



# JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. *1592*  
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 <sup>3</sup> 96.66 cu. in
Serial No. of chassis	PA20-5040234	Model	Isuzu PA20SD ( Florian TS )
Serial No. of engine	G161-358874	Manufacturer	Isuzu Motors Limited
Recognition is valid from	<i>1/4/70</i>	Manufacturer	Isuzu Motors Limited
		List	<i>70/4</i> 1969

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

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

Stamp and signature of the  
National Sporting Authority

### 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 F. I. A.

Make ISUZU

Model PA20SD

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.

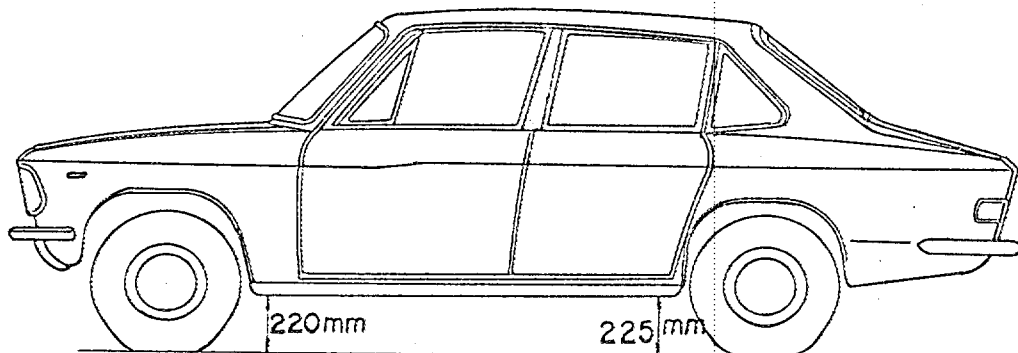
**CAPACITIES AND DIMENSIONS**

1. <u>Wheelbase</u>	2500	mm	98.43	inches
2. <u>Front track</u>	1320	mm	52.0	inches *
3. <u>Rear track</u>	1300	mm	51.18	inches *
4. Overall length of the car	424.0	cm		inches
5. Overall width of the car	160.0	cm		inches
6. Overall height of the car	144.5	cm		inches
7. <u>Capacity of fuel tank</u> (reserve included)			46	ltrs
	12.2	Gallon US		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:	900	kg	1985	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 <sup>2</sup>	1 gallon imp.	--	4.546 ltrs
1 cubic inch / pouce cube	--	16.387 cm <sup>3</sup>	1 gallon US	--	3.785 ltrs
1 pound / livre (lb)	--	453.593 gr.	1 hundred weight (cwt)	--	50.002 kg

Make ISUZU

Model PA20SD

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. Separate Constructions: Material(s) of chassis
23. Material (s) of coachwork
24. Number of doors **4** 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 **Glass**
31. Sliding system of door windows **Vertical, Manual**
32. Material (s) of rear-quarter light

**ACCESSORIES AND UPHOLSTERY**

38. Interior heating : ~~YES~~ - no
39. Air-conditioning : ~~YES~~ - no
40. Ventilation : yes - ~~YES~~
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 **7.0 kg** lbs
45. Rear bumper, material (s) **Steel** Weight **6.0 kg** lbs

**WHEELS**

50. Type **Pressed steel**
51. Weight (per wheel, without tyre) **6.3 kg** lbs
52. Method of attachment **4 nuts**
53. Rim diameter **354.8 mm** **14.0 inches**
54. Rim width **114.3 mm** **4.5 inches**

**STEERING**

60. Type **Recirculating ball**
61. Servo-assistance : ~~YES~~ - no
62. Number of turns of steering wheel from lock to lock **3.3**
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  | Rigid                         |
| 79. Type of spring                      | 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   | Vacuum    |
| 92. Number of hydraulic master cylinders | 2         |

	FRONT		REAR	
	2		1	
93. Number of cylinders per wheel				
94. Bore of wheel cylinder (s)	53.97 mm	in.	19.05 mm	in.
<b>Drum brakes</b>				
95. Inside diameter	mm	in.	228.6 mm	in.
96. Length of brake linings	mm	in.	232.0 mm	in.
97. Width of brake linings	mm	in.	40.0 mm	in.
98. Number of shoes per brake			2	
99. Total area per brake	mm <sup>2</sup>	sq. in.	18,560 mm <sup>2</sup>	sq. in.
<b>Disc brakes</b>				
100. Outside diameter	230 mm	in.	mm	in.
101. Thickness of disc	10 mm	in.	mm	in.
102. Length of brake linings	87 mm	in.	mm	in.
103. Width of brake linings	46 mm	in.	mm	in.
104. Number of pads per brake	2			
105. Total area per brake	8,000 mm <sup>2</sup>	sq. in.	mm <sup>2</sup>	sq. in.

Make ISUZU

Model PA20SD

F. I. A. Rec. No.

ENGINE (photographs J and K)

130. Cycle 4

131. Number of cylinders 4

132. Cylinder arrangement In line

133. Bore 82 mm 3.228 in. 134. Stroke 75 mm 2.953 in.

135. Capacity per cylinder 396 cm<sup>3</sup> 24.17 cu. in.

136. Total cylinder-capacity 1584 cm<sup>3</sup> 96.68 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<sup>3</sup> 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 : ~~xxxxx~~ / stamped 148. Type of crankshaft : integral ~~xxxx~~

149. Number of crankshaft main bearings 5

150. Material of bearing cap Cast Iron

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

152. Capacity, lubricant 3.6 ltrs pts quarts US

153. Oil cooler : ~~xxxx~~ / no

154. Method of engine cooling Water quarts US

155. Capacity of cooling system 6 ltrs 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, 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 lbs

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 0.41 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) 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 ISUZU

Model PA20SD

F.I.A. Rec. No.

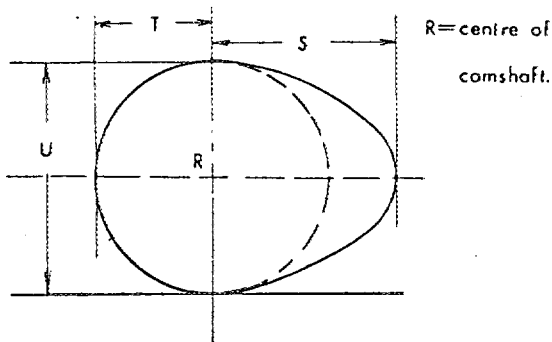
ENGINE ACCESSORIES

- 230. Fuel pump : mechanical ~~and electric~~
- 231. No. fitted 1
- 232. Type of ignition system **Make and break**
- 233. No. of distributors 1
- 234. No. of ignition coils 1
- 235. No. of spark plugs per cylinder 1
- 236. Generator, type: ~~dyno~~/alternator-number fitted 1
- 237. Method of drive **V belt**
- 238. Voltage of generator 12 volts
- 239. Battery, number 1
- 240. Location **Engine room**
- 241. Voltage of battery 12 volts

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

- 250. Max. engine output 103PS (type of horsepower: JIS ) at 5800 rpm
- 251. Maximum rpm 5800 output at that figure 103 PS
- 252. Maximum torque 13.6kg-m at 4200 rpm
- 253. Maximum speed of the car 165 km/hour miles / hour

255.



Inlet cam

S =	24.0	mm	0.945	inches
T =	16.0	mm	0.63	inches
U =	32.0	mm	1.26	inches

Exhaust cam

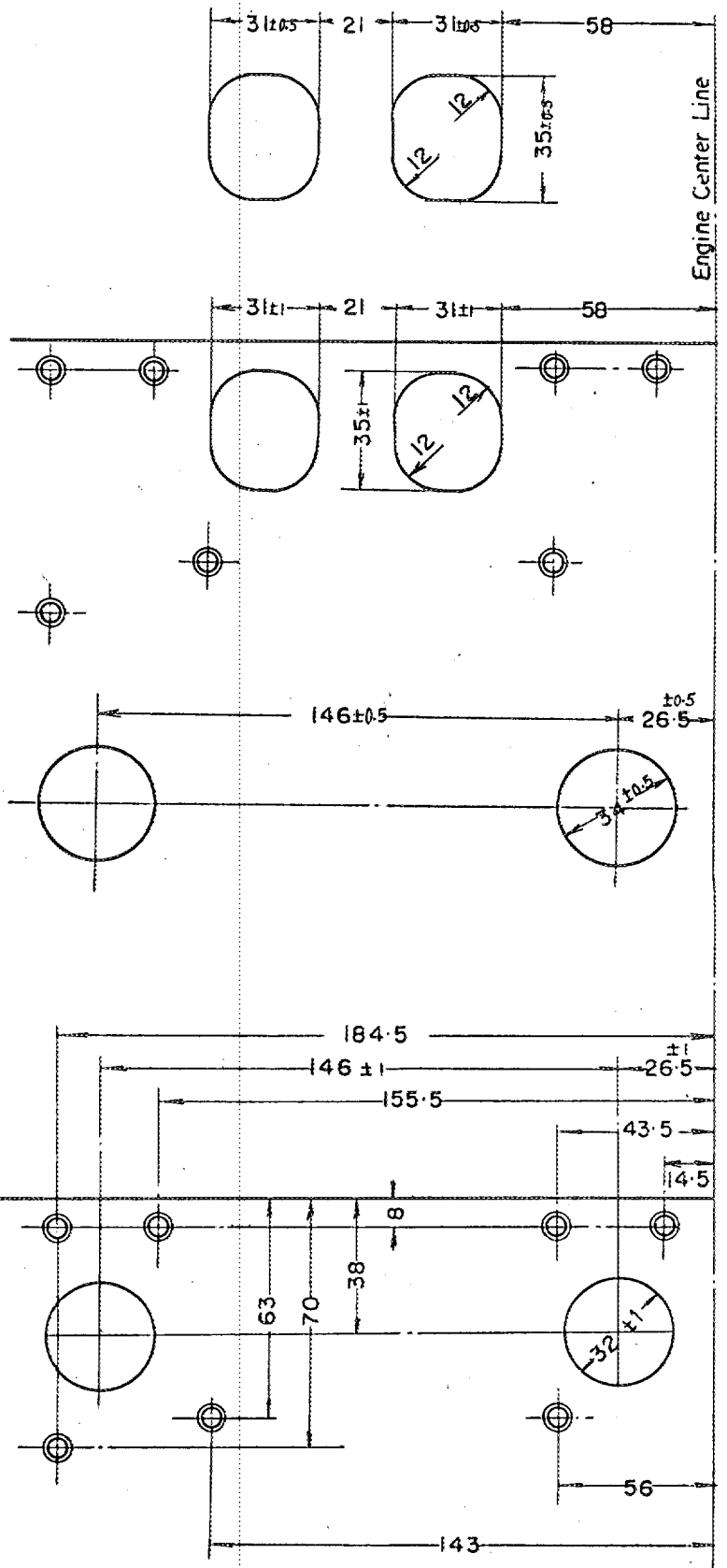
S =	24.0	mm	0.945	inches
T =	16.0	mm	0.63	inches
U =	32.0	mm	1.26	inches

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.





Make ISUZU

Model PA20SD

F. I. A. Rec. No.

**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 **Borg Warner** type **M 35**  
 275. No. of forward ratios **3** 276. Location of gear-shift **Column**

277.	Manual		Automatic		Ratio	Alternative manual/ <del>automatic</del>		Ratio	No. teeth
	Ratio	No. teeth	Ratio	No. teeth		No. teeth	No. teeth		
1	3.507	$\frac{29}{18} \times \frac{37}{17}$	2.393	$\frac{67}{28}$	3.507	$\frac{28}{19} \times \frac{37}{17}$			
2	2.175	$\frac{29}{18} \times \frac{27}{20}$	1.450	$\frac{67(28 + 32)}{28(32 + 67)}$	1.989	$\frac{28}{19} \times \frac{27}{20}$			
3	1.418	$\frac{29}{18} \times \frac{22}{25}$	1.000		1.356	$\frac{28}{19} \times \frac{23}{25}$			
4	1.000				1.000				
5									
6									
reverse	3.927	$\frac{29}{18} \times \frac{39}{16}$	2.093	$\frac{67}{32}$	3.592	$\frac{28}{19} \times \frac{29}{16}$			

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 or 4.100**  
 Number of teeth **41/11 or 41/10**



Make ISUZU

Model PA20SD

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, 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.

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



Make

ISUZU

Model

PA 20 SD

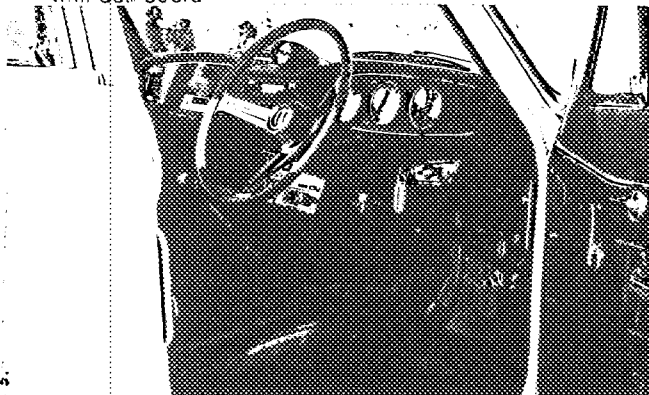
F. I. A. Rec. No.

Photograph

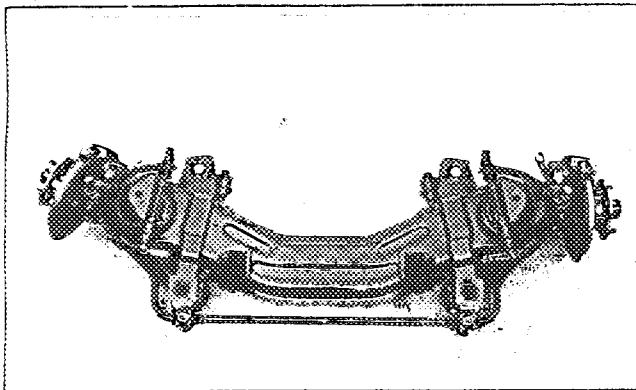
B, 3/4 view of car from rear



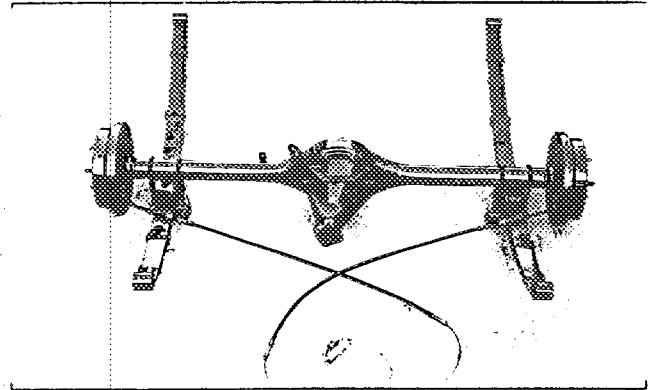
C, interior view of car through driver's door (open or removed) with dashboard



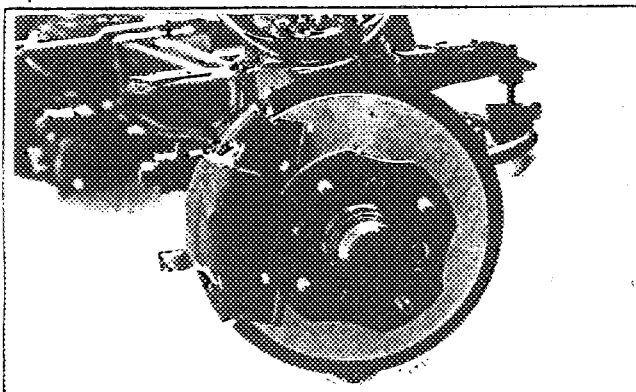
D, front axle complete, removed from car. Without wheels.



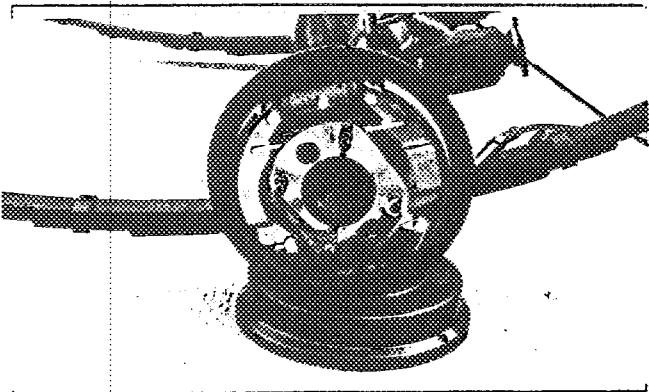
E, Rear axle complete without wheels, removed from car.



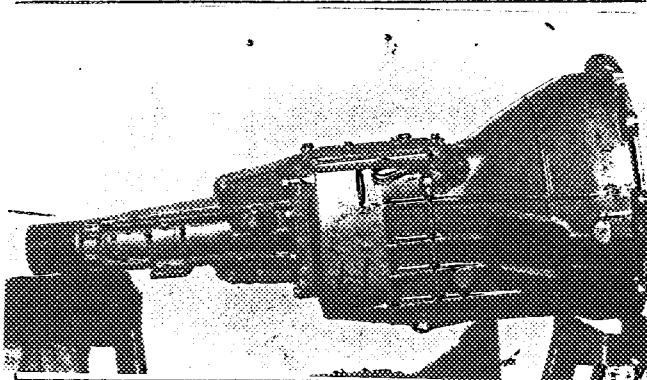
F, front brake. drum removed or disc with calipers



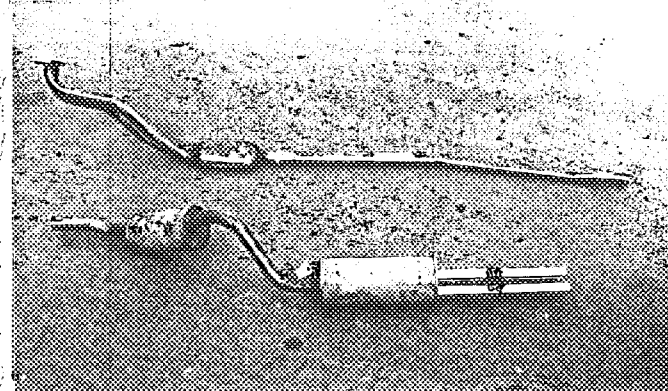
G, rear brake. drum removed or disc with calipers



H, gear-box, view from side



I, silencer + exhaust pipes after exhaust manifold.



FEDERAL BUREAU OF INVESTIGATION  
U. S. DEPARTMENT OF JUSTICE  
WASHINGTON, D. C. 20535  
PAGE 10016  
APR 19 1968

Make

ISUZU

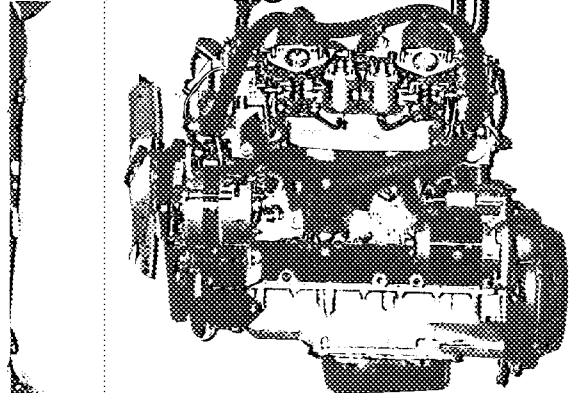
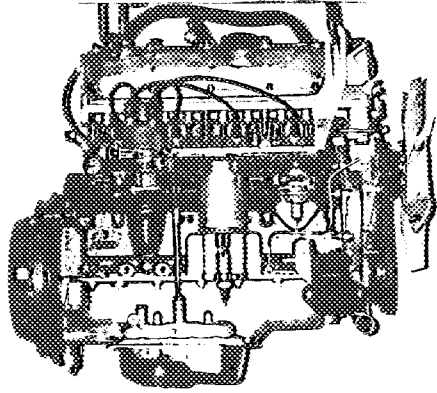
Photograph

Model PA20SD

F.I.A. Rec. No

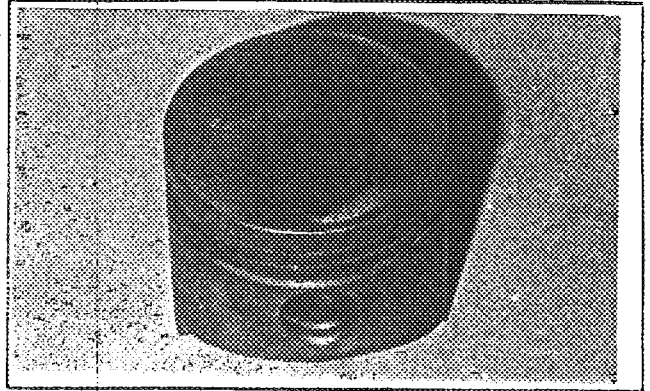
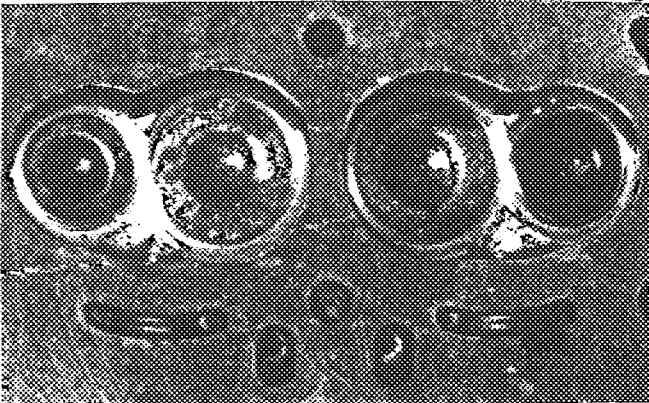
engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.

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



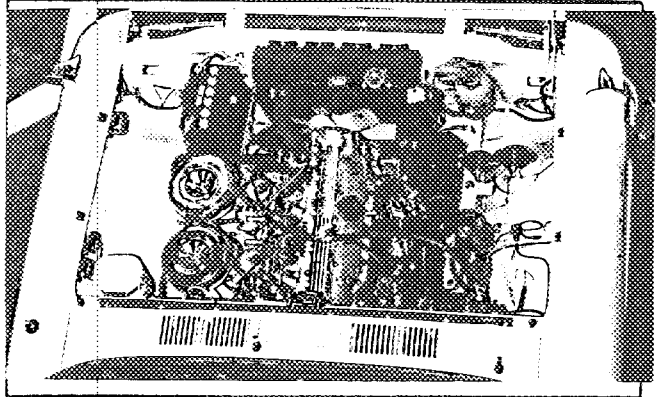
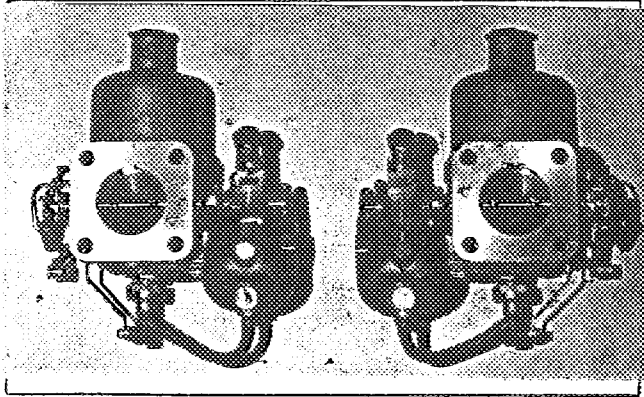
L, combustion chamber

M, piston crown



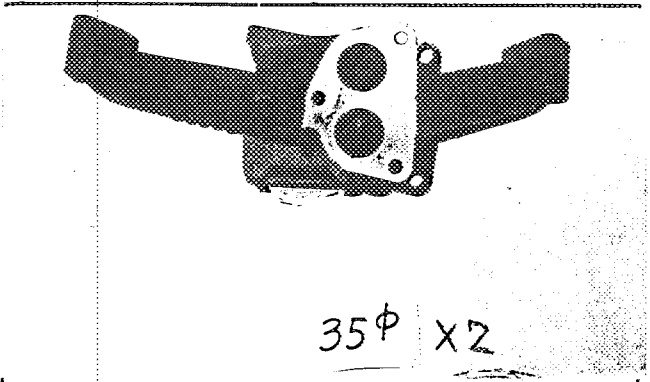
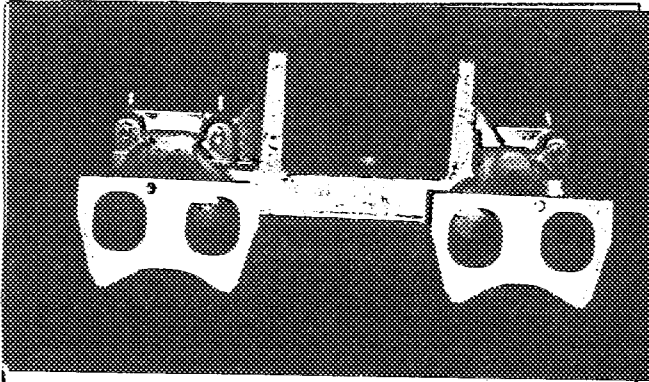
N, Carburettor (view from side of manifold)

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



P, inlet manifold

Q, exhaust manifold

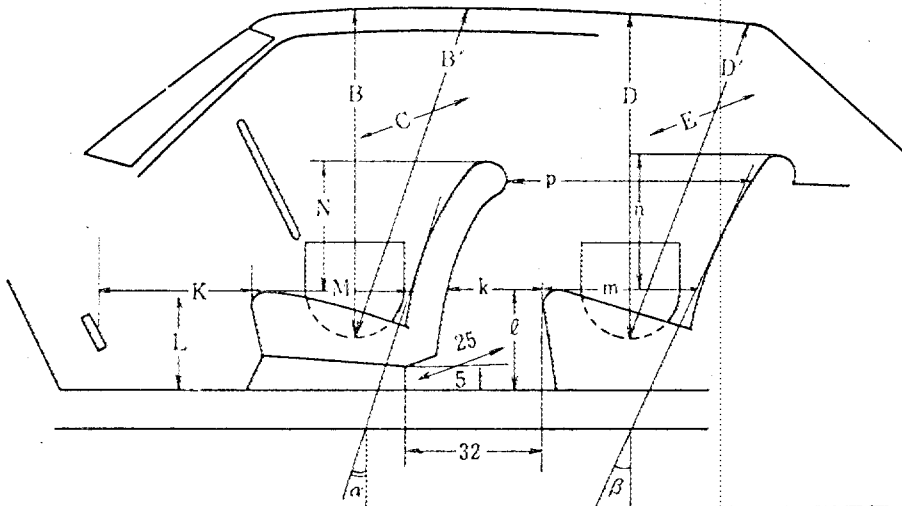


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DEPARTMENT OF JUSTICE  
Page 1200E

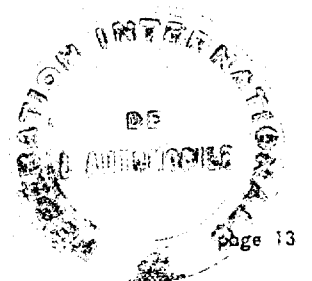
DIMENSIONS OF INTERIOR  
(Conform to Art. 253 b of Appendix J)

For four seaters :



Minimum Dimensions (cm)							
B	B'	$\alpha$	C	D	D'	$\beta$	E
98.5	103	15°	135	95	94.5	23°	134.5

Minimum Dimensions (cm)										
L	l	M	m	N	n	k+m	p	k	k+l+m	K+L+M
28	35	45	45.5	36.5	40.5	70	67.5	24.5	105	123
0.9L = 25.2		0.85M = 38.3		0.8N = 29.2		0.8(k+m) = 56		(15)	(95)	(120)



Make ISUZU

Model PA20SD

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 mm<sup>2</sup> sq. in.
305. Exhaust ports, length measured around cylinder wall mm inches
306. Height exhaust port mm in. 307. Area mm<sup>2</sup> sq. in.
308. Transfer port, length measured around cylinder wall mm inches
309. Height transfer port mm in. 310. Area mm<sup>2</sup> sq. in.
311. Piston ports, length measured around piston mm inches
312. Height piston port mm in. 313. Area mm<sup>2</sup> 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 :

JAPAN AUTOMOBILE FEDERATION

難波清治

Yasuharu Nanba

