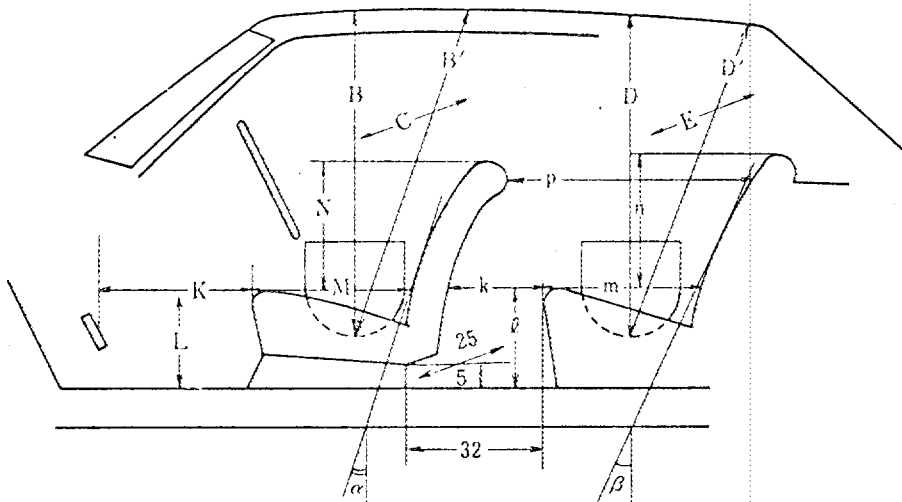


Q, exhaust manifold



DIMENSIONS OF INTERIOR
(Conform to Art. 253 b of Appendix J)

For four seaters:



Minimum Dimensions (cm)							
B	B'	α	C	D	D'	β	E
89	93	15°	123	87	86	10°	120

Minimum Dimensions (cm)										
L	ℓ	M	m	N	n	k+m	p	k	k+l+m	K+L+M
28	29	46	45	45	38	66.5	57	21.5	95.5	121
0.9L = 25.2		0.85M = 39.1		0.8N = 36		0.8(k+m) = 53.2		(15)	(95)	(120)

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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	mm ²	sq. in.
305. Exhaust ports, length measured around cylinder wall			mm	inches
306. Height exhaust port	mm	in. 307. Area	mm ²	sq. in.
308. Transfer port, length measured around cylinder wall			mm	inches
309. Height transfer port	mm	in. 310. Area	mm ²	sq. in.
311. Piston ports, length measured around piston			mm	inches
312. Height piston port	mm	in. 313. Area	mm ²	sq. in.
314. Method of precompression		315. Precompression cyl.:	yes / no	
316. Bore	mm	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. <u>Drawing of cylinder ports.</u>				

330. Supercharging—state full details hereafter :

JAPAN AUTOMOBILE FEDERATION

庭山博史

Hiroshi Niwayama