



# JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No  
Group **1**

# 5377

**ARRIVÉ le**

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

**8 JUN 1982**  
2851  
**F.I.A. - S.G.**

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

Manufacturer **TOYO KOGYO CO., LTD.**

Serial No of chassis **SNA-10001**  
engine **SNA-1001**

Recognition is valid from

Cylinder-capacity **1586** cm<sup>3</sup> **96.8** cu. in.

Model **MAZDA SNA (CAPELLA 1600)**

Manufacturer **TOYO KOGYO**

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List

The manufacturing of the model described in this recognition form was started on **MAY 19 70** and the minimum production of **5000** identical cars, in accordance with the specifications of this form was reached on **SEP. 19 70**

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 **TOYO KOGYO**

Model **MAZDA SNA**

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.

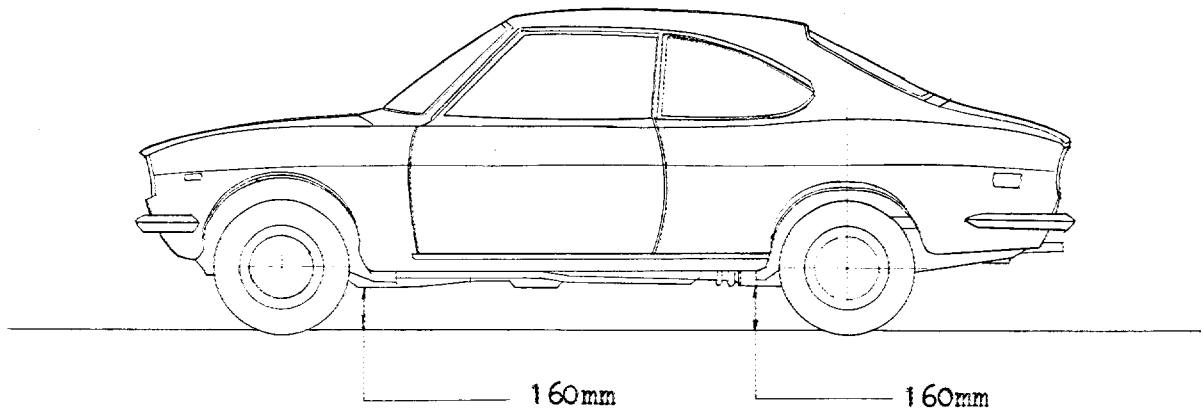
**CAPACITIES AND DIMENSIONS**

1. <u>Wheelbase</u>	2,470 mm	97.2 inches
2. <u>Front track</u>	1,285 mm	50.6 inches *
3. <u>Rear track</u>	1,280 mm	50.4 inches *
4. Overall length of the car	415.0 cm	inches
5. Overall width of the car	158.0 cm	inches
6. Overall height of the car	139.5 cm	inches
7. <u>Capacity of fuel tank</u> (reserve included)		50 ltrs Gallon Imp.
	13.2 Gallon US	
8. Seating capacity	5	
9. <u>Weight, total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools.</u>	865 kg	1,907 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)	-- 50.802 kg



**SUSPENSION**

70. Front suspension (photogr. D), type	Independent, Macpherson
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	<del>4 Links Type with Lateral Rod, Rigid Axle</del>
79. Type of spring	Coil
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 Servo
92. Number of hydraulic master cylinders	2 (Tandem)

	FRONT		REAR	
93. Number of cylinders per wheel	1		1	
94. Bore of wheel cylinder (s)	53.98 mm	in.	17.46 mm	in.
<b>Drum brakes</b>				
95. Inside diameter	mm	in.	200 mm	in.
96. Length of brake linings	mm	in.	200 mm	in.
97. Width of brake linings	mm	in.	32 mm	in.
98. Number of shoes per brake			2	
99. Total area per brake	mm <sup>2</sup>	sq. in.	12800 mm <sup>2</sup>	sq. in.
<b>Disc brakes</b>				
100. Outside diameter	230 mm	in.	mm	in.
101. Thickness of disc	12 mm	in.	mm	in.
102. Length of brake linings	90 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	8280 mm <sup>2</sup>	sq. in.	mm <sup>2</sup>	sq. in.



Make TOYO KOGYO

Model MAZDA SNA

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	78 mm	3.07 in.	134. Stroke	83 mm	3.27 in.
135. Capacity per cylinder		396.5 cm <sup>3</sup>			24.2 cu. in.
136. Total cylinder-capacity		1586 cm <sup>3</sup>			96.8 cu. in.
137. Material (s) of cylinder block	Cast Iron				
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	8.6				
143. Volume of one combustion chamber		52.2 cm <sup>3</sup>			cu. in.
144. Piston, material	Aluminium Alloy			145. Number of rings	3
146. Distance from gudgeon pin centre line to highest point of piston crown					
	41.25 mm				inches
147. Crankshaft : moulded / <del>xxxxx</del>		148. Type of crankshaft :	integral / xxxxxx		
149. Number of crankshaft main bearings	5				
150. Material of bearing cap	Cast Iron				
151. System of lubrication : <del>xxxxxx</del> / oil in sump					
152. Capacity, lubricant	3.6 ltrs				quarts US
					pts
153. Oil cooler : <del>xxx</del> / no		154. Method of engine cooling	Water		
155. Capacity of cooling system	7.0 ltrs				quarts US
					pints
156. Cooling fan (if fitted), dia.	33 cm				inches
157. Number of blades of cooling fan	4				

**Bearings**

158. Crankshaft main, type	Plain	Dia.	63 mm	in.
159. Connecting rod big end,	Plain	Dia.	53 mm	in.

**Weights**

160. Flywheel (clean)	10.2 kg		lbs		
161. Flywheel with clutch (all turning parts)		15.1 kg	lbs		
162. Crankshaft	16.8 kg	lbs	163. Connecting rod	0.76 kg	lbs
164. Piston with rings and pin	0.39 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 ~~Over Head Camshaft and~~ **Rocker-Arm**

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

180. Material(s) of inlet manifold **Aluminium Alloy**  
 181. Diameter of valves **42** mm **1.65** inches  
 182. Max. valve lift **9.5** mm **0.374** 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) **0.3** mm inches  
 187. Valves open at (with tolerance for tappet clearance indicated) **13 ± 7° B.T.D.C.**  
 188. Valves close at (with tolerance for tappet clearance indicated) **54 ± 7° A.B.D.C.**  
 189. Air filter, type **Dry**

**EXHAUST** (see page 8)

195. Material(s) of exhaust manifold **Cast Iron**  
 196. Diameter of valves **33** mm **1.30** inches  
 197. Max. valve lift **9.5** mm **0.374** 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) **0.3** mm inches  
 202. Valves open at (with tolerance for tappet clearance indicated) **57 ± 7° B.B.D.C.**  
 203. Valves close at (with tolerance for tappet clearance indicated) **10 ± 7° A.T.D.C.**

**CARBURETION** (photograph N)

210. Number of carburetors fitted **1** 211. Type **Down Draught**  
 212. Make **NIKKI** 213. Model **215282-231**  
 214. Number of mixture passages per carburettor **2**  
 215. Flange hole diameter of exit port(s) of carburettor **28 & 33** mm in.  
 216. Minimum dimensions of mixture passage(s) ~~with piston at max. height (example given)~~  
**23 & 28** 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 TOYO KOGYO

Model MAZDA SNA

F. I. A. Rec. No.

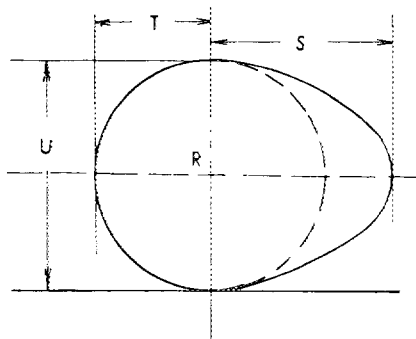
**ENGINE ACCESSORIES**

- 230. Fuel pump ~~mechanical~~ electric
- 231. No. fitted 1
- 232. Type of ignition system **Make & Break**
- 233. No. of distributors 1
- 234. No. of ignition coils 1
- 235. No. of spark plugs per cylinder 1
- 236. Generator, type: ~~brush~~ 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 **100 PS** (type of horsepower: **JIS**) at **6000** rpm
- 251. Maximum rpm **6000** output at that figure **100 PS**
- 252. Maximum torque **14.0 kg-m** at **3500** rpm
- 253. Maximum speed of the car **165** km/hour miles/hour

255.



R=centre of camshaft.

Inlet cam

S =	25.7	mm	1.01	inches
T =	19.0	mm	0.75	inches
U =	38.0	mm	1.50	inches

Exhaust cam

S =	25.7	mm	1.01	inches
T =	19.0	mm	0.75	inches
U =	38.0	mm	1.50	inches





**DRIVE TRAIN**

**CLUTCH**

260. Type of clutch **Dry Plate** 261. No. of plates **1**  
 262. Dia. of clutch plates **20.0** cm inches  
 263. Dia. of linings, inside **13.0** cm in. outside **20.0** cm in.  
 264. Method of operating clutch **Hydraulic**

**GEAR BOX** (photograph H)

270. Manual type, make **TOYO KOGYO** 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			Alternative manual/ <del>automatic</del>		
	Ratio	No.	teeth	Ratio	No.	teeth	Ratio	No.	teeth
1	3.403	30 / 27	17 / 14				2.014	24 / 27	22 / 14
2	2.005	30 / 25	17 / 22				1.608	24 / 28	22 / 19
3	1.373	30 / 21	17 / 27				1.240	24 / 25	22 / 22
4	1.000						1.000		
5									
6									
reverse	3.655	30 / 29	17 / 14				2.266	24 / 27	22 / 13

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 **3.700 , 4.111**  
 Number of teeth **37 / 10, 37 / 9**

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 .....  
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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.

4 Door Type

9. Weight, total weight of the car with normal equipment.

~~830 kg~~      ~~1940 lbs~~  
885 kg      1951 lbs

30. Material(s) of rear door windows Glass

Photograph A

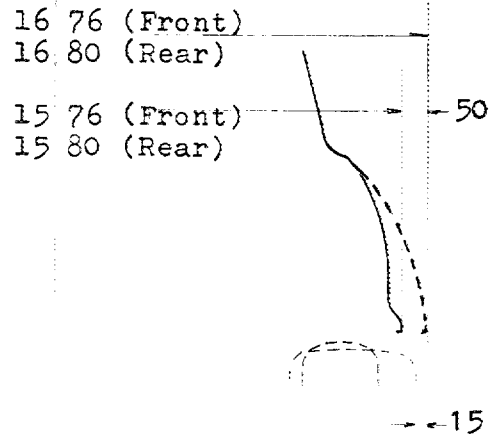


WHEEL

54. Rim width and weight      114.3 mm      4.5 in.      7.5 kg

N.B. Following optional equipments are <sup>NOT</sup> VALID FOR GROUP <sup>1</sup> ONLY.

FENDER EXTENSION KIT FRONT AND REAR



Unit : mm

Make TOYO KOGYO

Model MAZDA SNA

F.I.A. Rec. No.

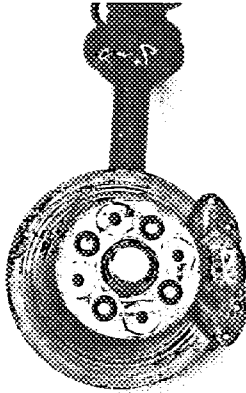
CONTINUE Optional equipment <sup>NOT</sup> VALID FOR GROUP <sup>1</sup> ONLY.

DISC BRAKES

	FRONT	REAR
93. Number of cylinder	2	1
94. Bore of wheel cylinder(s)	53.98 mm	31.75 mm
100. Outside diameter	254 mm	230 mm
101. Thickness of disc	20 mm	10 mm
102. Length of brake linings	78 mm	97.5 mm
103. Width of brake linings	52 mm	37.5 mm
104. Number of pads per brake	2	2
105. Total area per brake	8112 mm <sup>2</sup>	7312.5 mm <sup>2</sup>

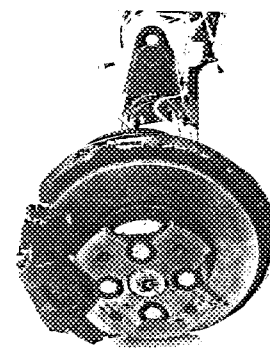
Photograph F

Front brake, disc with caliper.

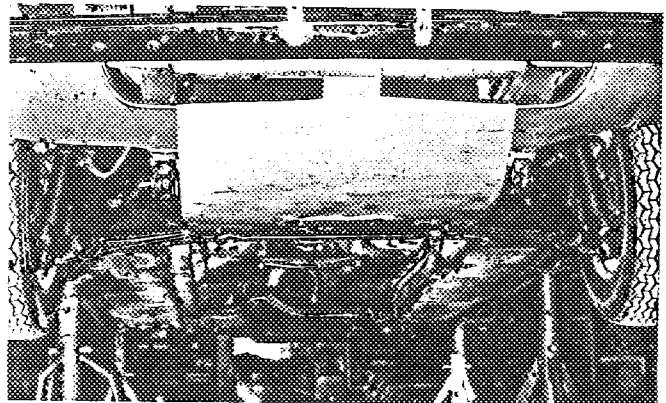


Photograph G

Rear brake, disc with caliper.



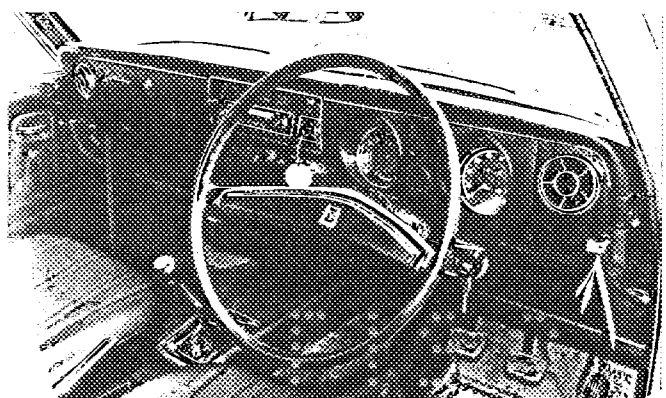
PROTECTION SHIELD UNDER THE CAR



DASHBOARD Deluxe type

Photograph C

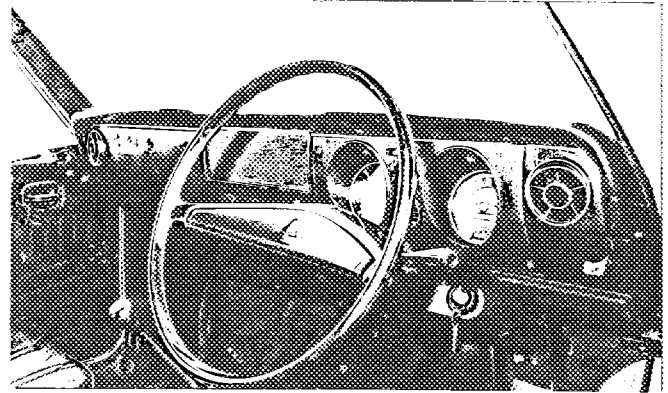
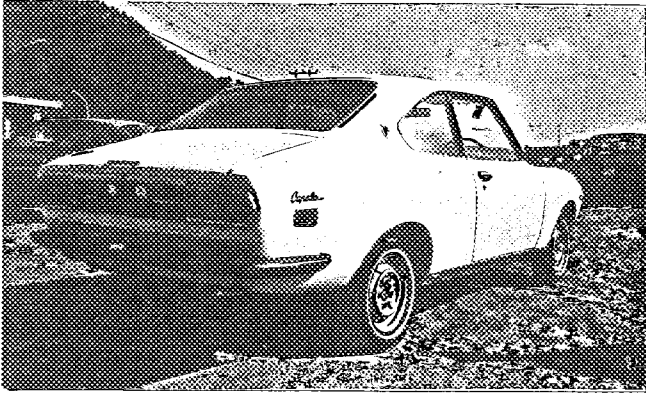
Interior view



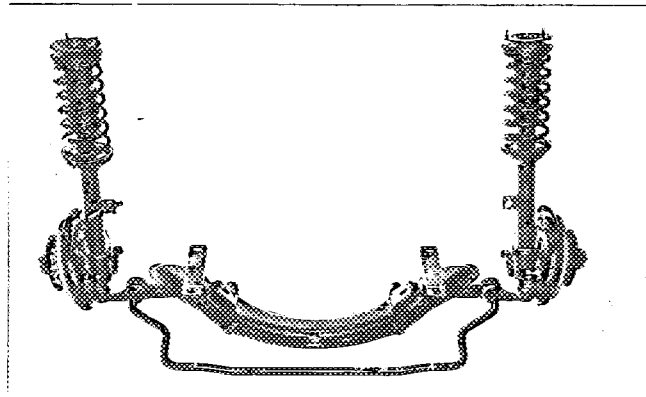
Photograph

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

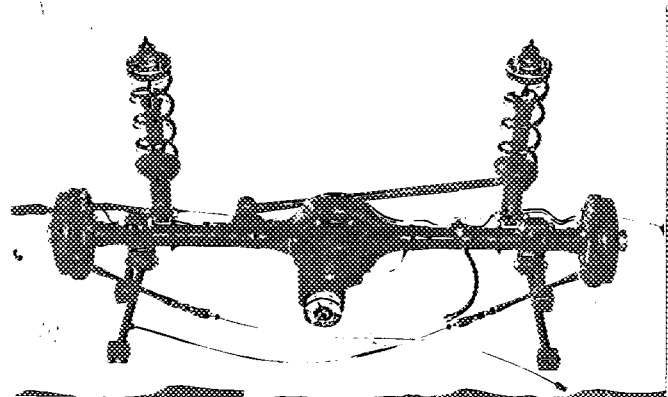
B, 3/4 view of car from rear



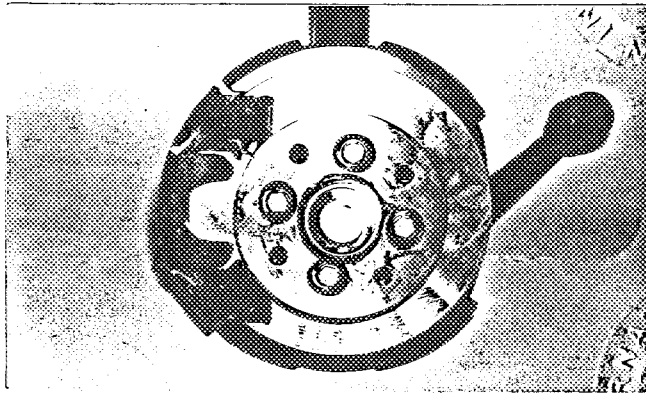
D, front axle complete, removed from car. Without wheels.



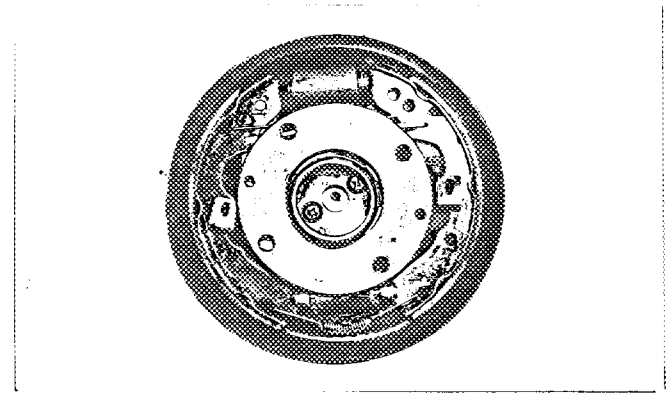
E, Rear axle complete without wheels, removed from car.



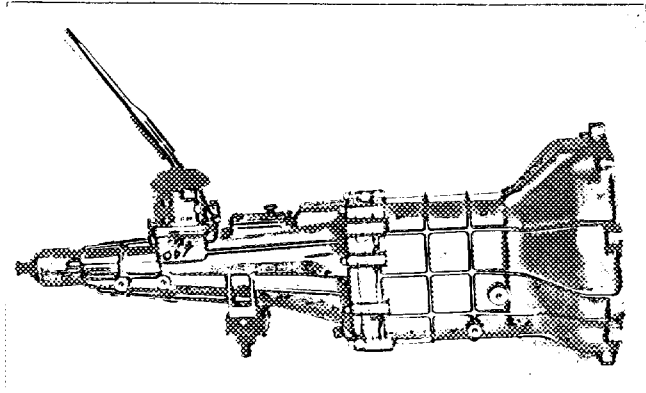
F, front brake, drum removed or disc with calipers



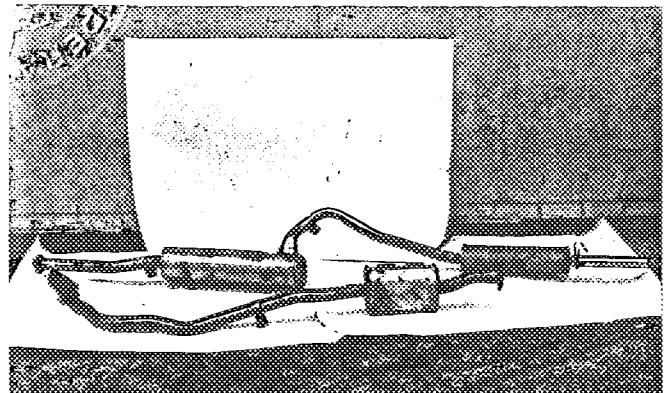
G, rear brake, drum removed or disc with calipers



H, gear-box, view from side

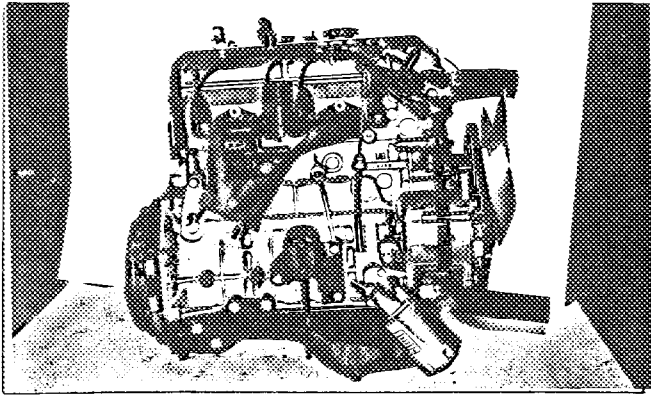


I, silencer + exhaust pipes after exhaust manifold.

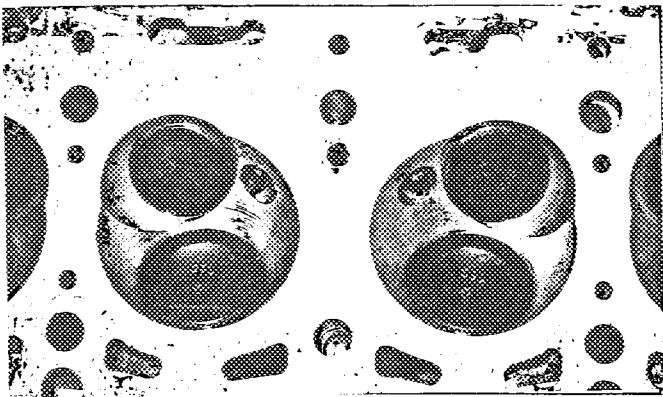


Make TOYO KOGYO

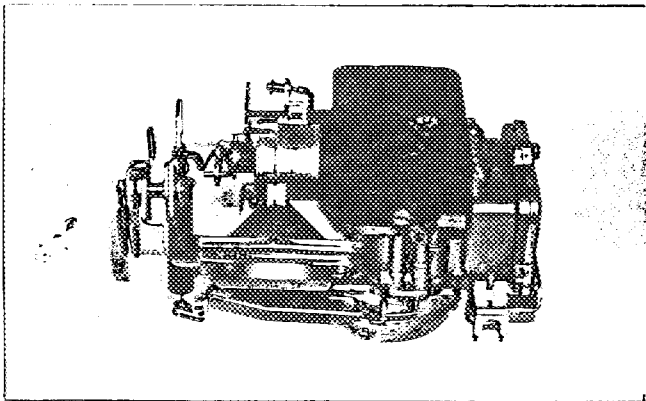
Engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.



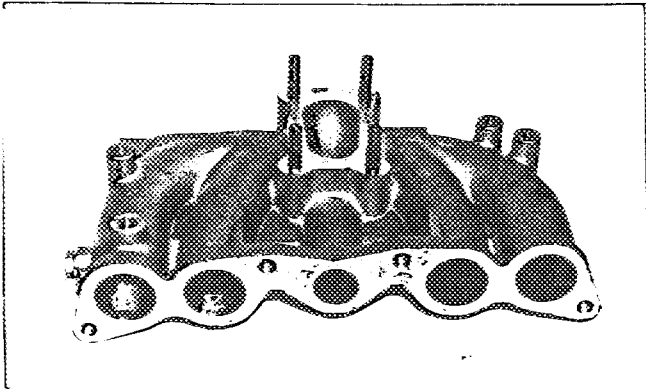
L, combustion chamber



N, Carburettor (view from side of manifold)



P, inlet manifold

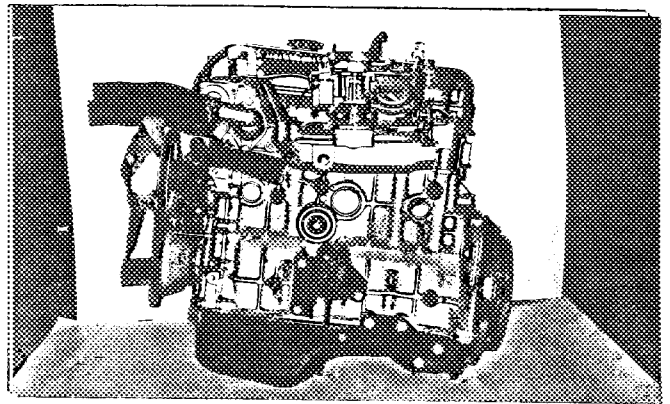


Photograph

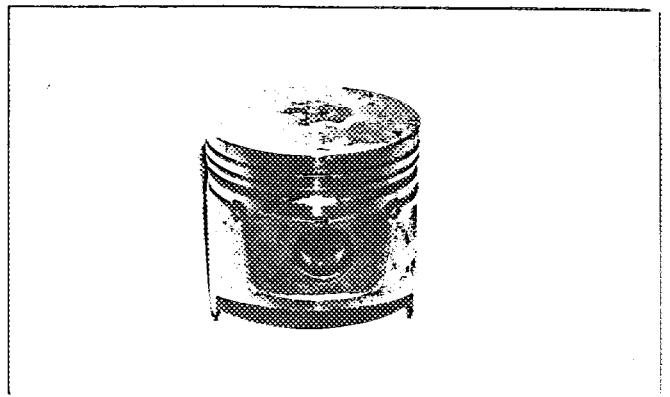
Model: MAZDA SNA

F. I. A. Rec. No

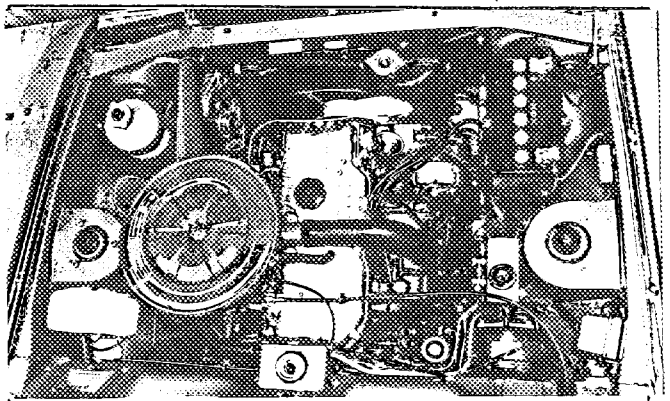
Engine unit out of car, from left. With clutch and accessories but without gear-box nor air filter.



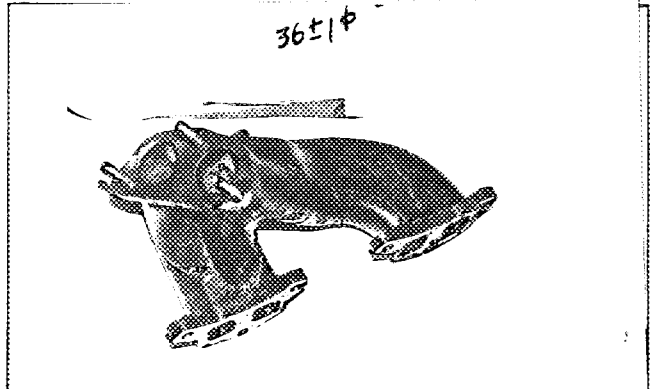
M, piston crown



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



Q, exhaust manifold



Make TOYO KOGYO

Model MAZDA SNA

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



Yasuharu Nanba

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50