



# JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. *5115*

Group *1-Series Prod. Touring*

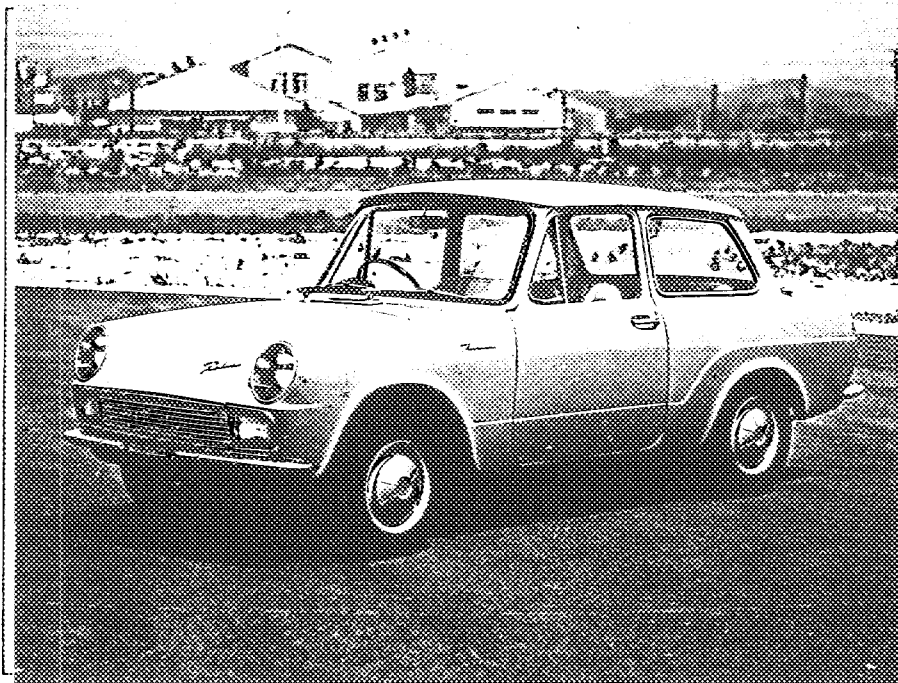
## FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer	Toyota Motor Co., Ltd.	Cylinder-capacity	790	cm3	48.2	cu. in.
Serial No. of chassis	UP 20 - 10001	Model	UP 20			
Serial No. of engine	2J - 329277	Manufacturer	Toyota Motor Co., Ltd.			
Recognition is valid from	<i>1st August 1966</i>	Manufacturer	Toyota Motor Co., Ltd.			
		List	<i>14/7</i>			

The manufacturing of the model described in this recognition form was started on *Jan.* 1966 and the minimum production of 5000 identical cars, in accordance with the specifications of this form was reached on *April* 1966

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

*[Handwritten signature]*

Make

Toyota

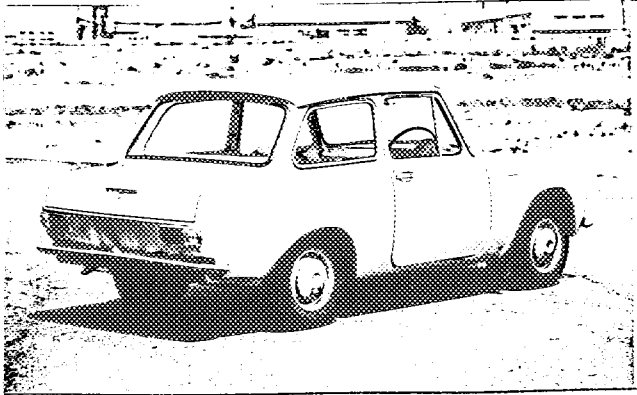
Model

UP 20

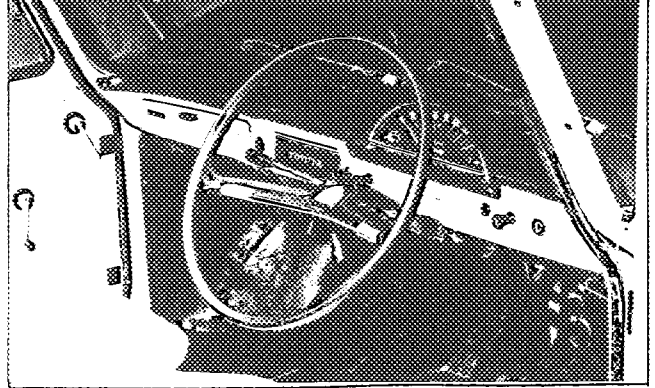
F. I. A. Rec. No.

Photograph

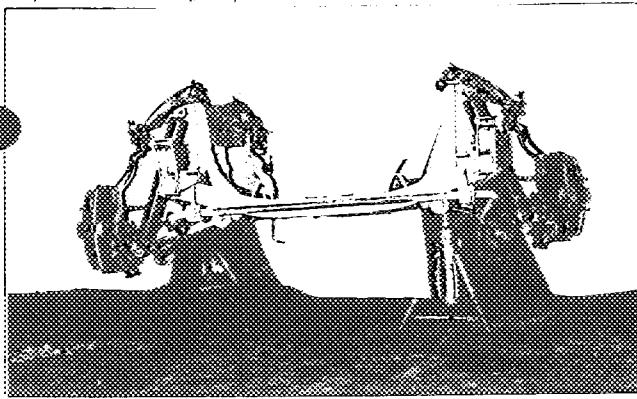
B, 3/4 view of car from rear



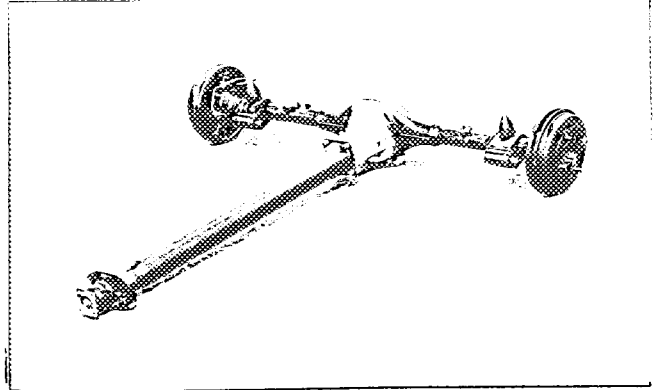
C, interior view of car through driver's door (open or removed)



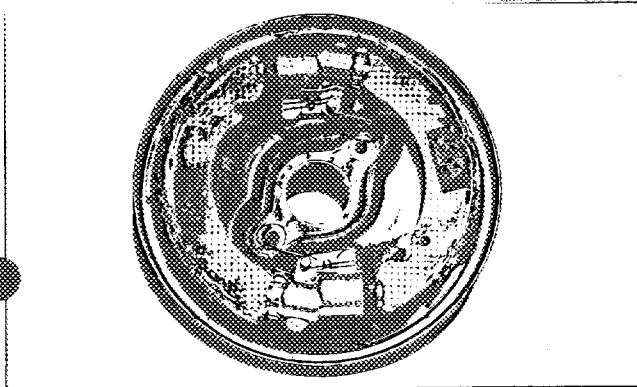
D, front axle complete, removed from car. Without wheels.



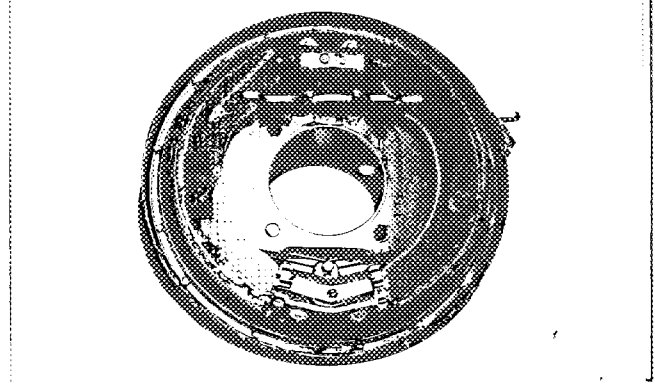
E, Rear axle complete without wheels, removed from car.



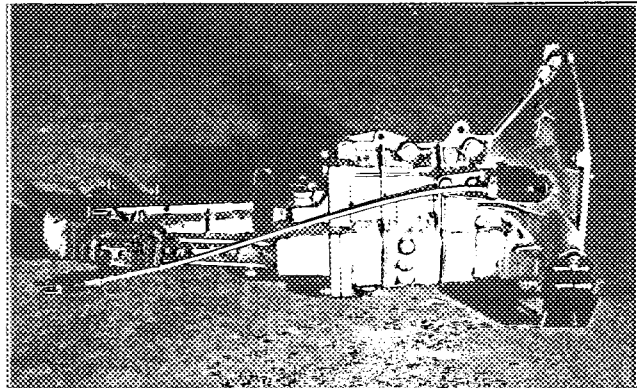
F, front brake, drum removed



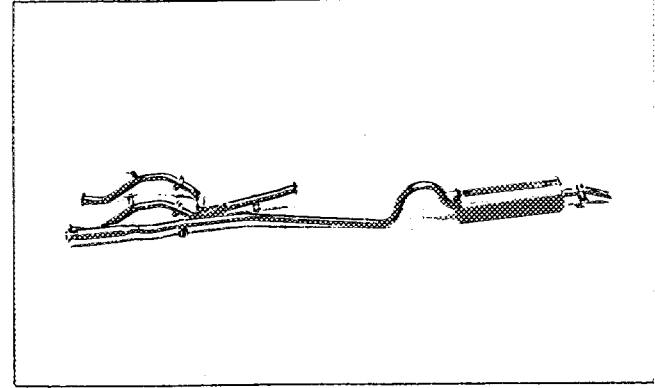
G, rear brake, drum removed



H, gear-box, view from side



I, silencer + exhaust pipes after exhaust manifold.



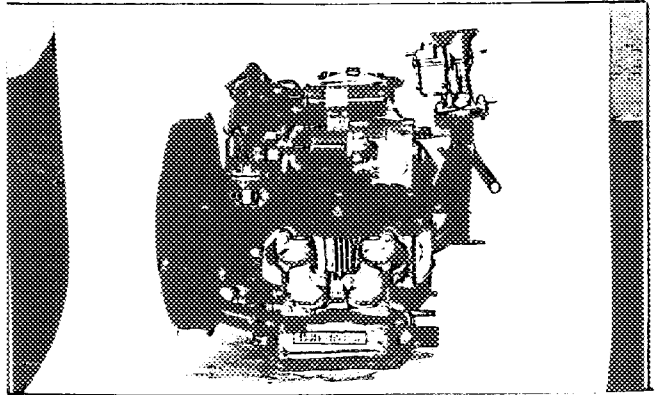
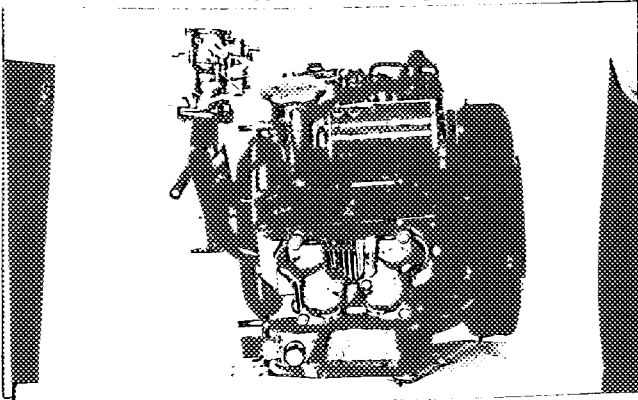
Make **Toyota**

Model **UP 20**

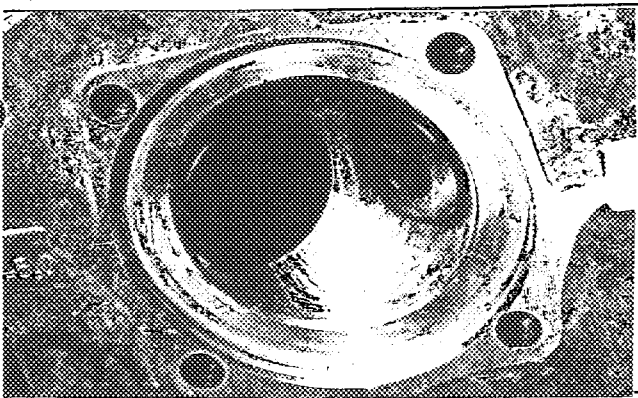
F. i. A. Rec. No

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

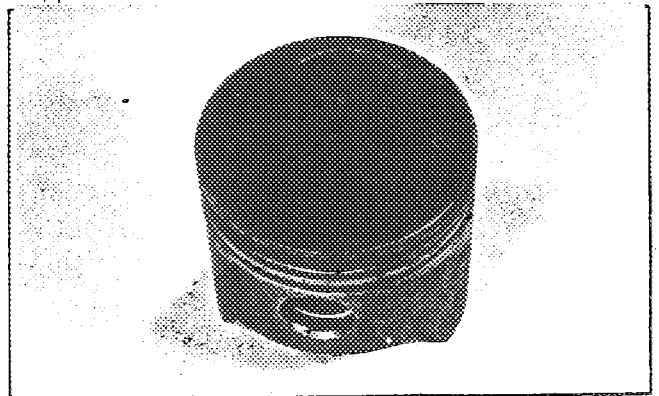
Engine unit out of car, from left. With clutch and accessories but without gear-box nor air filter.



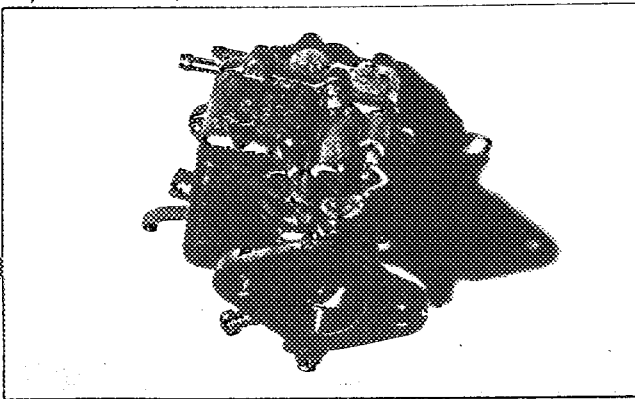
L, combustion chamber



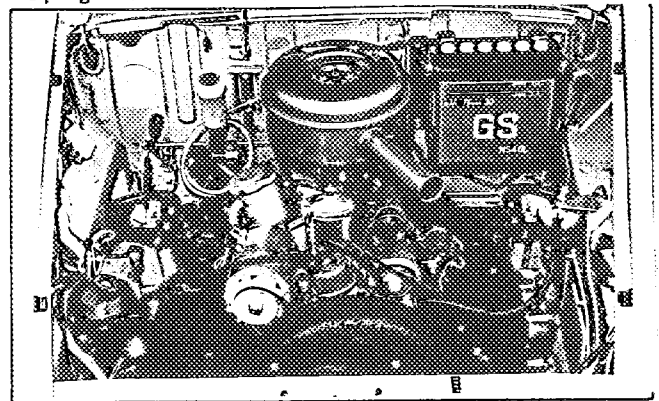
M, piston crown



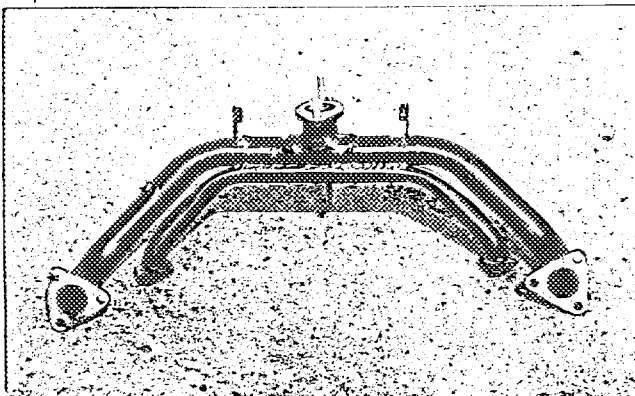
N, Carburettor (view from side of manifold)



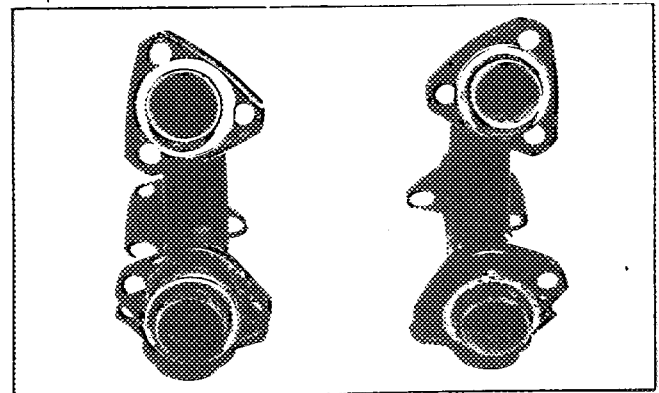
O, engine in car with all accessories, bonnet open or removed.



P, inlet manifold



Q, exhaust manifold



Make

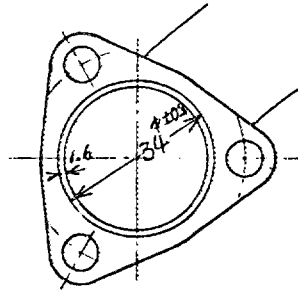
Toyota

Model

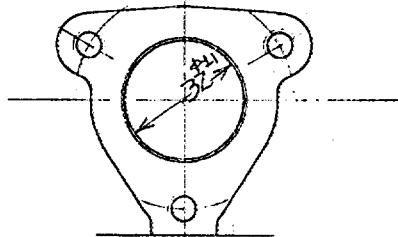
UP 20

F.I.A. Rec. No.

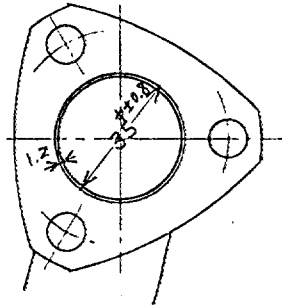
Drawing inlet manifold ports, side of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



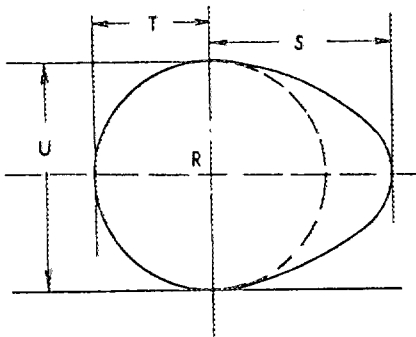
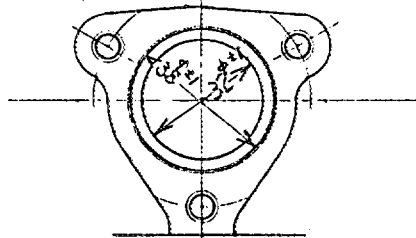
Drawing of entrance to inlet port of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



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



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



R=centre of camshaft.

Inlet cam

- S = 22.5
- T = 16.5
- U = 33.0

- mm 0.878 inches
- mm 0.650 inches
- mm 1.30 inches

Exhaust cam

- S = 22.5
- T = 16.5
- U = 33.0

- mm 0.878 inches
- mm 0.650 inches
- mm 1.30 inches



Make

Toyota

Model

UP 20

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>	2130	mm	83.9	inches
2. <u>Front track</u>	1203	mm	47.4	inches *
3. <u>Rear track</u>	1160	mm	54.7	inches *
4. Overall length of the car	362	cm	142.5	inches
5. Overall width of the car	141.5	cm	55.8	inches
6. Overall height of the car	138	cm	54.4	inches
7. <u>Capacity of fuel tank</u> (reserve included)			31	ltrs
	8.2	Gallon US		Gallon Imp.
8. Seating capacity	4			
9. <u>Weight</u> , total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools:				
	590	kg	1300	lbs
				cwt

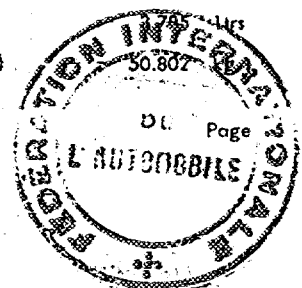
\* ) Differences in track caused by the use of other wheels with different rim widths must be stated when recognition is requested for the wheels concerned.

Specify ground clearance in relation to the track and give drawing of two easily recognizable points at front and rear 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)	--	907.185 kg



DL Page

**CHASSIS AND COACHWORK** (Photographs A, B and C)

20. Chassis/body construction : ~~separate~~ / unitary construction
21. Unitary construction, material (s) Steel Sheet  
 Separate construction
22. Material (s) of chassis
23. Material (s) of coachwork
24. Number of doors 2 Material (s) Steel Sheet
25. Material (s) of bonnet Steel Sheet
26. Material (s) of boot lid Steel Sheet
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**

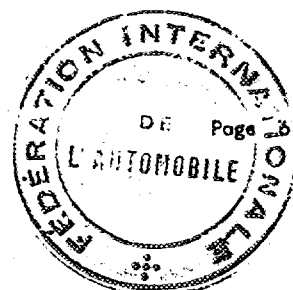
38. Interior heating : ~~XXX~~ - no
39. Air-conditioning : ~~XXX~~ - no
40. Ventilation : yes - ~~XXX~~
41. Front seats, type of seats and upholstery Bench, Vinyl Leather
42. Weight of front seat (s), complete with supports and rails, out of the car :  
13.9 kg lbs
43. Rear seats, type of seats and upholstery Bench, Vinyl Leather
44. Front bumper, material (s) Steel Plate Weight 2.8 kg lbs
45. Rear bumper, material (s) Steel Plate Weight 2.8 kg lbs

**WHEELS**

50. Type Pressed Steel, Disc Wheel
51. Weight (per wheel, without tyre) 4.5 kg lbs
52. Method of attachment Four Hub Bolts and Nuts
53. Rim diameter 304 mm 12 inches
54. Rim width 102 mm 4 inches

**STEERING**

60. Type Worm & Sector Roller
61. Servo-assistance : ~~XXX~~ - no
62. Number of turns of steering wheel from lock to lock 2.5
63. In case of servo-assistance



Make

Toyota

Model

UP 20

F. I. A. Rec. No.

**SUSPENSION**

- 70. Front suspension (photogr. D), type **Independent by Double Wishbones**
- 71. Type of spring **Torsion Bar**
- 72. Stabiliser (if fitted) **Torsion Bar**
- 73. Number of shockabsorbers **2**
- 74. Type **Hydraulic Telescopic**
- 78. Rear suspension (photogr. E), type **Torque Tube**
- 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. Method of operation **Hydraulic**
- 91. Servo-assistance (if fitted), type \_\_\_\_\_
- 92. Number of hydraulic master cylinders **1**

	FRONT			REAR		
93. Number of cylinders per wheel	2			1		
94. Bore of wheel cylinder (s)	mm	3/4	in.	mm	11/16	in.
<b>Drum brakes</b>						
95. Inside diameter	200	mm	in.	200	mm	in.
96. Length of brake linings	192	mm	in.	192	mm	in.
97. Width of brake linings	30	mm	in.	30	mm	in.
98. Number of shoes per brake	2			2		
99. Total area per brake	115 x 10 <sup>2</sup>	mm <sup>2</sup>	sq. in.	115 x 10 <sup>2</sup>	mm <sup>2</sup>	sq. in.
<b>Disc brakes</b>						
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 <sup>2</sup>		sq. in.	mm <sup>2</sup>		sq. in.



Make **Toyota** Model **UP 20** F.I.A. Rec. No.

**ENGINE** (photographs J and K)

- |   |   |                              |                      |           |         |
|---|---|------------------------------|----------------------|-----------|---------|
| 130. Cycle  | 4   | 131. Number of cylinders     | 2                    |           |         |
| 132. Cylinder arrangement   | <b>Horizontally Opposed</b>                                     |                              |                      |           |         |
| 133. Bore   | 83 mm   | 3.3 in.                      | 134. Stroke          | 73 mm     | 2.9 in. |
| 135. Capacity per cylinder  | 395   | cm <sup>3</sup>              | 24.1                 | cu. in.   |         |
| 136. Total cylinder-capacity  | 790   | cm <sup>3</sup>              | 48.2                 | cu. in.   |         |
| 137. Material (s) of cylinder block   | <b>Cast Iron</b>  |                              |                      |           |         |
| 138. Material (s) of sleeves (if fitted)                                    | -----   |                              |                      |           |         |
| 139. Cylinder-head, material (s)  | <b>Al- Alloy</b>  |                              | Number fitted        | 2         |         |
| 140. Number of inlet ports  | 2   | 141. Number of exhaust ports | 2                    |           |         |
| 142. Compression ratio  | <b>8.2</b>  |                              |                      |           |         |
| 143. Volume of one combustion chamber                                       | 44  | cm <sup>3</sup>              | cu. in.              |           |         |
| 144. Piston, material   | <b>Al- Alloy</b>  |                              | 145. Number of rings | 3         |         |
| 146. Distance from gudgeon pin centre line to highest point of piston crown | 36  | mm                           | inches               |           |         |
| 147. Crankshaft : <del>cast iron</del> / stamped                            | 148. Type of crankshaft : <b>integral /</b>                     |                              |                      |           |         |
| 149. Number of crankshaft main bearings                                     | 2   |                              |                      |           |         |
| 150. Material of bearing cap  | -----   |                              |                      |           |         |
| 151. System of lubrication : <del>dry sump</del> / oil in sump              |   |                              |                      |           |         |
| 152. Capacity, lubricant  | 2.8   | litrs                        | pts                  | quarts US |         |
| 153. Oil cooler : <del>yes</del> / no                                       | 154. Method of engine cooling <b>Air Cooling by Sirocco Fan</b> |                              |                      |           |         |
| 155. Capacity of cooling system   | 2.2   | litrs                        | pints                | quarts US |         |
| 156. Cooling fan (if fitted), dia.  | 22.2  | cm                           | inches               |           |         |
| 157. Number of blades of cooling fan  | 30  |                              |                      |           |         |

**Bearings**

- |                              |      |    |    |     |
|------------------------------|------|----|----|-----|
| 158. Crankshaft main, type   | Dia. | 50 | mm | in. |
| 159. Connecting rod big end, | Dia. | 50 | mm | in. |

**Weights**

- |   |      |    |     |
|---|------|----|-----|
| 160. Flywheel (clean)                         | 10   | kg | lbs |
| 161. Flywheel with clutch (all turning parts) | 11   | kg | lbs |
| 162. Crankshaft                               | 5.5  | kg | lbs |
| 163. Connecting rod                           | 0.55 | kg | lbs |
| 164. Piston with rings and pin                | 0.48 | kg | lbs |





Make

Toyota

Model

UP 20

F. I. A. Rec. No.

FOUR STROKE ENGINES

170. Number of camshafts 1 171. Location Crankcase  
 172. Type of camshaft drive Gear  
 173. Type of valve operation Push Rod & Rocker

INLET (see page 4) \*

180. Material(s) of inlet manifold Steel Pipe  
 181. Diameter of valves 38 mm 1.5 inches  
 182. Max. valve lift 9.0 mm 0.35 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 mm inches  
 187. Valves open at (with tolerance for tappet clearance indicated) B.T.D.C.  $24^{\circ} \pm 3^{\circ}$   
 188. Valves close at (with tolerance for tappet clearance indicated) A.B.D.C.  $64^{\circ} \pm 3^{\circ}$   
 189. Air filter, type Dry

EXHAUST (see page 4)

195. Material (s) of exhaust manifold Steel Pipe  
 196. Diameter of valves 32 mm 1.26 inches  
 197. Max. valve lift 9.0 mm 0.35 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 mm inches  
 202. Valves open at (with tolerance for tappet clearance indicated) B.B.D.C.  $64^{\circ} \pm 3^{\circ}$   
 203. Valves close at (with tolerance for tappet clearance indicated) A.T.D.C.  $24^{\circ} \pm 3^{\circ}$

CARBURETION (photograph N)

210. Number of carburetors fitted 1 211. Type Down Draught  
 212. Make Aisan 213. Model 21100-11020  
 214. Number of mixture passages per carburetor 1  
 215. Flange hold diameter of exit port(s) of carburetor 32 mm in.  
 216. Minimum diameter of venturi / ~~minimum diameter of venturi~~ 26 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

Toyota

Model

UP 20

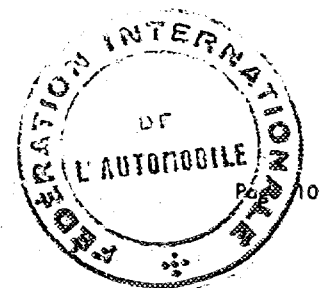
F. I. A. Rec. No.

**ENGINE ACCESSORIES**

- |  |                         |                                      |        |
|--|-------------------------|--------------------------------------|--------|
| 230. Fuel pump : mechanical <del>XXXXXX</del>  |                         | 231. No. fitted                      | 1      |
| 232. Type of ignition system                   | Make and 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 <del>XXXXXX</del> | number fitted           | 237. Method of drive                 | V Belt |
| 238. Voltage of generator                      | 12 volts                | 239. Battery, number                 | 1      |
| 240. Location                                  | Engine Compartment      |                                      |        |
| 241. Voltage of battery                        | 12 volts                |                                      |        |

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

- |                               |          |                            |          |      |              |
|-------------------------------|----------|----------------------------|----------|------|--------------|
| 250. Max. engine output       | 36 PS    | (type of horsepower: JIS ) | at       | 4600 | rpm          |
| 251. Maximum rpm              | 5200     | output at that figure      |          | 32   |              |
| 252. Maximum torque           | 6.3 kg-m | at                         | 3000 rpm |      |              |
| 253. Maximum speed of the car | 115      | km/hour                    |          |      | miles / hour |



Make

Toyota

Model

UP 20

F. I. A. Rec. No.

**DRIVE TRAIN**

**CLUTCH**

260. Type of clutch **Dry Single Plate Friction** 261. No. of plates **1**  
 262. Dia. of clutch plates **16.3** cm inches  
 263. Dia. of linings, inside **11.0** cm in. outside **16.0** cm in.  
 264. Method of operating clutch **Flexible Cable**

**GEAR BOX** (photograph H)

270. Manual type, make **Toyota**  
 271. No. of gear-box ratios forward **4** 272. Synchronized forward ratios **2nd, 3rd & 4th**  
 273. Location of gear-shift **Steering Column, Floor (Option)**  
 274. Automatic, make type  
 275. No. of forward ratios 276. Location of gear-shift

277.	Manual		Automatic		<del>Automatic</del> manual/ <del>Automatic</del>		<del>Automatic</del>	
	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth	Ratio	No. teeth
1	4.444	40/9			4.444	40/9		
2	2.642	37/14			2.400	36/15		
3	1.684	32/19			1.550	31/20		
4	1.125	27/24			1.125	27/24		
5								
6								
reverse	5.812	17/9 40/13			5.812	17/9 40/13		

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 **3.889 , 3.556**  
 Number of teeth **35/9 , 32/9**



Make

Toyota

Model

UP 20

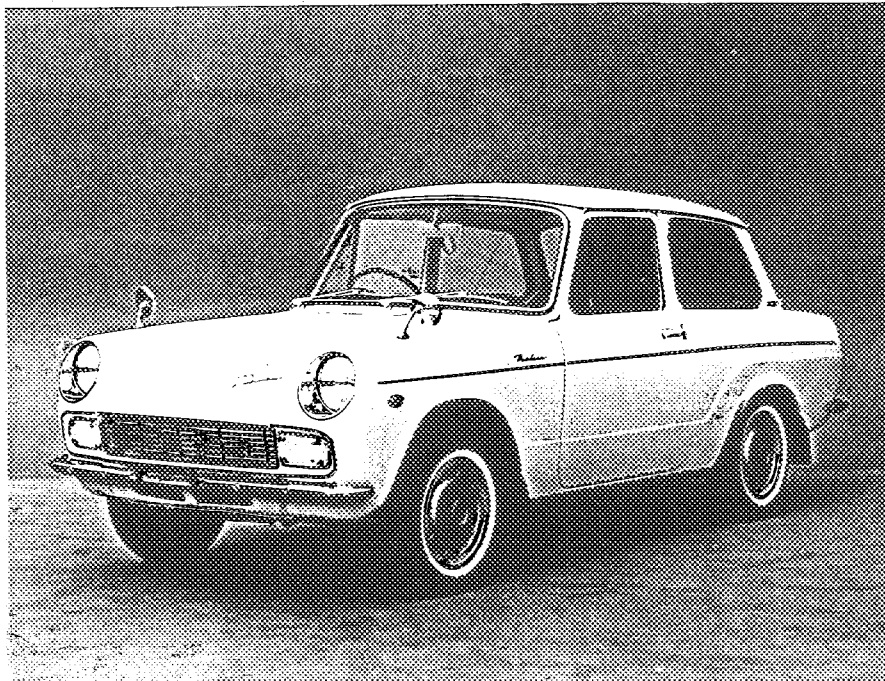
F.I.A. Rec. No.

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.

This model of car has another appearance equipped with various embellishing accessories as below.



Make

Toyota

Model

UP 20

F. I. A. Rec. No.

TWO STROKE ENGINES

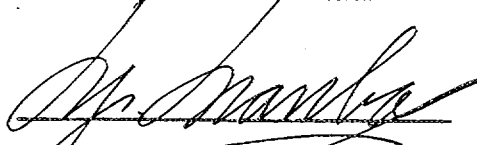
- 300. System of cylinder scavenging
- 301. Type of lubrication
- 302. Inlet ports, length measured around cylinder wall mm inches
- 303. Height inlet port mm in. 304. Area mm<sup>2</sup> sq. in.
- 305. Exhaust ports, length measured around cylinder wall mm inches
- 306. Height exhaust port mm in. 307. 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

Chairman

of Technical Subcommission

  
 Yasuharu Nanba

