

5TH CATEGORY - HISTORIC RACING
GROUP Nc
APPROVED VEHICLE SPECIFICATION

This form details specifications of models in the 5th

car group. To be issued with an Historic Log Book, cars need to comply with these specifications, the physical appearance shown in the illustrations and the general historic rules as detailed in the current CAMS Manual of Motor Sport.

the approved individual vehicle Category Historic

Make of Car:

Mazda

Model:

RX2

Period of Original Manufacture: 10/70 to 4/76

CAMS Historic Group:

Nc

Date of Issue of this Document: 8th April 2004



SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description: Unitary Construction **Period of Manufacture:**
10/70 to 4/76

Manufacturer: Toyo Kogyo

Chassis no. from: S122A >>

Chassis no. location:

Material: Steel

Comments:

1.2 FRONT SUSPENSION

Description: Independent –McPherson Strut

Spring medium: Coil

Damper Type: Telescopic **Adjustable:** No

Anti-sway bar: Fitted **Adjustable:** Optional

Suspension adjustable: No **Method:** N/A

Comments: Spring rate and ride height free. Refer Group Nc regulations for permitted modifications.

1.3 REAR SUSPENSION

Description: 4 Links & Lateral Locating Rod

Spring medium: Coil

Damper type: Hydraulic Telescopic **Adjustable:** No

Anti-sway bar: Not Fitted **Adjustable:** N/A

Suspension adjustable: No **Method:**

Comments: Spring rate and ride height free. Refer Group Nc regulations for permitted modifications.

1.4 STEERING

Type: Ball & Nut **Make:** Mazda

Comments:

1.5 BRAKES

	Front	Rear
Type:	Disc	Drum
Dimensions:	230 x 12mm	200 x 32 mm
Material of drum/disc	Cast Iron	Cast Iron
No. cylinders/pots per wheel:	2	2
Actuation:	Hydraulic	Hydraulic
Caliper: Make, Material, Type:	Cast Iron	N/A
Master cylinder make:	Mazda	Type Tandem
Adjustable bias: No		
Servo Fitted: Yes		

Comments: Components may be replaced with those from another make/model of Production Touring Car produced before 31/12/1972. No increase in swept area or diameter of rotor/drum is permitted, save for an overall variation in diameter of not more than 3mm. Dual Master Cylinders permitted. Servo may be rendered inoperative. Refer Group Nc regulations for permitted modifications.

SECTION 2 - ENGINE

2.1 ENGINE

Make: Toyo Kogyo - Mazda
Model: 12A
No. cylinders: 2 Rotor - 6 Chamber
Configuration: Rotary
Cylinder Block-material: Alloy
Four Stroke
Bore - Original: N/A
Max. allowed:
Stroke - original: N/A
Max. allowed:
Capacity - original: Chamber Capacity 573 cc
Max. allowed: 2063 cc
Cooling method: Capacity equiv (x1.8) 2063 cc
Identifying marks: 12A (Twin Distributor)**

Comments: Mild/Extend porting is permitted. Engine must be sealed by a CAMS accredited officer. ** Single Distributor 12A is approved alternative. See illustrations attached. Refer Group Nc regulations for permitted modifications.

2.2 CYLINDER HEAD N/A

Make:
No. of valves/cylinder-
Inlet:
Exhaust:
No. of ports total:
Inlet:
Exhaust:
No. of camshafts:
Location:
Drive:
Valve actuation:
Spark plugs/cylinder:
Identifying marks:
Comments:

2.3 LUBRICATION

Method: Direct Injection
Oil tank location: N/A
Dry sump pump type: N/A
Location: N/A
Oil cooler standard: Yes
Location: N/A
Comments: Refer Group Nc regulations for permitted modifications

2.4 IGNITION SYSTEM

Type: Coil & Distributor (Twin Distributor 12A engine)**
Make:
Comments: ** Single Distributor engine approved. Refer 2.1 above. Refer Group Nc regulations for permitted modifications.

2.5 FUEL SYSTEM

Carburettor : Make: Nikki Downdraft
Model: 210284 - 831
Fuel Injection: Make: N/A
Type: N/A
Supercharged : N/A
Comments: Carburettor may be replaced by carburettor/s of a make/type available in the period. Multiple carburettors may be fitted in the ratio of not more than one choke per rotor.

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Mazda **Type:** Diaphragm **Diameter:** 215mm
No. of Plates: 1
Actuation: Hydraulic
Comments: Clutch and method of actuation are free

3.2 TRANSMISSION

Type: Four Speed synchromesh
Make: Mazda
No. forward speeds: 4 **Gearbox location:** Behind Engine
Gearchange type and location: Floor - Remote
Case material: Aluminium **Identifying marks:**
Comments: Ratios Free. Refer Group Nc regulations for permitted modifications.

3.3 FINAL DRIVE

Make: Mazda **Model:** RX2
Wheel drive method:
Ratios: Various
Differential: Free **Type:**
Comments: Limited slip differential permitted. Refer Group Nc regulations for permitted modifications.

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: 1 **Location:** Gearbox to Final Drive
Description: Tubular Tailshaft to Final Drive
Comments:

3.5 WHEELS & TYRES

Wheel type: Original:	Pressed Steel	Material: Steel
		Original:
Allowed:	Steel or Period Alloy	Allowed: Steel or Alloy
Fixture method:	Bolt On	No. studs: 4
	FRONT	REAR

Wheel dia. & rim width

Original:	4 x 13	4 x 13
Allowed	7 x 13	7 x 13

Tyre Section:

Original:	155 x 13	155 x 13
Allowed		

Aspect ratio - minimum: 60%

Comments: Wheels and tyres are confined to dimensions which fit within the wheel arches.

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location: Rear **Capacity:** 65 Litres
Fuel pump, type and location: Electric **Make:**
Comments: Fuel pump/s free. Refer Group Nc regulations for permitted modifications.

4.2 ELECTRICAL SYSTEM

Voltage: 12 Volt **Alternator/Dynamo fitted:**
Battery Location: Engine Bay **Alternator**
Comments: Refer Group Nc regulations for permitted modifications.

4.3 BODYWORK

Type: 4 Door Sedan **Material:** Steel
No. of seats: 5 **No. doors:** 4
Comments:

4.4 DIMENSIONS

Track - Front: 1285 mm **Rear:** 1280 mm
Wheelbase: 2470 mm **Overall length:** 4150 mm
Dry weight: 900 Kg
Comments:

4.5 SAFETY EQUIPMENT

Fire extinguisher:	Required	Refer Schedule H
Seat belt:	Required	Refer Schedule I
Rollbar:	Required	Refer Schedule J and Art. 3 General Regulations
Electrical cut off switch:	Required	
Safety fuel tank :	Optional	

LOCATION OF CHASSIS NUMBER

On firewall under bonnet

LOCATION OF ENGINE NUMBER

Stamped on front or centre plates

**ENGINE**

Type	Rotary RX2-AP. Two rotors
Capacity	1146 cc
Power Units	22.9
Power	71 kW @ 6000 rpm
Torque	138 Nm @ 4000 rpm

CARBURETTOR AND FUEL SYSTEM

Carburettor	Downdraught with 4 barrels
Fuel Pump	Electric
Fuel Tank Capacity	65 litres

TRANSMISSION

Gear Change	Floor
Gear Box	4 speed manual

SUSPENSION

Front	Struts with coil springs
Rear	4-link with coil springs. Lateral rod

STEERING

Type	Variable ball
Turning Circle	9.4 metres

WHEELS AND TYRES

Wheel Size	4.5" x 13"
Tyre Size	155 SR

BRAKES

Front	Power disc
Rear	Power drum
Handbrake	Central pull-up lever

DIMENSIONS

Length	4150 mm
Width	1580 mm
Height	1435 mm
Wheelbase	2470 mm
Track — Front	1265 mm
— Rear	1290 mm
Kerb Mass	1020 kg

BODY

- 4 door Sedan

IDENTIFICATION

- Black horizontal grille bars with vertical badge
- Dual circular headlights
- Rotary engine badge on grille
- Chrome front/rear bumpers
- Front parklights/indicators above bumper
- Side indicators on front/rear guards

STANDARD EQUIPMENT

- Fully reclining front bucket seats
- Centre console
- Day/night interior mirror
- Full interior carpeting
- Flow-through ventilation
- Steering wheel lock
- Electric clock
- Tachometer

OPTIONAL EQUIPMENT

- T-bar automatic transmission
- Adjustable headrests
- Radio
- Stereo cassette
- Heated rear window
- Fan boosted heater

NOTES

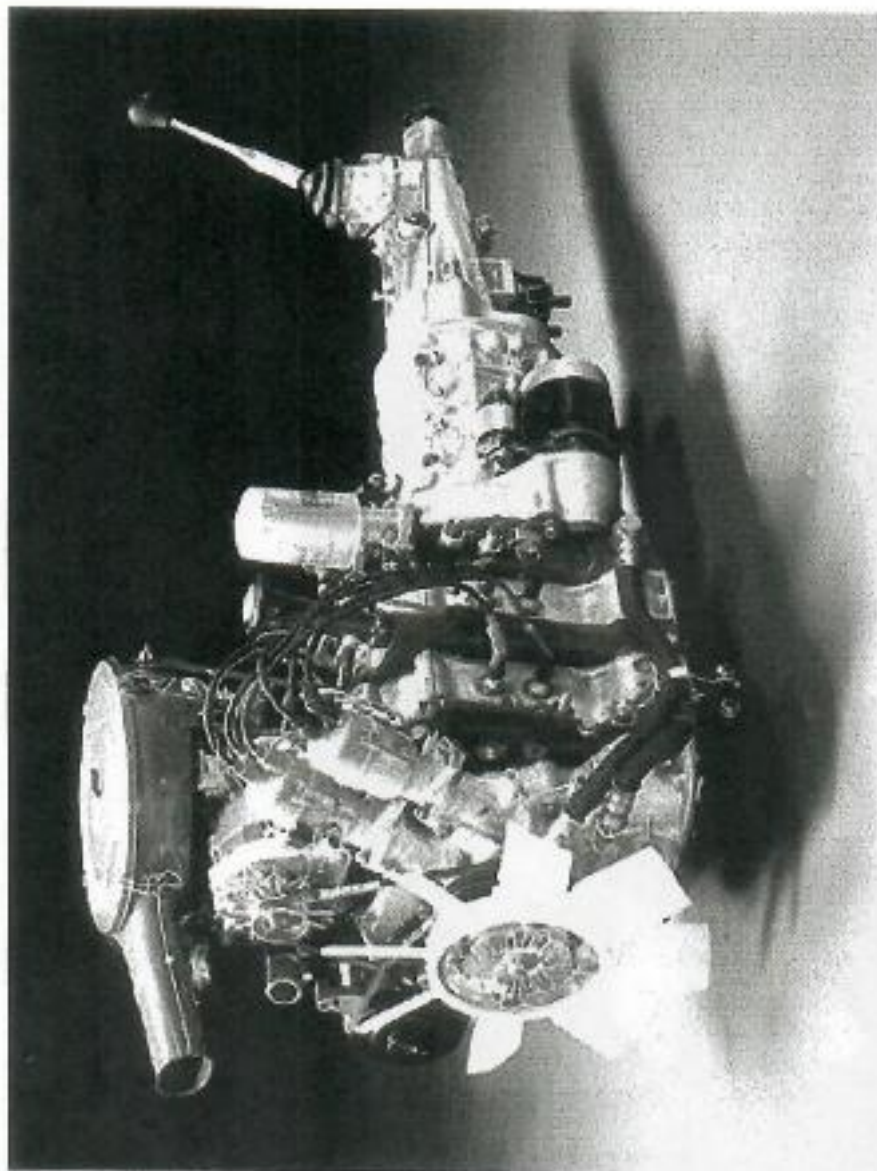
.....

.....

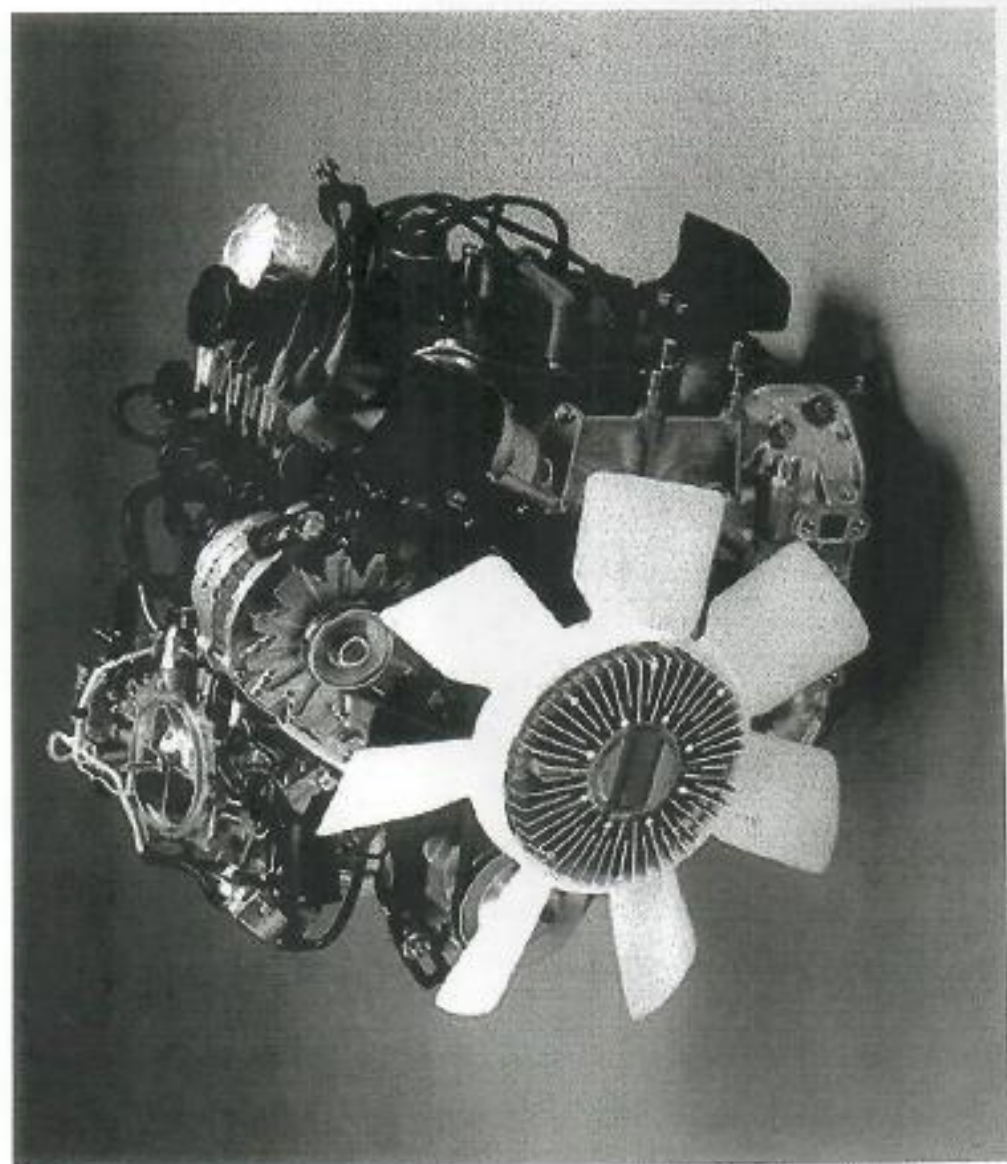
.....

.....

.....



12 A Twin Distributor.



12 A Single Distributer



JAPAN AUTOMOBILE FEDERATION

M1-1

F. I. A. Recognition No. 5378
Group **I**

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer **TOYO KOGYO CO., LTD**
Model **S122A-10001**
Serial No. of engine **12A-10001**
Recognition is valid from **11/171**

Equivalent Rotary engine
Cylinder-capacity 2292 cm³ 140.0 c.c. in.
Model **MAZDA S122A (CAPELLA ROTARY)**
Manufacturer **TOYO KOGYO**
Manufacturer **TOYO KOGYO**
List **711**

The manufacturing of the model described in this recognition form was started on **MAY 19 70** and the minimum production of identical cars, in accordance with the specifications of this form was reached on **OCT. 1970**

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.



Handwritten signature of the F.I.A. official.



Make **TOYO KOGYO**

Model **MAZDA S122A**

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 covering table hereafter.

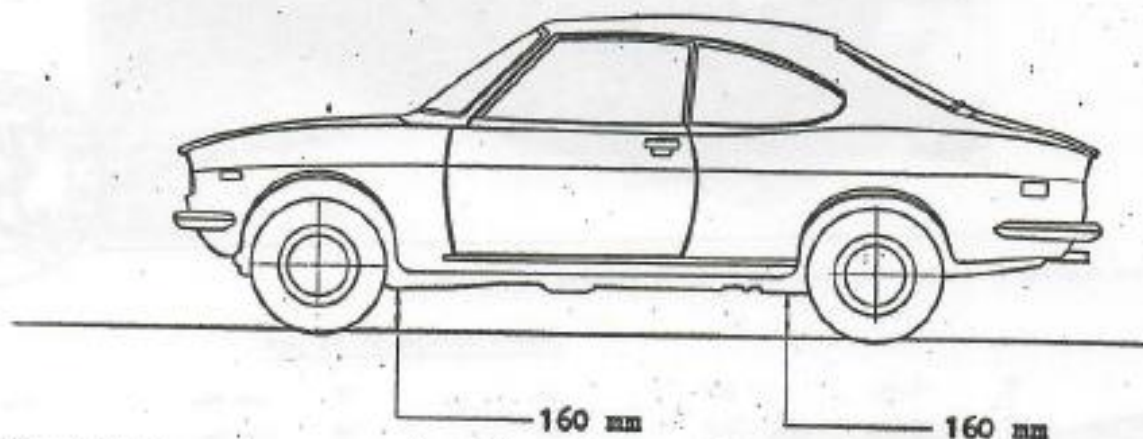
CAPACITIES AND DIMENSIONS

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)		65 ltrs Gallon, Imp.
	17.2 Gallon US	
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	890 kg 890kg (EU) 1997 lbs 900 kg 1997 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

CAMS
VALID

Make TOYO KOGYO

Model MAZDA S122A

F.I.A. Rec. No.

CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis/body construction : ~~XXXXXX~~/unitary construction
21. Unitary construction, material (s) **Steel**
Separate construction
22. Separate Constructions: Material(s) of chassis
23. Material (s) of coachwork **Steel**
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 : ~~XXX~~ - no
39. Air-conditioning : ~~XXX~~ - no
40. Ventilation : yes - ~~XXX~~
41. Front seats, type of seats and upholstery **Separate, Vinyl Leather**
42. Weight of front seat (s), complete with supports and rails, out of the car :
11.5 x 2 kg lbs
43. Rear seats, type of seats and upholstery **Bench, Vinyl Leather**
44. Front bumper, material (s) **Steel** Weight **5.0 kg lbs**
45. Rear bumper, material (s) **Steel** Weight **5.1 kg lbs**

WHEELS

50. Type **Pressed Steel**
51. Weight (per wheel, without tyre) **6.8 kg lbs**
52. Method of attachment **4 Hub-Bolts**
53. Rim diameter **330 mm 13 inches**
54. Rim width **102 mm 4 inches**

STEERING

60. Type **Ball & Nut Type**
61. Servo-assistance : ~~XXX~~ - 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, 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 ~~4 Links Type with Lateral Rod, Rigid axle~~
 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	2		1	
94. Bore of wheel cylinder (s)	53.98 mm	in.	17.46 mm	in.
Drum brakes				
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		2	
99. Total area per brake	mm ²	sq. in.	12800 mm ²	sq. in.
Disc brakes				
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		2	
105. Total area per brake	8280 mm ²	sq. in.	mm ²	sq. in.



Make **TOYO KOGYO**

Model **MAZDA S122A**

F.I.A. Rec. No.

ENGINE (photographs J and K) *

- | | | | |
|---|-----------------------------|------------------------------|---------------|
| 130. Cycle | Wankel rotary engine | 131. Number of cylinders | |
| 132. Cylinder arrangement | | | |
| 133. Bore | mm | 134. Stroke | mm |
| 135. Capacity per cylinder | | cm ³ | cu. in. |
| 136. Total cylinder-capacity | | cm ³ | cu. in. |
| 137. Material (s) of cylinder block | | | |
| 138. Material (s) of sleeves (if fitted) | | | |
| 139. Cylinder-head, material (s) | | | Number fitted |
| 140. Number of inlet ports | | 141. Number of exhaust ports | |
| 142. Compression ratio | | | |
| 143. Volume of one combustion chamber | | cm ³ | cu. in. |
| 144. Piston, material | | 145. Number of rings | |
| 146. Distance from gudgeon pin centre line to highest point of piston crown | mm | | inches |
| 147. Crankshaft : moulded / stamped | | 148. Type of crankshaft : | integral / |
| 149. Number of crankshaft main bearings | | | |
| 150. Material of bearing cap | | | |
| 151. System of lubrication : self-lubricating / oil in sump | | | |
| 152. Capacity, lubricant | 5.5 ltrs | pts. | quarts US |
| 153. Oil cooler : yes / no | | | |
| 154. Method of engine cooling | Water | | |
| 155. Capacity of cooling system | 7 ltrs | pints | quarts US |
| 156. Cooling fan (if fitted), dia. | 370 cm | inches | |
| 157. Number of blades of cooling fan | 4 | | |
-
- Bearings**
- | | | | | |
|------------------------------|--|------|----|-----|
| 158. Crankshaft main, type | | Dia. | mm | in. |
| 159. Connecting rod big end. | | Dia. | mm | in. |
-
- Weights**
- | | | | |
|---|----------|----------|-----|
| 160. Flywheel (clean) | 13.25 kg | lbs | |
| 161. Flywheel with clutch (all turning parts) | | 20.15 kg | lbs |
| 162. Crankshaft | kg | | |
| 163. Connecting rod | | kg | lbs |
| 164. Piston with rings and pin | kg | | lbs |

*) for additional information concerning Wankel rotary engines, see page 15 & 16.



Make TOYO KOGYO

Model MAZDA S122A

F.I.A. Rec. No.

FOUR STROKE ENGINES **

170. Number of camshafts 171. Location
172. Type of camshaft drive
173. Type of valve operation

INLET (see page 8) *, **

180. Material(s) of inlet manifold
181. Diameter of valves mm inches
182. Max. valve lift mm in. 183. Number of valve springs
184. Type of spring 185. Number of valves per cylinder
186. Tappet clearance for checking timing (cold) mm inches
187. Valves open at (with tolerance for tappet clearance indicated)
188. Valves close at (with tolerance for tappet clearance indicated)
189. Air filter, type

EXHAUST (see page 8) **, *

195. Material (s) of exhaust manifold
196. Diameter of valves mm inches
197. Max. valve lift mm in. 198. Number of valve springs
199. Type of spring 200. Number of valves per cylinder
201. Tappet clearance for checking timing (cold) mm inches
202. Valves open at (with tolerance for tappet clearance indicated)
203. Valves close at (with tolerance for tappet clearance indicated)

CARBURETION (photograph N)

210. Number of carburetors fitted 1 211. Type Down Draught
212. Make NIKKI 213. Model 210284-831
214. Number of mixture passages per carburetor 4
215. Flange hole diameter of exit port(s) of carburetor 28 x 2 & 34 x 2 mm
216. Minimum dimensions of mixture passage (s) with piston at max. height ~~example 64~~
20 x 2 & 28 x 2 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.

***) for information concerning wankel rotary engines see page 15 & 16.



Make TOYO KOGYO

Model MAZDA S122A

F.I.A. Rec. No.

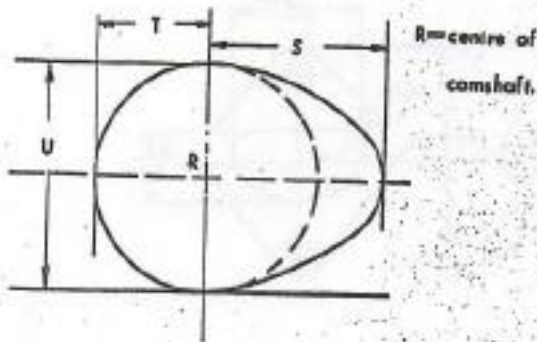
ENGINE ACCESSORIES

- 230. Fuel pump : ~~mechanical~~ electric
- 231. No. fitted 1
- 232. Type of ignition system **Make & Break ignition**
- 233. No. of distributors 2
- 234. No. of ignition coils 2
- 235. No. of spark plugs per ~~rotor~~ **rotor** 2
- 236. Generator, type ~~generator~~/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 120 ps (type of horsepower: **JIS**) at 6500 rpm
- 251. Maximum rpm 7000 output at that figure 119 ps
- 252. Maximum torque 16.0 kg-m at 3500 rpm
- 253. Maximum speed of the car 190 km/hour miles / hour

255.



Inlet cam

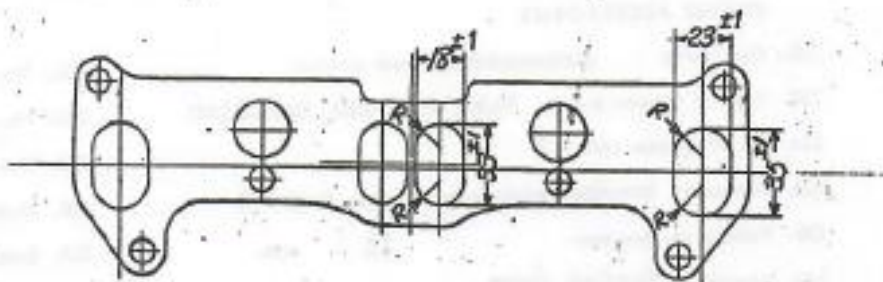
- S = mm inches
- T = mm inches
- U = mm inches

Exhaust cam

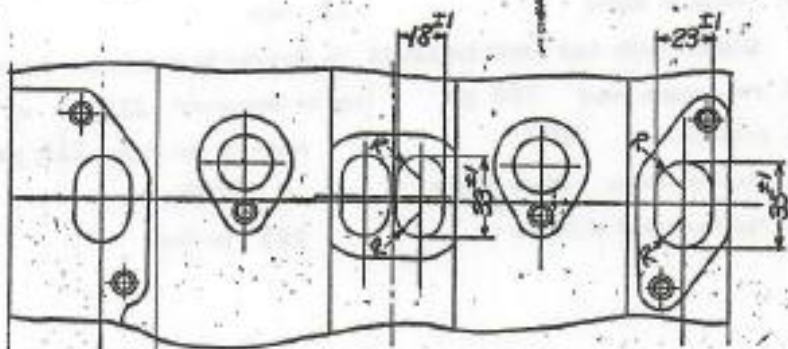
- S = mm inches
- T = mm inches
- U = mm inches



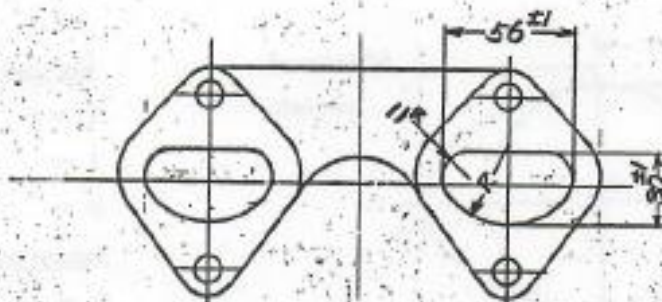
Drawing inlet manifold ports, side of ~~crankcase~~ housing. head. Indicate scale or dimensions and manufacturing tolerance.



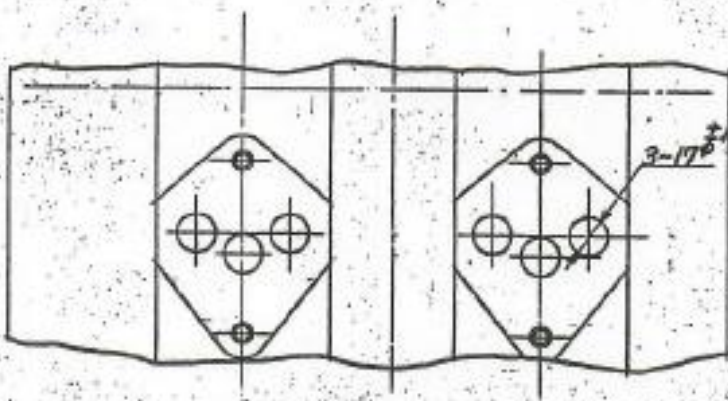
Drawing of entrance to inlet port of ~~crankcase~~ housing. head. Indicate scale or dimensions and manufacturing tolerance.



Drawing exhaust manifold ports, side of ~~crankcase~~ housing. head. Indicate scale or dimensions and manufacturing tolerance.



Drawing of exit to exhaust port of ~~crankcase~~ housing. head. Indicate scale or dimensions and manufacturing tolerance.



Unit: mm



Make **TOYO KOGYO**

Model **MAZDA S122A**

F.I.A. Rec. No.

DRIVE TRAIN

CLUTCH

260. Type of clutch **Dry Plate**

261. No. of plates **1**

262. Dia. of clutch plates **21.5** cm inches

263. Dia. of linings, inside **15.0** cm in. outside **21.5** 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/automatic			
	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth
1	3.683	32 / 18 29 / 14			2.014	24 / 22 27 / 14		
2	2.263	32 / 18 28 / 22			1.608	24 / 22 28 / 19		
3	1.397	32 / 18 22 / 28			1.240	24 / 22 25 / 22		
4	1.000				1.000			
5								
6								
reverse	3.692	32 / 18 27 / 13			2.266	24 / 22 27 / 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**



Make TOYO KOGYO

Model MAZDA S122A

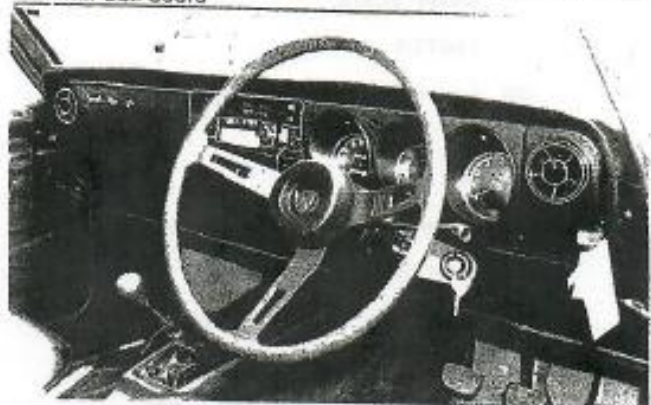
F.I.A. Rec. No.

Photograph

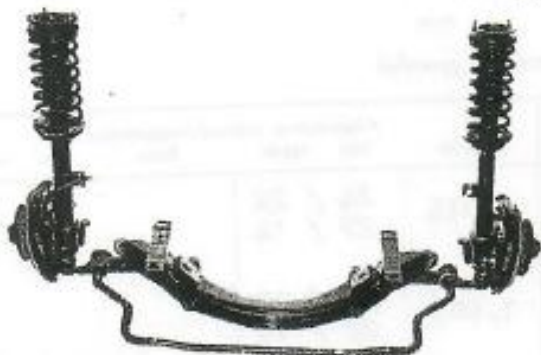
B, 3/4 view of car from rear



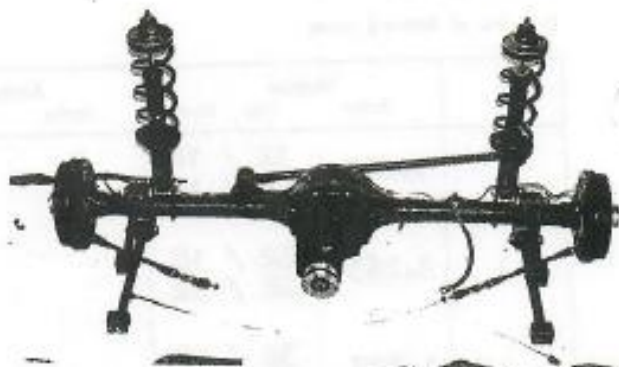
C, interior view of car through driver's door (open or removed) with dashboard



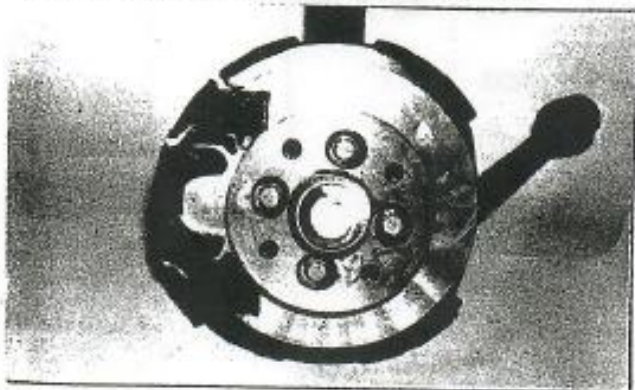
D, front axle complete, removed from car. Without wheels.



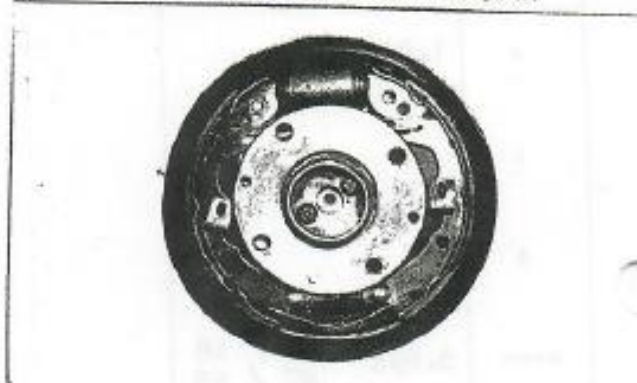
E, Rear axle complete without wheels, removed from car.



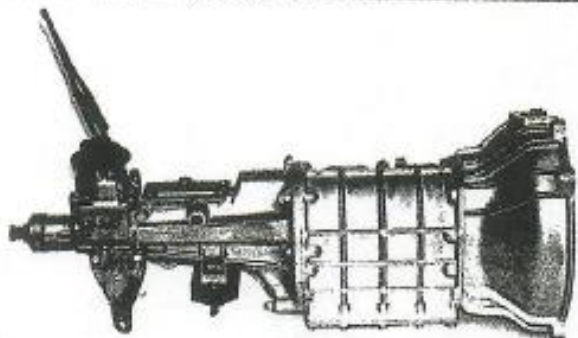
F, front brake, drum removed or disc with calipers



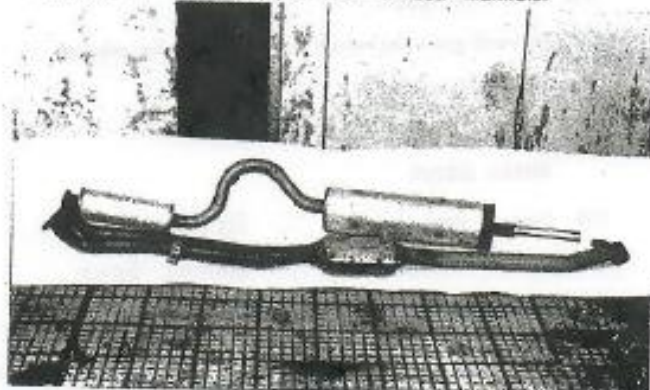
G, rear brake, drum removed or disc with calipers



H, gear-box, view from side



I, silencer + exhaust pipes after exhaust manifold.



Make TOYO KOGYO

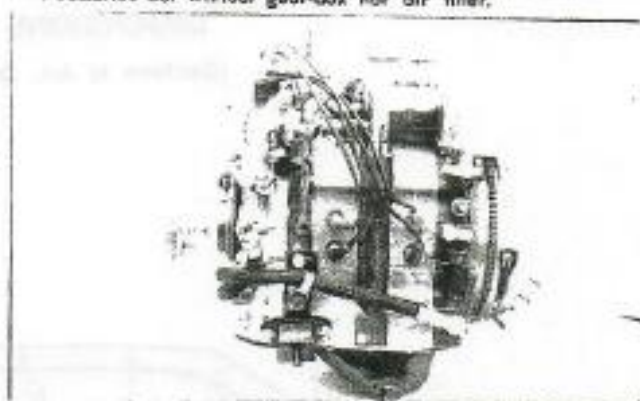
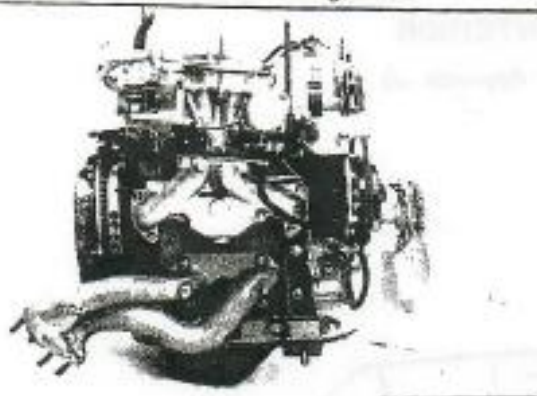
Model MAZDA S122A

F.I.A. Rec. No

Photograph

1. 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.



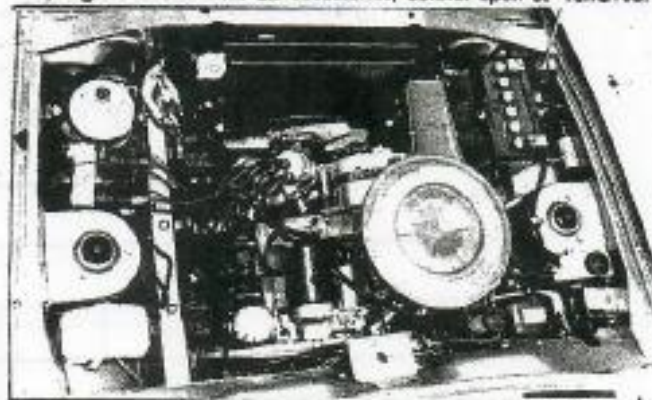
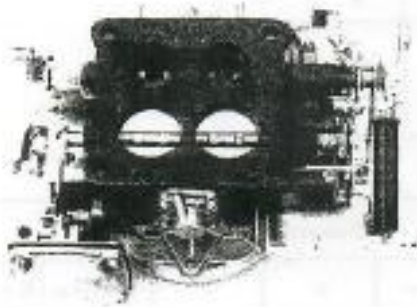
L. ~~COUVERTOIR~~ rotor housing

M. ~~DISQUE~~ rotor flank



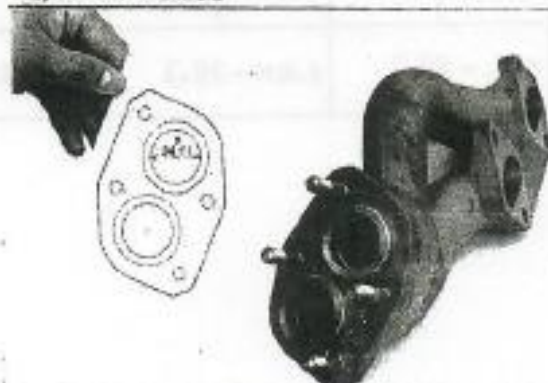
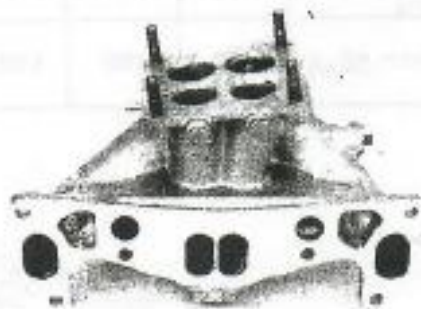
N. Carburetor (view from side of manifold)

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



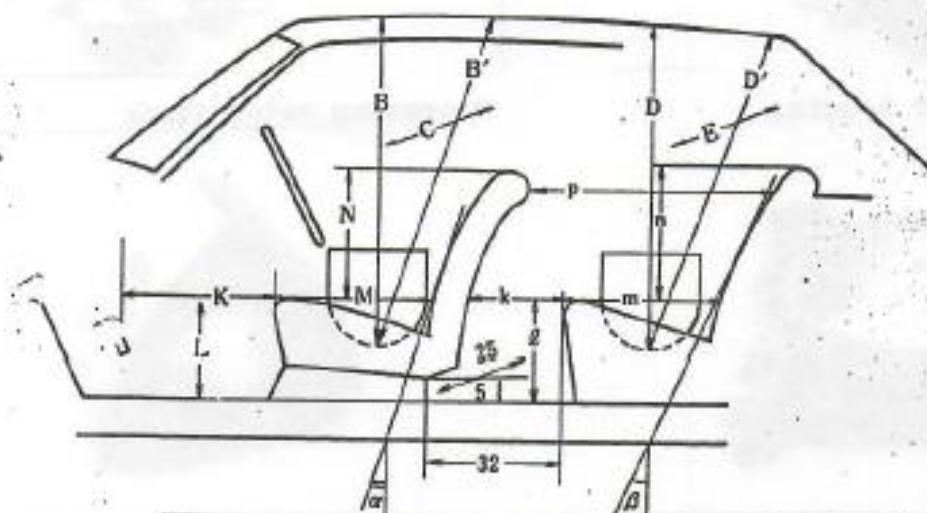
P. inlet manifold

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
93	97	15	129	92	88	20	129

*Minimum Dimensions (cm)										
L	l	M	m	N	n	k+m	p	k	k+l+m	K+L+M
29.0	34.0	46.0	46.0	39.0	40.5	70.5	72.5	24.5	104.5	121.5
0.9L - 26.1		0.85M - 39.1		0.8N - 31.2		0.8(k+m) - 56.4		(15)	(95)	(120)



Make TOYO KOGYO

Model MAZDA S122A

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 part | mm | in. | 304. Area | mm ² sq. in. |
| 305. Exhaust ports, length measured around cylinder wall | | | mm | inches |
| 306. Height exhaust part | mm | in. | 307. Area | mm ² sq. in. |
| 308. Transfer port, length measured around cylinder wall | | | mm | inches |
| 309. Height transfer part | mm | in. | 310. Area | mm ² sq. in. |
| 311. Piston ports, length measured around piston | | | mm | inches |
| 312. Height piston part | mm | in. | 313. Area | mm ² 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. <u>Drawing of cylinder ports.</u> | | | | |

330. Supercharging—see full details hereafter :

~~JAPAN MOTOR OIL FEDERATION~~

GAMS
VALID

Make TOYO KOGYO

Model MAZDA S122A

F.I.A. Rec. No.

WANKEL ROTARY ENGINE (photographs J and K)

400. Number of rotors		2	
401. Rotor arrangement		In line	
402. <u>Trochoid, length of major axis</u>	240 mm		9.45 in.
403. <u>Trochoid, length of minor axis</u>	180 mm		7.09 in.
404. <u>Trochoid, width</u>	70 mm		2.76 in.
405. <u>Trochoid, generating radius (containing equidistance)</u>	105 mm		4.13 in.
406. <u>Eccentricity</u>	15 mm		0.59 in.
407. <u>Capacity per rotor</u>	573 cm ³		35.0 cu.in.
408. <u>Total capacity</u>	1146 cm ³		69.9 70.0 cu.in.
409. <u>Equivalent total capacity (by App.J Art.252)</u>	2292 cm ³		139.8 140.0 cu.in.
410. Material(s) of side housing		Cast iron	
411. Material(s) of rotor housing		Al-alloy	
412. Number of inlet ports		4	
413. Number of exhaust ports		2	
414. Compression ratio		9.4	
415. Volume of one combustion chamber		68 cm ³	
416. Rotor, material		Cast iron	
417. Number of apex seal per rotor		3	
418. Number of corner seal per rotor		6	
419. Number of side seal per rotor		12	
420. Number of oil scraping ring per rotor		4	
421. Eccentric shaft: stamped / stamped			
422. Type of eccentric shaft: integral / *****			
423. Number of eccentric shaft main bearings		2	

Bearings

425. Eccentric shaft, main,	Type	Plain	Dia.	43 mm
426. Rotor bearing,	Type	Plain	Dia.	74 mm

Make TOYO KOGYO

Model MAZDA S122A

F.I.A. Rec. No.

Weights

430. Eccentric shaft 6.0 ~~4.1~~ kg
431. Rotor with seals, gear and bearing 5.02 ~~4.7~~ kg

Inlet (see page 8)

435. Material(s) of inlet manifold Al-alloy
436. Inlet ports area per rotor 1428 mm²
437. Inlet ports open at (with tolerance) 32° ± 10° A.T.D.C.
438. Inlet ports close at (with tolerance) 40° ± 10° A.B.D.C.
439. Air filter, type Dry

Exhaust (see page 8)

445. Material(s) of exhaust manifold Cast iron
446. Exhaust ports area per rotor 460 mm²
447. Exhaust ports open at (with tolerance) 80° ± 10° B.B.D.C.
448. Exhaust ports close at (with tolerance) 48° ± 10° A.T.D.C.

JAPAN AUTOMOBILE FEDERATION

難波靖治

Yasuharu Nanba

