



JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. **1483**

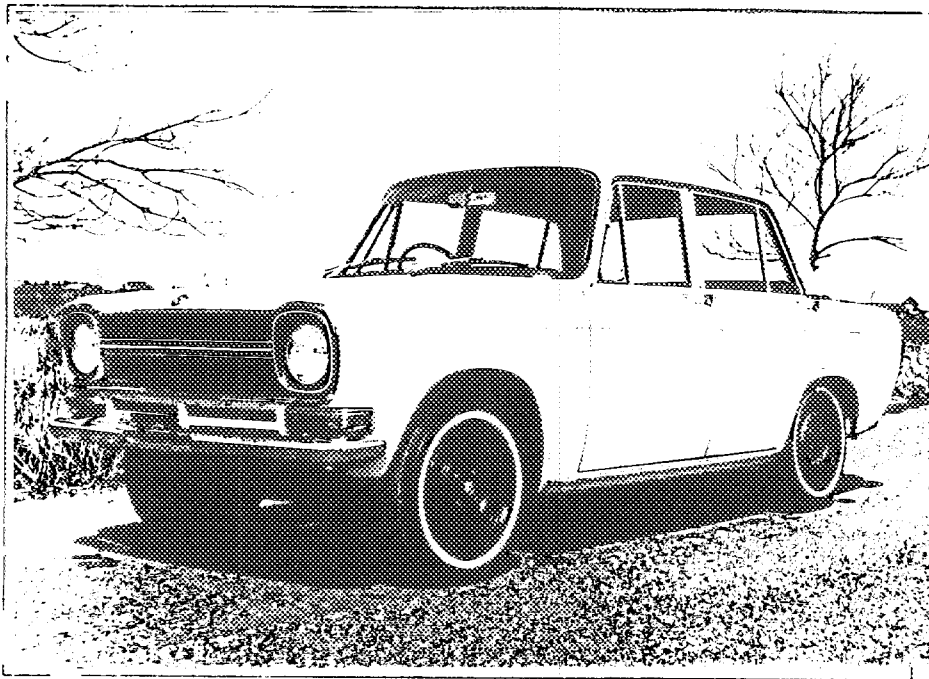
Group **2 Touring**

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer **Mitsubishi Heavy Industries, Ltd** Model **Mitsubishi A21ES (Sporty Deluxe)**
 Serial No. of chassis **A21 - 00001** Manufacturer **Mitsubishi Heavy Industries, Ltd.**
 engine **KE44 - 10001** Manufacturer **Mitsubishi Heavy Industries, Ltd.**
 Recognition is valid from **1st July 1967** list **164**
 The manufacturing of the model described in this recognition form was started on **SEPT 1966** and the minimum production of **1000** identical cars. in accordance with the specifications of this form was reached on **FEB 1967**

Photograph A. 3/4 view of car from front

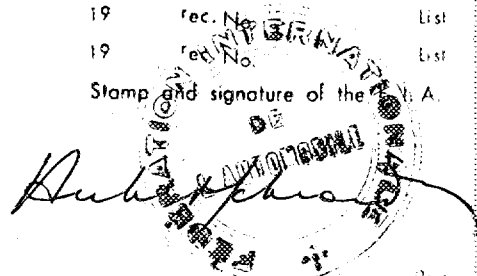


The vehicle described in this form has been subject to the following amendments :

| 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 F. I. A.



Make **Mitsubishi**

Model **A 2 1 E S**

F.I.A. Reg. No.

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

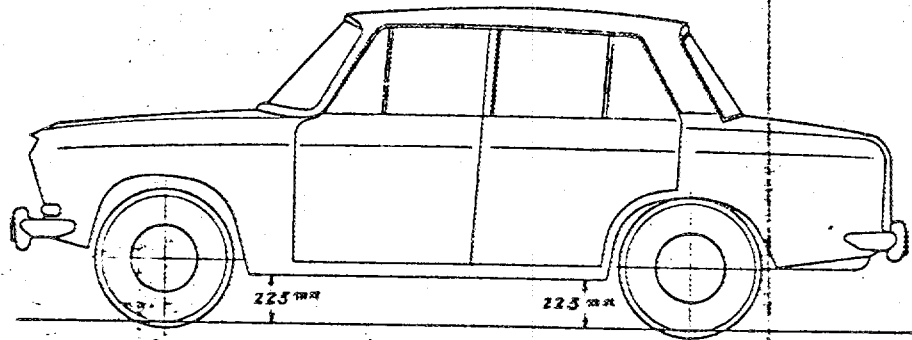
CAPACITIES AND DIMENSIONS

| | | | | |
|---|---------------------|-----------|-------|-------------|
| 1. <u>Wheelbase</u> | 2285 | mm | 89.96 | inches |
| 2. <u>Front track</u> | 1230 | mm | 48.43 | inches * |
| 3. <u>Rear track</u> | 1220 | mm | 48.03 | inches * |
| 4. Overall length of the car | | 391 | cm | inches |
| 5. Overall width of the car | | 149 | cm | inches |
| 6. Overall height of the car | | 142 | cm | inches |
| 7. <u>Capacity of fuel tank</u> (reserve included) | | | | 32 ltrs |
| | 8.45 | Gallon US | 7.04 | Gallon Imp. |
| 8. Seating capacity | 5 passengers | | | |
| 9. <u>Weight</u> , total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools: | | | | |
| | 805 | kg | 1775 | 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.

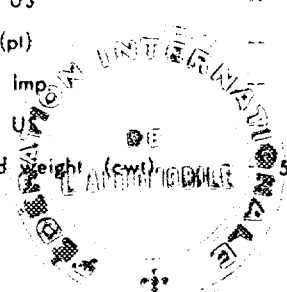
Specify ground clearance in relation to the track and give drawing of two fixed points of the vehicle's structure at which measurements are taken.

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 (pl) | -- | 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 U.S. | -- | 3.785 ltrs |
| 1 pound / livra (lb) | -- | 453.593 gr. | 1 hundred weight (cwt) | -- | 50.802 kg |



Make Mitsubishi

Model A21ES

F. I. A. Rec. No.

SUSPENSION

- 70. Front suspension (photogr. D), type Independent by Double Wishbone
- 71. Type of spring Coil spring
- 72. Stabiliser (if fitted) Torsion Bar
- 73. Number of shockabsorbers 2
- 74. Type Hydraulic Telescopic
- 78. Rear suspension (photogr. E), type Rigid Axle
- 79. Type of spring Semi-elliptical Leaf Spring
- 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 1

| | FRONT | | | REAR | | |
|-----------------------------------|---------------|-----------------|---------|-------|-----------------|---------|
| 93. Number of cylinders per wheel | 1 | | | 1 | | |
| 94. Bore of wheel cylinder (s) | mm | 7/8 in. | | mm | 11/16 in. | |
| Drum brakes | | | | | | |
| 95. Inside diameter | 228.6 | mm | in. | 228.6 | mm | in. |
| 96. Length of brake linings | Primary 215 | mm | in. | 215 | mm | in. |
| 97. Width of brake linings | Secondary 245 | mm | in. | 245 | mm | in. |
| | 35 | mm | | 35 | mm | |
| 98. Number of shoes per brake | 2 | | | 2 | | |
| 99. Total area per brake | 16100 | mm ² | sq. in. | 16100 | mm ² | 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 | | mm ² | sq. in. | | mm ² | sq. in. |



Make Mitsubishi

Model A21ES

F. I. A. Rec. No.

ENGINE (photographs J and K)

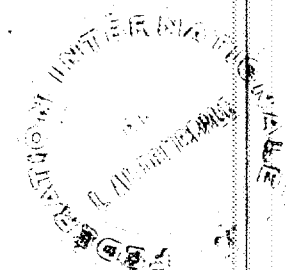
| | | | |
|---|--------------------------------------|-------------------------------|------------|
| 130. Cycle | 4 | 131. Number of cylinders | 4 |
| 132. Cylinder arrangement | In-Line | | |
| 133. Bore | 73 mm | 134. Stroke | 65 mm |
| 135. Capacity per cylinder | 272 | | 2.56 |
| 136. Totpl. cylinder-capacity | 1088 | | 16.6 |
| 137. Material (s) of cylinder block | Cast-Iron | | 66.4 |
| 138. Material (s) of sleeves (if fitted) | | | |
| 139. Cylinder-head, material (s) | Aluminium Alloy | Number fitted | 1 |
| 140. Number of inlet ports | 4 | 141. Number of exhaust ports | 4 |
| 142. Compression ratio | 8.5 | | |
| 143. Volume of one combustion chamber | | 36.3 cm ³ | 2.22 |
| 144. Piston, material | Aluminium Alloy | 145. Number of rings | 3 |
| 146. Distance from gudgeon pin centre line to highest point of piston crown | 35.5 mm | | |
| | | 1.40 | inches |
| 147. Crankshaft : roller / stamped | | 148. Type of crankshaft : | integral / |
| 149. Number of crankshaft main bearings | 3 | | |
| 150. Material of bearing cap | Cast Iron | | |
| 151. System of lubrication : dry sump / oil in sump | | | |
| 152. Capacity, lubricant | 3 ltrs | 5.3 pts | 3.2 |
| 153. Oil cooler : yes / no | | 154. Method of engine cooling | Water |
| 155. Capacity of cooling system | 2.8 ltrs (Without Radiator and Pipe) | 4.9 pints | 3.0 |
| 156. Cooling fan (if fitted), dia. | 30 cm | 1.2 | inches |
| 157. Number of blades of cooling fan | 4 | | |

Bearings

| | | | | | |
|------------------------------|---------------|------|-------|-------|-----|
| 158. Crankshaft main, type | Plain Bearing | Dia. | 64 mm | 2.520 | in. |
| 159. Connecting rod big end, | Plain Bearing | Dia. | 52 mm | 2.047 | in. |

Weights

| | | | |
|---|----------|-------|-----|
| 160. Flywheel (clean) | 6.77 kg | 14.93 | lbs |
| 161. Flywheel with clutch (all turning parts) | | 10.53 | kg |
| | | 23.21 | lbs |
| 162. Crankshaft | 10.7 kg | 23.59 | lbs |
| 163. Connecting rod | 0.521 kg | 1.15 | lbs |
| 164. Piston with rings and pin | 0.32 kg | 0.71 | lbs |



Make **Mitsubishi**

Model **A21ES**

F.I.A. Rec. No.

FOUR STROKE ENGINES

170. Number of camshafts **1** 171. Location **Cylinder Block**

172. Type of camshaft drive **Chain**

173. Type of valve operation **Pushrod and Rocker**

8
INLET (see page **8**) *

180. Material(s) of inlet manifold **Aluminium Alloy**

181. Diameter of valves **35** mm **1.38** inches

182. Max. valve lift **7.8+0.3** mm **0.312+0.012** in. 183. Number of valve springs **2**

184. Type of spring **Coil** 185. Numbr of valves per cylinder **1**

186. Tappet clearance for checking timing (cold) **0.05** mm **0.002** inches

187. Valves open at (with tolerance for tappet clearance indicated) **20 Deg, ± 2.5 BTDC**

188. Valves close at (with tolerance for tappet clearance indicated) **60 Deg, ± 2.5 ABDC**

189. Air filter, type **Dry**

8
EXHAUST (see page **8**)

195. Material (s) of exhaust manifold **Cast Iron**

196. Diameter of valves **28** mm **1.1** inches

197. Max. valve lift **7.8+ 0.3** mm **0.312+0.012** 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) **0.1** mm **0.004** inches

202. Valves open at (with tolerance for tappet clearance indicated) **60 Deg, ± 2.5 BBDC**

203. Valves close at (with tolerance for tappet clearance indicated) **20 Deg, ± 2.5 ATDC**

CARBURETION (photograph N)

210. Number of carburetors fitted **1**

211. Type **Down Draft Dual Venturi**

212. Make **AISAN KOGYO CO, LTD.**

213. Model **DW28**

214. Number of mixture passages per carburetor **2**

215. Flange hold diameter of exit port(s) of carburetor **28** mm **1.1** in.

216. Minimum dimensions of mixture passage (s): ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~ ~~XXXXXX~~

19.0 , 24.0 mm **0.748 , 0.945** 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 **Mitsubishi**

Model **A21ES**

F. I. A. Rec. No.

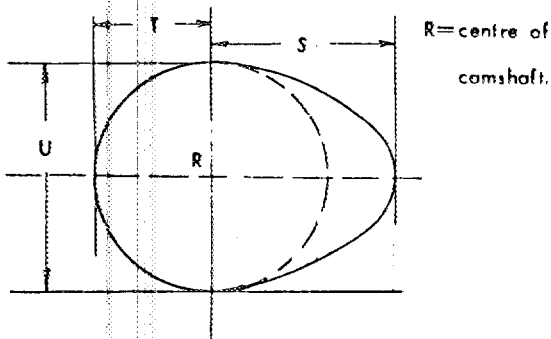
ENGINE ACCESSORIES

- 230. Fuel pump: mechanical ~~oil/x/x/x/x/x/x~~
- 231. No. fitted **1**
- 232. Type of ignition system **Battery**
- 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 **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 **58 PS** (type of horsepower: **JIS**) at **6000** rpm
- 251. Maximum rpm **6500** output at that figure **57 PS**
- 252. Maximum torque **8.2 kg-m** at **3800** rpm
- 253. Maximum speed of the car **135** km/hour **miles / hour**

255.

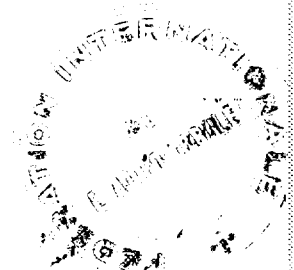


Inlet cam

| | | | | |
|-----|------|----|-------|--------|
| S = | 20.3 | mm | 0.799 | inches |
| T = | 15 | mm | 0.591 | inches |
| U = | 30 | mm | 1.181 | inches |

Exhaust cam

| | | | | |
|-----|------|----|-------|--------|
| S = | 20.3 | mm | 0.799 | inches |
| T = | 15 | mm | 0.591 | inches |
| U = | 30 | mm | 1.181 | inches |

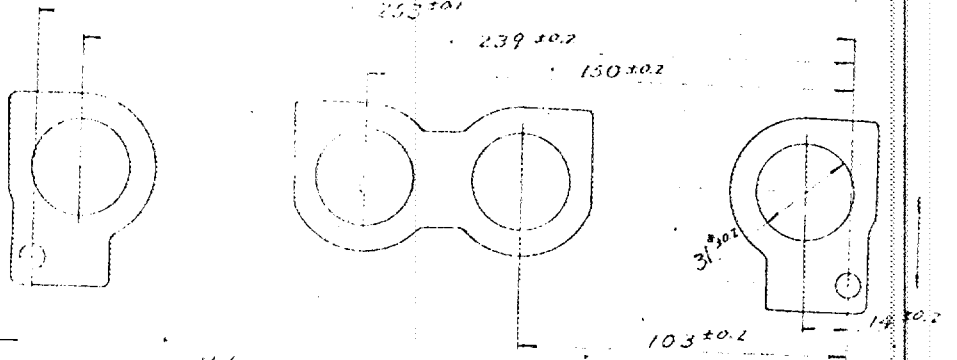


Make Mitsubishi

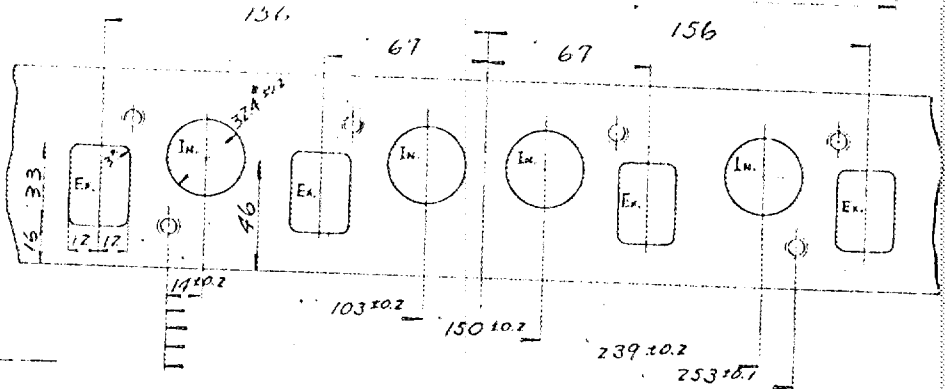
Model A21 ES

F.I.A. Rev. 11

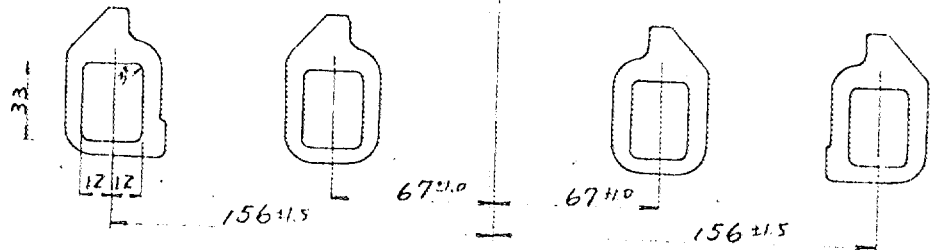
Drawing inlet manifold ports, side of cylinder head. Indicate scale or dimensions and manufacturing tolerance.



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 cylinder head. Indicate scale or dimensions and manufacturing tolerance.

Dimensions; mm



Make Mitsubishi

Model A21ES

F. I. A. Rec No.

DRIVE TRAIN

CLUTCH

- 260. Type of clutch **Dry Single Plate** 261. No. of plates **1**
- 262. Dia. of clutch plates **18.5** cm inches
- 263. Dia. of linings, inside **12.7** cm in. outside **18.42** cm in.
- 264. Method of operating clutch **Hydraulic**

GEAR BOX (photograph H)

- 270. Manual type, make **Mitsubishi Heavy Industries, Ltd. Kyoto Machinery Works** 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 Ratio No. teeth | Automatic Ratio No. teeth | Alternative manual Ratio No. teeth | Ratio No. teeth |
|---------|----------------------------|---------------------------|------------------------------------|----------------------------|
| 1 | 3.787 35/19 x 37/18 | | 3.490 35/19x36/19 | 3.789 35/19x37/18 |
| 2 | 2.379 35/19 x 31/24 | | 2.211 35/19x30/25 | 2.379 35/19x31/24 |
| 3 | 1.535 35/19 x 25/30 | | 1.426 35/19x24/31 | 1.324 35/19x23/32 |
| 4 | 1.000 | | 1.000 | 1.000 |
| 5 | | | | |
| 6 | | | | |
| reverse | 5.385 35/19x21/13x38/21 | | 5.385 35/19x21/13x38/21 | 5.385 35/19x21/13x38/21 |

- 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 **Straight bevel gear type**
- 292. Type of limited slip differential (if fitted)
- 293. Final drive ratio **4.875** 5.428 4.625 4.222 3.899
- Number of teeth **39/8** 38/7 37/8 38/9 35/9



Make Mitsubishi

Model A 2I ES

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 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, 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.

7 Capacity of fuel tank

70 ltrs.
18,49 Gallon US.



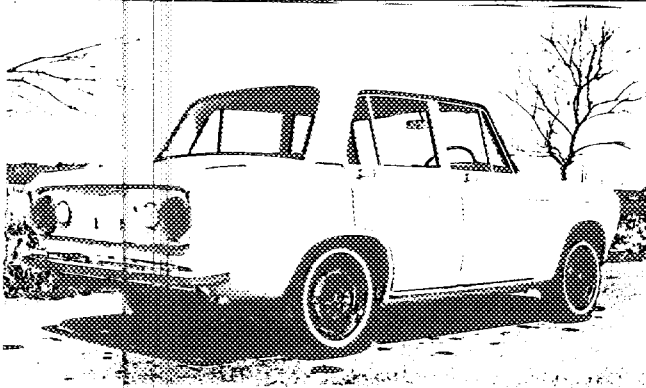
Make **Mitsubishi**

Model **A21ES**

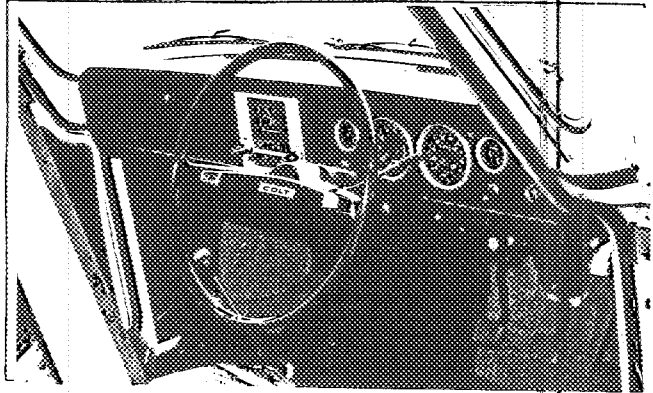
F. I. A. Rec. No.

Photograph

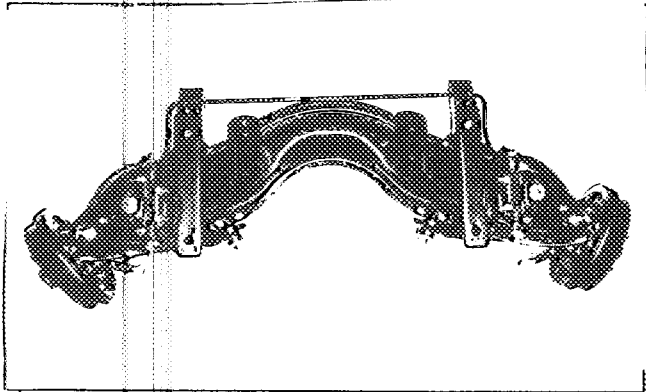
B, 3/4 view of car from rear



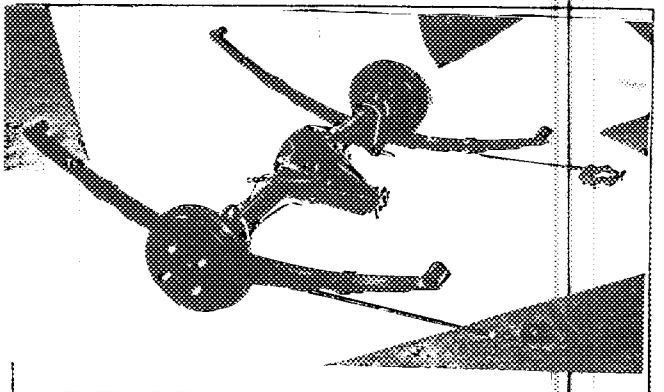
C, interior view of car through driver's door (open or removed) with dashboard



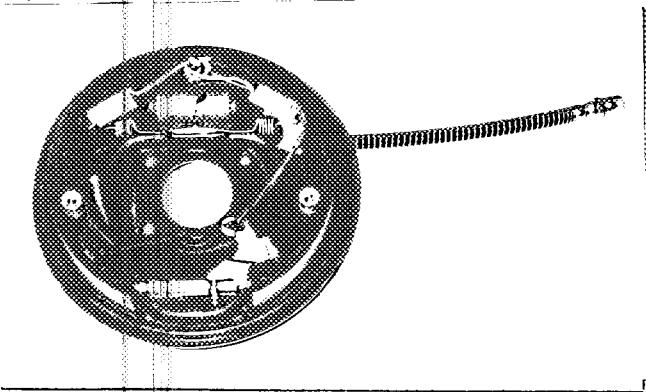
D, front axle complete, removed from car. Without wheels.



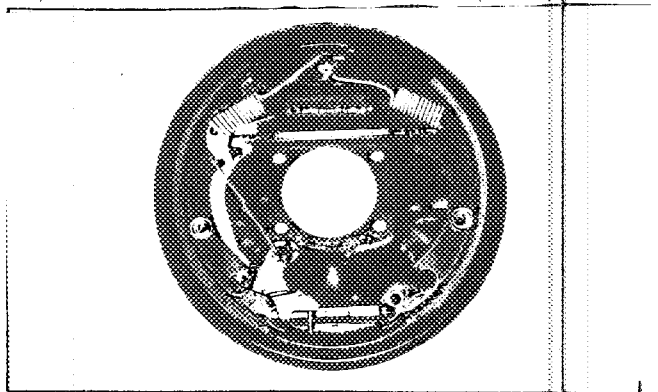
E, Rear axle complete without wheels, removed from car.



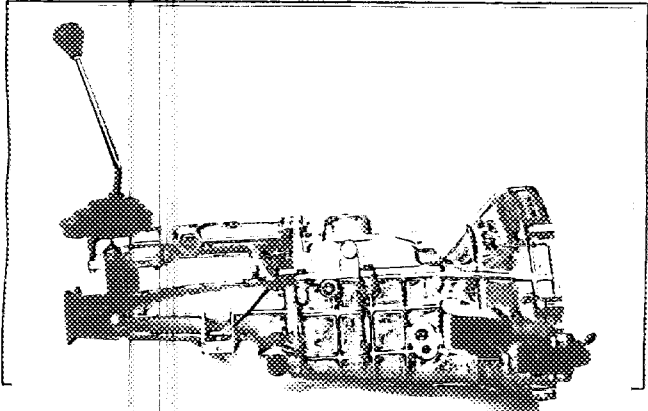
F, front brake, drum removed or disc with calipers



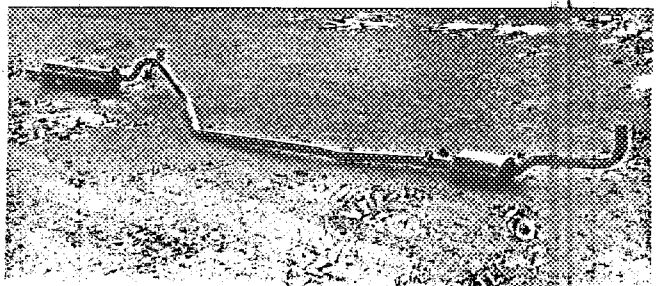
G, rear brake, drum removed or disc with calipers



H, gear-box, view from side



I, silencer + exhaust pipes after exhaust manifold



F11

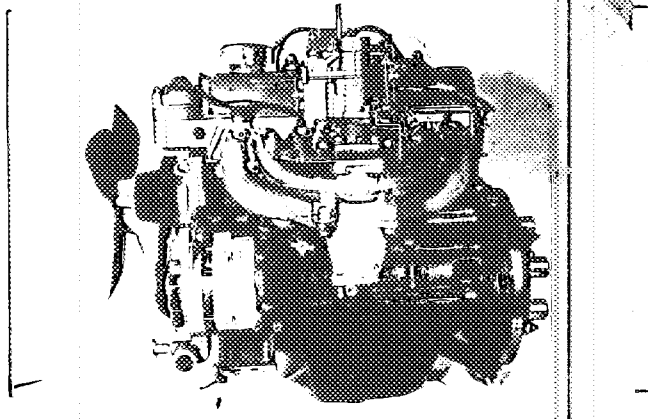
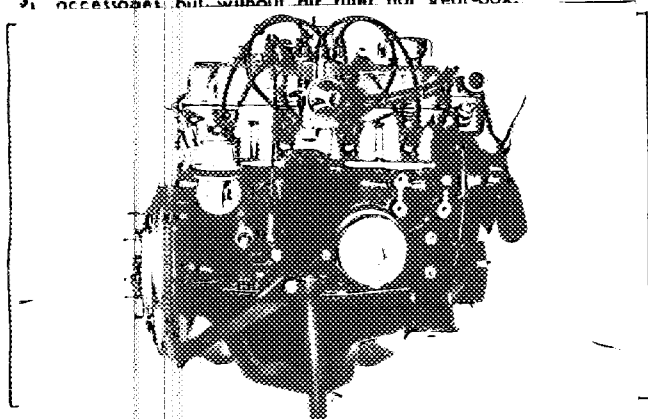
Make **Mitsubishi**

Model **A21ES**

F. I. A. Rec No

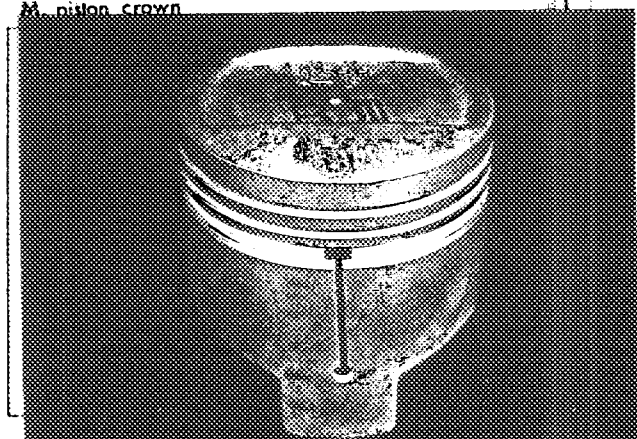
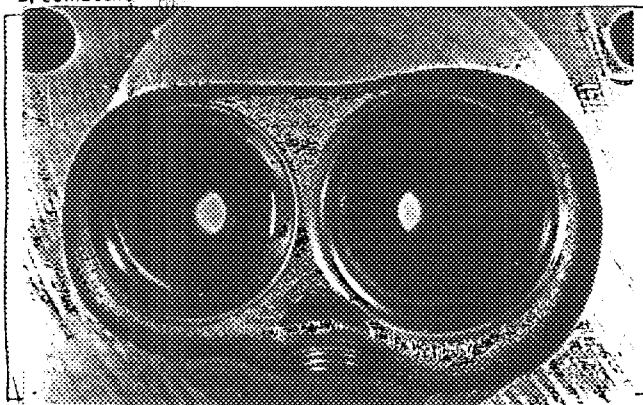
engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.

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



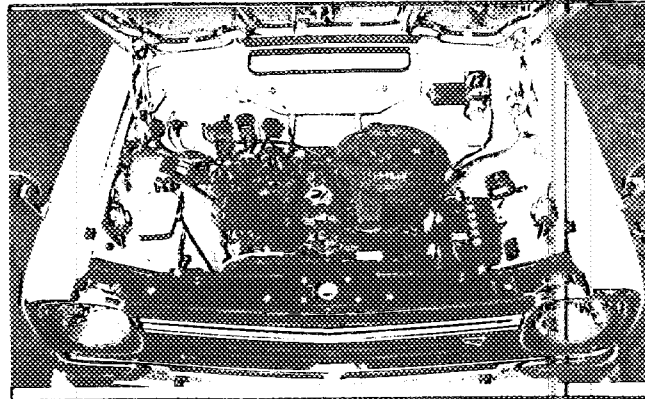
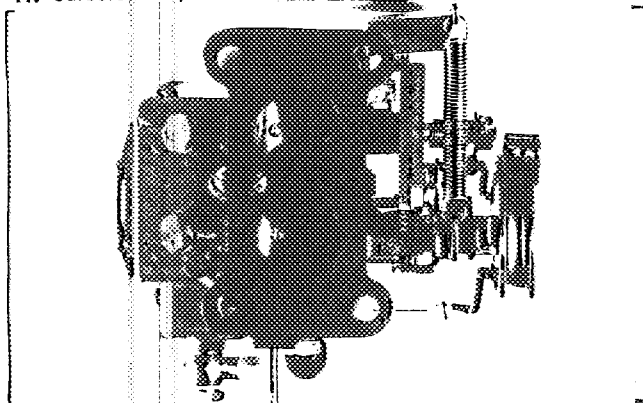
L, combustion chamber

M, piston crown



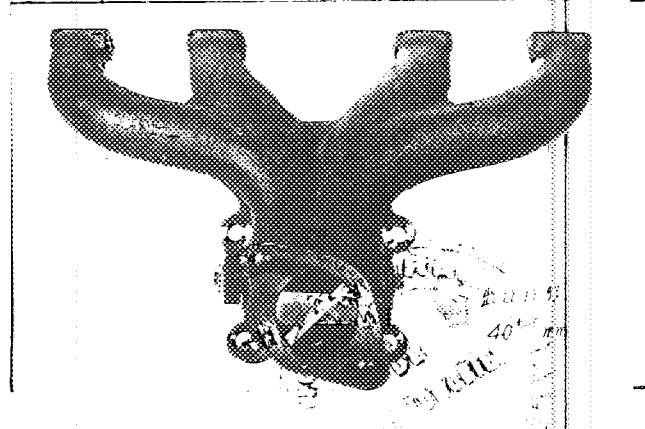
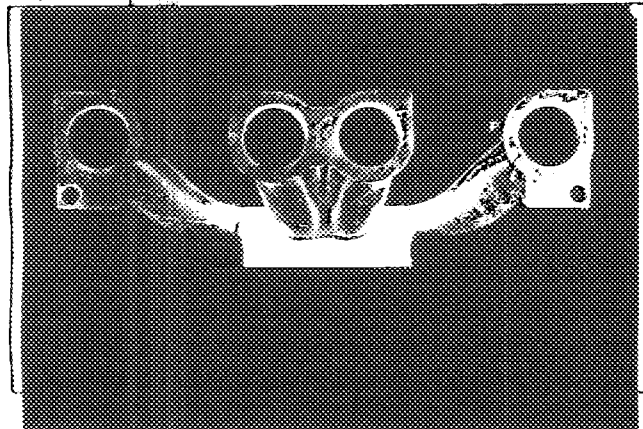
N, Carburettor (view from side of manifold)

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



P, inlet manifold

Q, exhaust manifold



Make **Mitsubishi**

Model **A21ES**

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.: 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



難波靖治

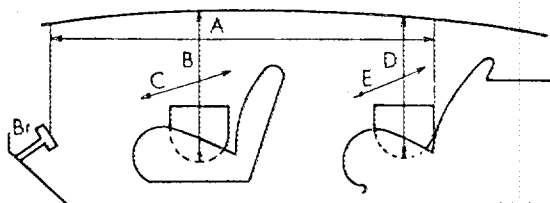
Yasuharu Nanba

Make Mitsubishi

Model A21ES

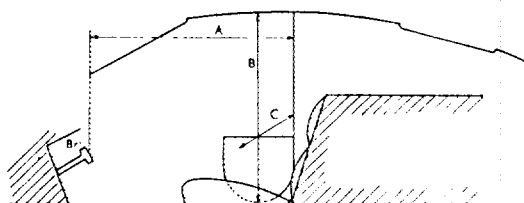
DIMENSIONS OF INTERIOR
(Conform to Art. 253 b of Appendix J)

For four seaters :



| Minimum Dimensions | | | | |
|--------------------|----------|-----------|----------|-----------|
| A | B | C | D | E |
| 162 cm | 92 cm | 124 cm | 91 cm | 124 cm |

For two seaters :



| Minimum Dimensions | | |
|--------------------|----|----|
| A | B | C |
| cm | cm | cm |

