



JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. **5316**
Group **1**

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer	TOYO KOGYO CO., LTD.	Cylinder-capacity	1796	cm ³	109.6	cu. in.
Serial No. of chassis	SVA-10001	Model	SVA (MAZDA LUCE 1800)			
Serial No. of engine	VB-10001	Manufacturer	TOYO KOGYO			
Recognition is valid from	1/1/70	Manufacturer	TOYO KOGYO			
		List	70/1			

The manufacturing of the model described in this recognition form was started on **Nov. 1968** and the minimum production of **5000** identical cars, in accordance with the specifications of this form was reached on **June 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

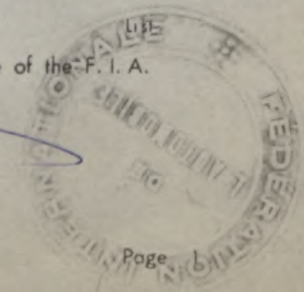
Normal evolution of the type

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
National Sporting Authority



Stamp and signature of the F. I. A.



Make TOYO KOGYO

Model. SVA

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.

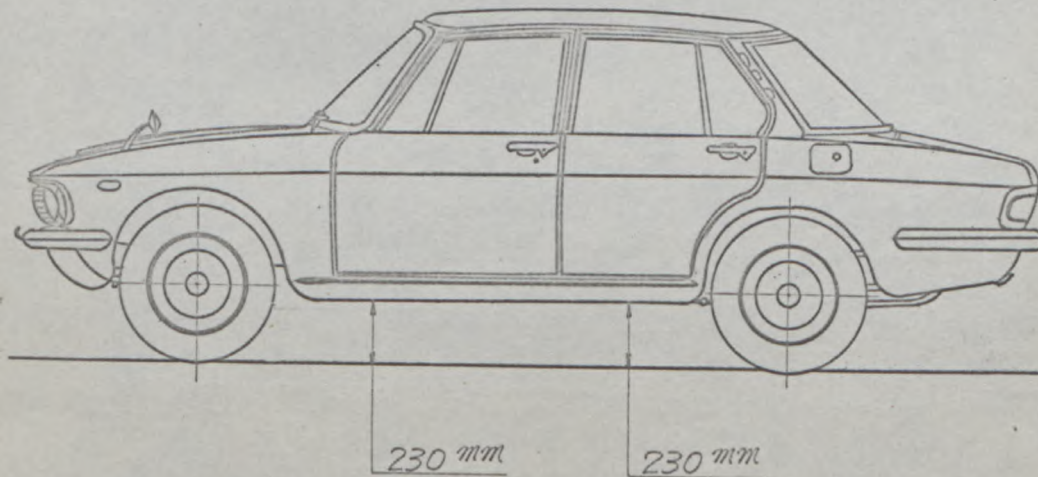
CAPACITIES AND DIMENSIONS

1. <u>Wheelbase</u>	2500	mm	98.4	inches
2. <u>Front track</u>	1330	mm	52.4	inches *
3. <u>Rear track</u>	1320	mm	52.0	inches *
4. Overall length of the car	437	cm		inches
5. Overall width of the car	163	cm		inches
6. Overall height of the car	143	cm		inches
7. <u>Capacity of fuel tank</u> (reserve included)		50		1 lrs
	13.21	Gallon US		Gallon Imp.
8. Seating capacity	6			
9. <u>Weight</u> , total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools:				
	1000	kg	2240	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 lrs
1 foot / pied	--	30.4794 cm	1 pint (pt)	--	0.568 lrs
1 square inch / pouce carré	--	6.452 cm ²	1 gallon Imp.	--	4.546 lrs
1 cubic inch / pouce cube	--	16.387 cm ³	1 gallon US	--	3.785 lrs
1 pound / livre (lb)	--	453.593 gr.	1 hundred weight (cwt)	--	50.802 kg

FEDERAL BUREAU OF INVESTIGATION
 DEPARTMENT OF JUSTICE
 Page 2

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 **Steel**
- 24. Number of doors **4** Material (s) **"**
- 25. Material (s) of bonnet **"**
- 26. Material (s) of boot lid **"**
- 27. Material (s) of rear-window **Glass**
- 28. Material (s) of windscreen **"**
- 29. Material (s) of front-door windows **"**
- 30. Material (s) of rear-door windows **"**
- 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 - ~~no~~
- 41. Front seats, type of seats and upholstery **Separate Seat & Vinyl Leather**
- 42. Weight of front seat (s), complete with supports and rails, out of the car :

16 x 2	kg	lbs
--------	----	-----
- 43. Rear seats, type of seats and upholstery **Bench Seat & Vinyl Leather**
- 44. Front bumper, material (s) **Steel** Weight **8** kg lbs
- 45. Rear bumper, material (s) **Steel** Weight **9** kg lbs

WHEELS

- 50. Type **Pressed Steel**
- 51. Weight (per wheel, without tyre) **5.9 (4 1/2)kg** lbs
- 52. Method of attachment **4 Hub-Bolts**
- 53. Rim diameter **356** mm **14** inches
- 54. Rim width **114** mm **4 1/2** inches

STEERING

- 60. Type **Ball and Nuts Type**
- 61. Servo-assistance : ~~yes~~ - no
- 62. Number of turns of steering wheel from lock to lock **3.8**
- 63. In case of servo-assistance



SUSPENSION

- 70. Front suspension (photogr. D), type Independent, Wishbone Type
- 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 Axle Type
- 79. Type of spring ~~Semi-Elliptic 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 ~~4.5" Master Vac.~~ 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)	mm 2 1/8 in.		mm 11/16 in.	
Drum brakes				
95. Inside diameter	mm	in.	254	mm in.
96. Length of brake linings	mm	in.	266	mm in.
97. Width of brake linings	mm	in.	40	mm in.
98. Number of shoes per brake			2	
99. Total area per brake	mm ²	sq. in.	21280	mm ² sq. in.
Disc brakes				
100. Outside diameter	256	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 ²	sq. in.	mm ² sq. in.



ENGINE (photographs J and K)

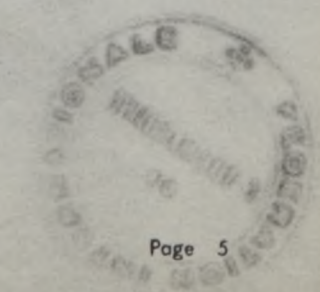
- | | | | |
|---|--------------------------------------|------------------------------|-----------------------------|
| 130. Cycle | 4 | 131. Number of cylinders | 4 |
| 132. Cylinder arrangement | in line | | |
| 133. Bore | 78.0 mm | 134. Stroke | 94.0 mm |
| | 3.07 in. | | 3.71 in. |
| 135. Capacity per cylinder | 449 | cm ³ | 27.4 cu. in. |
| 136. Total cylinder-capacity | 1796 | cm ³ | 109.6 cu. in. |
| 137. Material (s) of cylinder block | High Grade 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 | 50 | cm ³ | 3.05 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 | 40 | mm | 1.57 inches |
| 147. Crankshaft : moulded / cast | | 148. Type of crankshaft : | integral / XXXXX |
| 149. Number of crankshaft main bearings | 5 | | |
| 150. Material of bearing cap | Ductile Cast Iron | | |
| 151. System of lubrication : dry sump / oil in sump | | | |
| 152. Capacity, lubricant | 3.9 | litrs | pts quarts US |
| 153. Oil cooler : yes / no | | | |
| 154. Method of engine cooling | Water, Forced Circulation | | |
| 155. Capacity of cooling system | 7.9 | litrs | pints quarts US |
| 156. Cooling fan (if fitted), dia. | 35 | cm | 13.8 inches |
| 157. Number of blades of cooling fan | 4 | or 2 | |

Bearings

- | | | | | | | |
|------------------------------|-------|------|----|----|------|-----|
| 158. Crankshaft main, type | Plain | Dia. | 63 | mm | 2.48 | in. |
| 159. Connecting rod big end, | Plain | Dia. | 56 | mm | 2.20 | in. |

Weights

- | | | | | | | |
|---|------------|----|--------|---------------------|-------|--------------|
| 160. Flywheel (clean) | 10,301 | kg | 22.73 | lbs | | |
| 161. Flywheel with clutch (all turning parts) | | | 15,995 | kg 35.15 lbs | | |
| 162. Crankshaft | 19.66 | kg | lbs | 163. Connecting rod | 0.632 | kg 1,392 lbs |
| | (with key) | | | | | |
| 164. Piston with rings and pin | 0.471 | kg | 1,038 | lbs | | |



FOUR STROKE ENGINES

- 170. Number of camshafts 1 171. Location Cylinder head
- 172. Type of camshaft drive Chain
- 173. Type of valve operation Overhead 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 10.0 mm 0.394 in.
- 183. Number of valve springs 2
- 184. Type of spring Coil Spring
- 185. Number of valves per cylinder 1
- 186. Tappet clearance for checking timing (cold) 0.3 mm 0.0118 inches
- 187. Valves open at (with tolerance for tappet clearance indicated) 13° ±7°
- 188. Valves close at (with tolerance for tappet clearance indicated) 57° ±7°
- 189. Air filter, type Dry

EXHAUST (see page 8)

- 195. Material (s) of exhaust manifold ~~FC145 Ductile~~ Cast Iron
- 196. Diameter of valves 33.0 mm 1.299 inches
- 197. Max. valve lift 10.0 mm 0.394 in.
- 198. Number of valve springs 2
- 199. Type of spring Coil Spring
- 200. Number of valves per cylinder 1
- 201. Tappet clearance for checking timing (cold) 0.3 mm 0.0118 inches
- 202. Valves open at (with tolerance for tappet clearance indicated) 62° ±7°
- 203. Valves close at (with tolerance for tappet clearance indicated) 8° ±7°

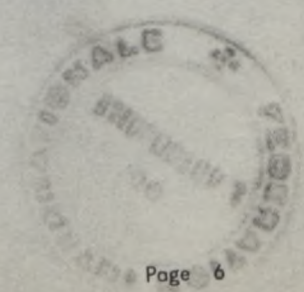
CARBURETION (photograph N)

- 210. Number of carburetors fitted 1
- 211. Type Constant Vacuum Type
- 212. Make HITACHI
- 213. Model HJN42
- 214. Number of mixture passages per carburetor 4
- 215. Flange hole diameter of exit port(s) of carburetor 42 mm 1.65 in.
- 216. Minimum dimensions of mixture passage (s) with piston at max. height (example: SU)
~~Variable~~ 34 mm inches

INJECTION (if fitted)

- 220. Make of pump
- 221. Number of plungers
- 222. Model or type of pump
- 223. Total number of injectors
- 224. Location of injectors
- 225. Minimum diameter of inlet pipe mm inches

*) for additional information concerning two-stroke engines and super-charged engines see page 13.



Make TOYO KOGYO

Model SVA

F.I.A. Rec. No.

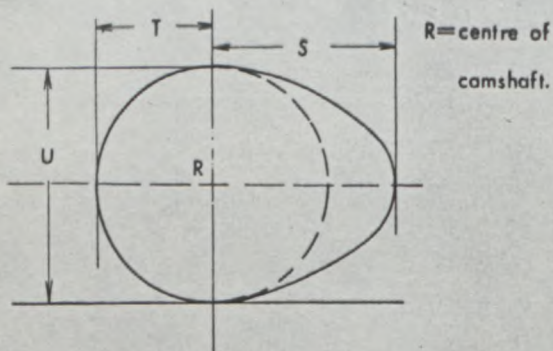
ENGINE ACCESSORIES

- 230. Fuel pump : ~~mechanical~~ electric
- 231. No. fitted 1
- 232. Type of ignition system ~~Magneto~~ **Make & Break Ignition**
- 233. No. of distributors 1
- 234. No. of ignition coils 1
- 235. No. of spark plugs per cylinder 1
- 236. Generator type: ~~dynamo~~/alternator - number fitted 1
- 237. Method of drive ~~Pully~~ V Belt
- 238. Voltage of generator ~~14~~ 12 volts
- 239. Battery, number ~~NS402~~, 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 5500 rpm
- 251. Maximum rpm 5500 output at that figure 100 PS
- 252. Maximum torque 15.5 kg-m at 2500 rpm
- 253. Maximum speed of the car 165 km/hour 102.4 miles / hour

255.

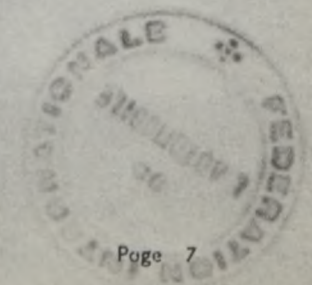


Inlet cam

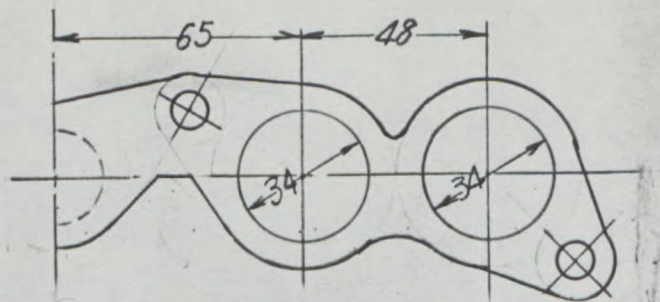
S =	27.117	mm	1.07	inches
T =	19.0	mm	0.748	inches
U =	38.0	mm	1.496	inches

Exhaust cam

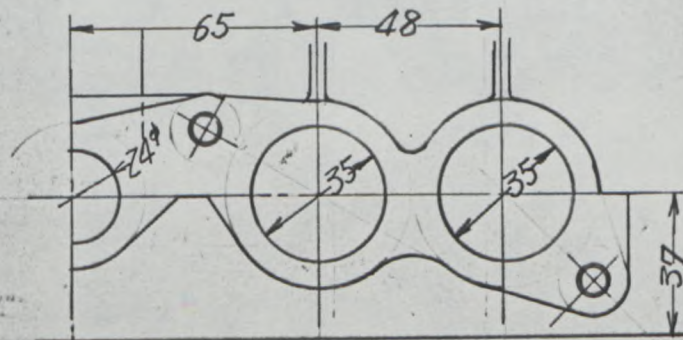
S =	27.117	mm	1.07	inches
T =	19.0	mm	0.748	inches
U =	38.0	mm	1.496	inches



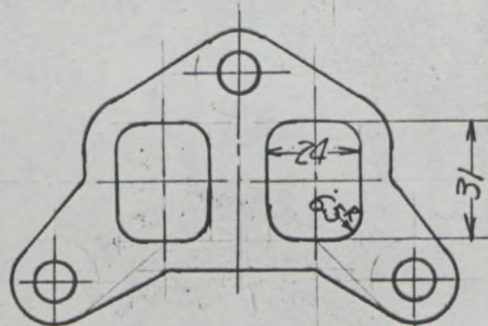
Drawing inlet manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



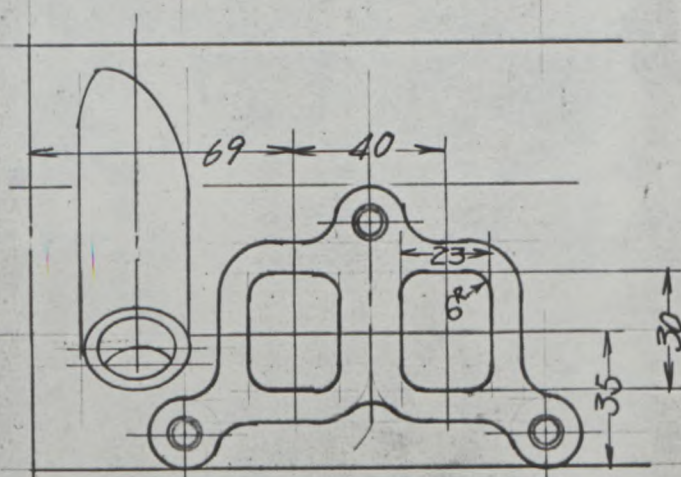
Drawing of entrance to inlet port of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



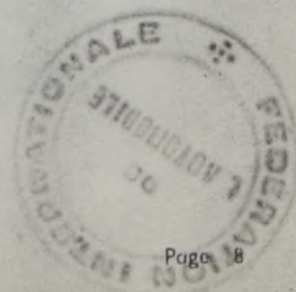
Drawing exhaust manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



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



Unit: mm
Tolerance: ± 1.5



Make TOYO KOGYO

Model SVA

F.I.A. Rec. No.

DRIVE TRAIN

CLUTCH

260. Type of clutch Dry Plate 261. No. of plates 1

262. Dia. of clutch plates 20.34 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 or Column

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	3.737	31/16 27/14			3.403	30/17 27/14		
2	2.202	31/16 25/22			2.005	30/17 25/22		
3	1.435	31/16 20/27			1.307	30/17 20/27		
4	1.000				1.000			
5								
6								
reverse	4.024	31/16 27/13			3.665	30/17 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

SVA

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.

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

7	<u>Capacity of fuel tank (reserve included)</u>					
	60 ltrs	15.9	gallonUS			
	80 ltrs	21.1	gallon US			
	100 ltrs	26.4	gallon US			
53	<u>Rim Diameter</u>	381 mm	14 inches	381 mm	15 inches	
54/51	<u>Rim Width and Weight(per wheel)</u>	127 mm	5 inches	6.8 kg	127 mm	5 inches 7.0 kg
		140 mm	5.5 inches	7.0 kg	140 mm	5.5 inches 7.9 kg
292	Type of limited slip differential			Mechanical Type		
293	Final drive ratio	3.455	3.900	4.375	4.625	4.875
	Number of teeth	38/11	39/10	35/8	37/8	39/8

N.B. Above optional equipments are VALID FOR GROUPE 2 ONLY.

41 Front seats, type of seats and upholstery Bench seat & Vinyl leather

Photograph C



Photograph

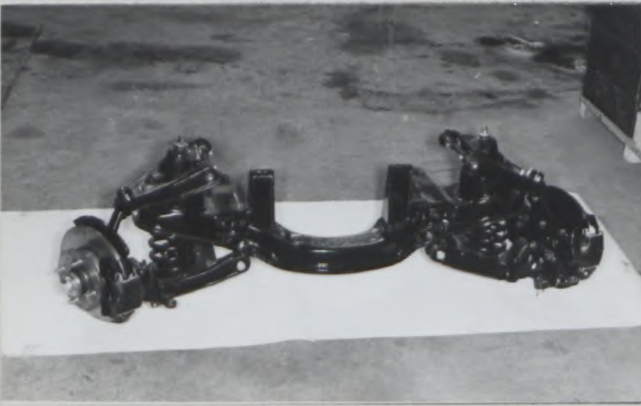
B, 3/4 view of car from rear



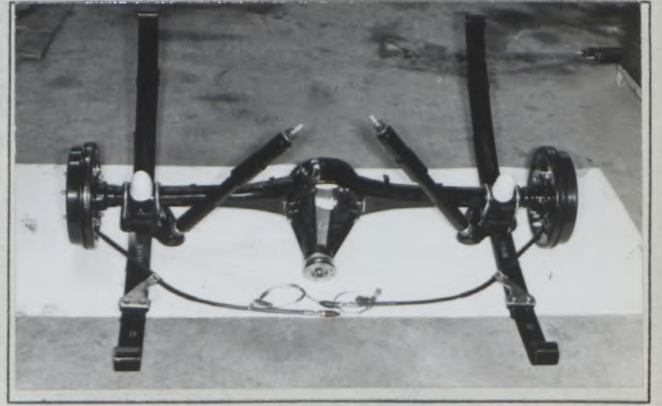
C, interior view of car through driver's door (open or removed) with dashboard



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



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



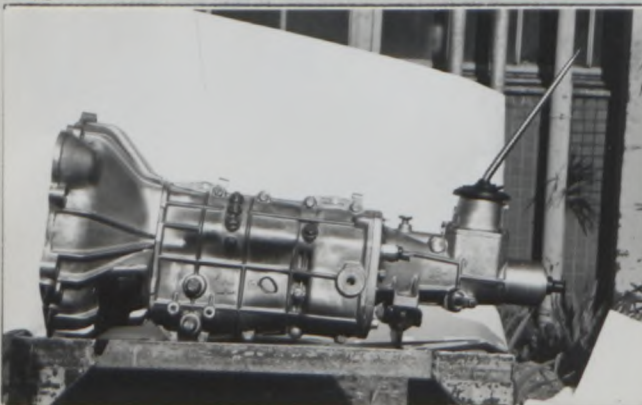
F, front brake. drum removed or disc with caliper(s)



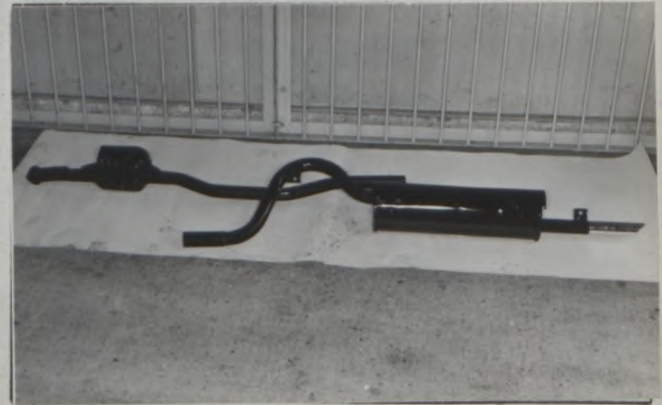
G, rear brake. drum removed or disc with caliper(s)



H, gear-box, view from side

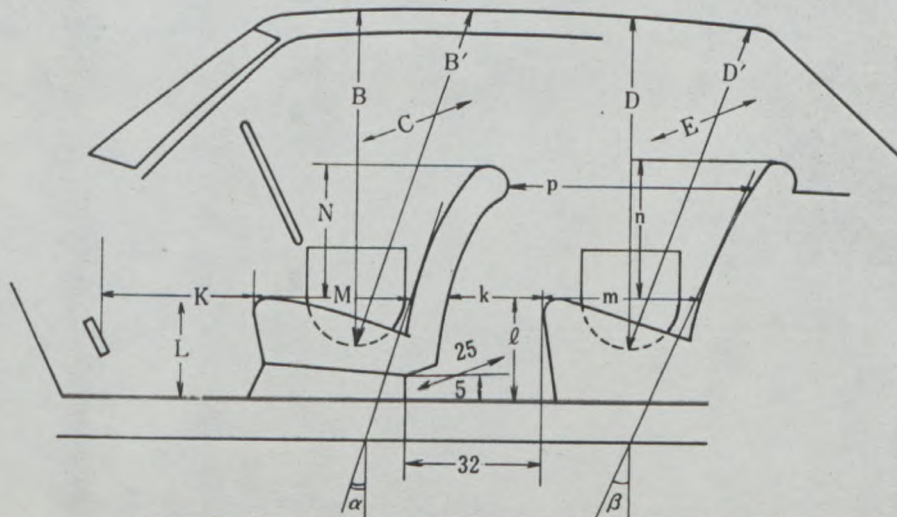


I, silencer + exhaust pipes after exhaust manifold.



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
95.5	102.5	20°	131	94.5	84	25°	131

Minimum Dimensions (cm)										
L	ℓ	M	m	N	n	k+m	p	k	k+l+m	K+L+M
31	36.5	47	47	41	37	71.5	75	24.5	109	120.5
0.9L =	27.9	0.85M =	39.95	0.8N =	32.8	0.8(k+m) =	57.20	(15)	(95)	(120)



Make TOYO KOGYO

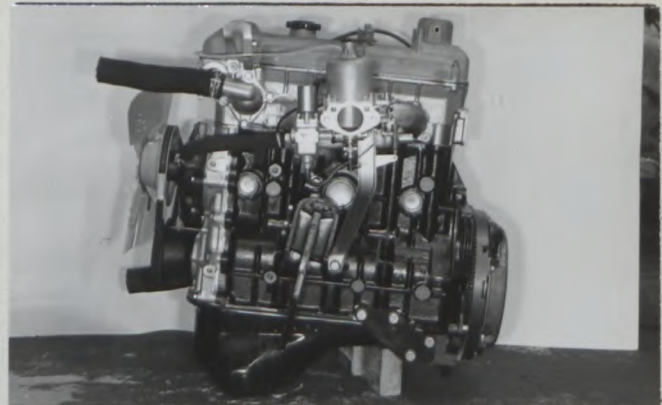
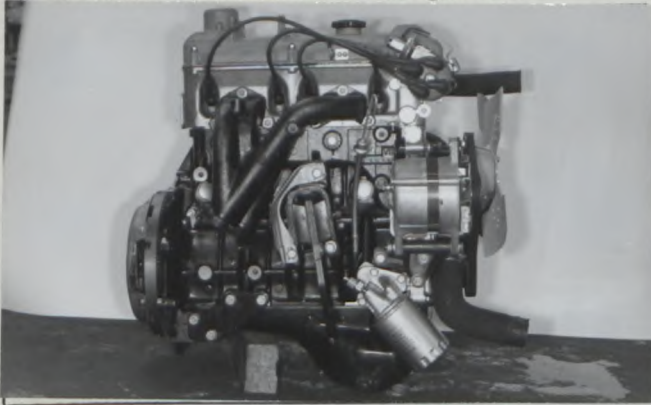
Model SVA

F. I. A. Rec. No

Photograph

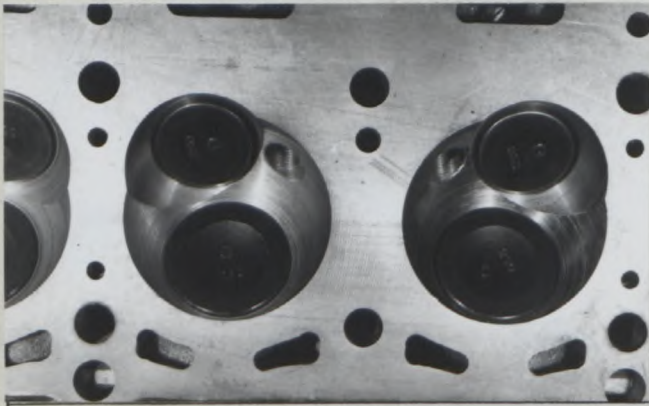
engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.

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



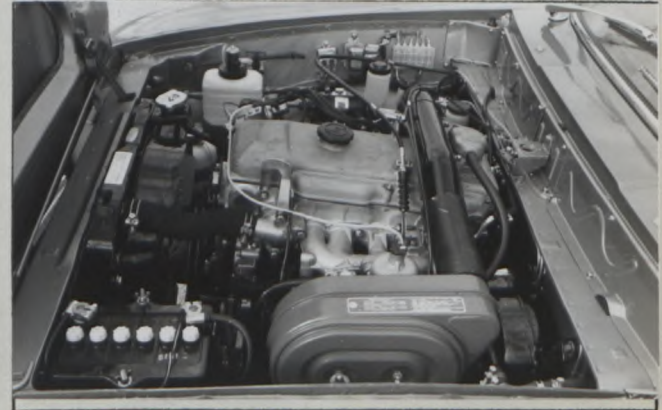
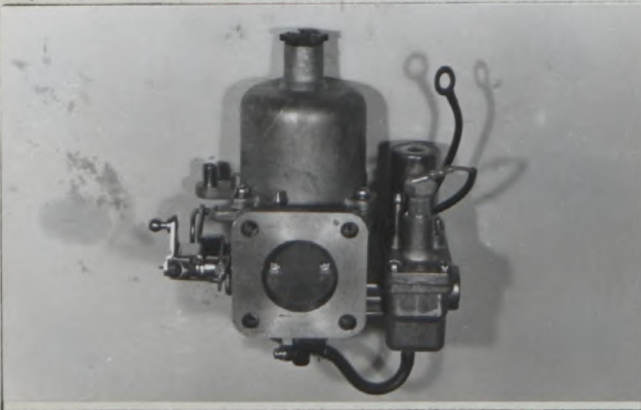
L, combustion chamber

M, piston crown



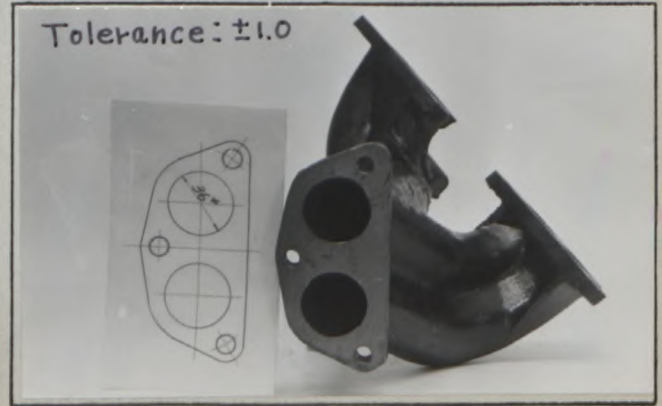
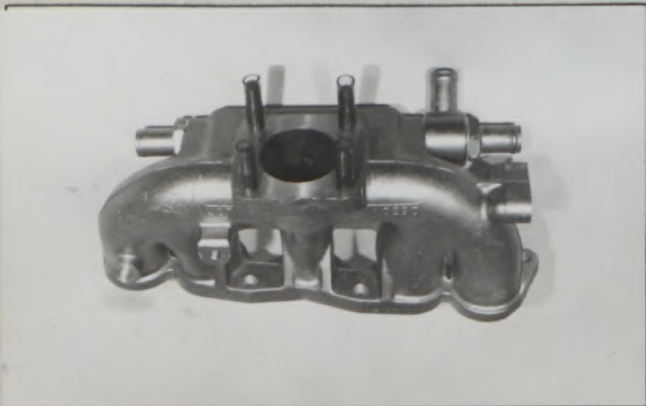
N, Carburettor (view from side of manifold)

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



P, inlet manifold

Q, exhaust manifold



Make TOYO KOGYO

Model SVA

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

Kazunari Komotori

Kazunari Komotori

