JAPAN AUTOMOBILE FEDERATION

F. I. A. Recognition No. 142C

Group 2 Touring Cars

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

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

Manufacturer: Toyota Motor Co.,Ltd.

Serial No of chassis: RT 40 - 57041

engine: 4R - 151113

Recognition is valid from: 1st February 1966

Cylinder-capacity: 1587 cm3 96.9 inches

Model: RT 40S

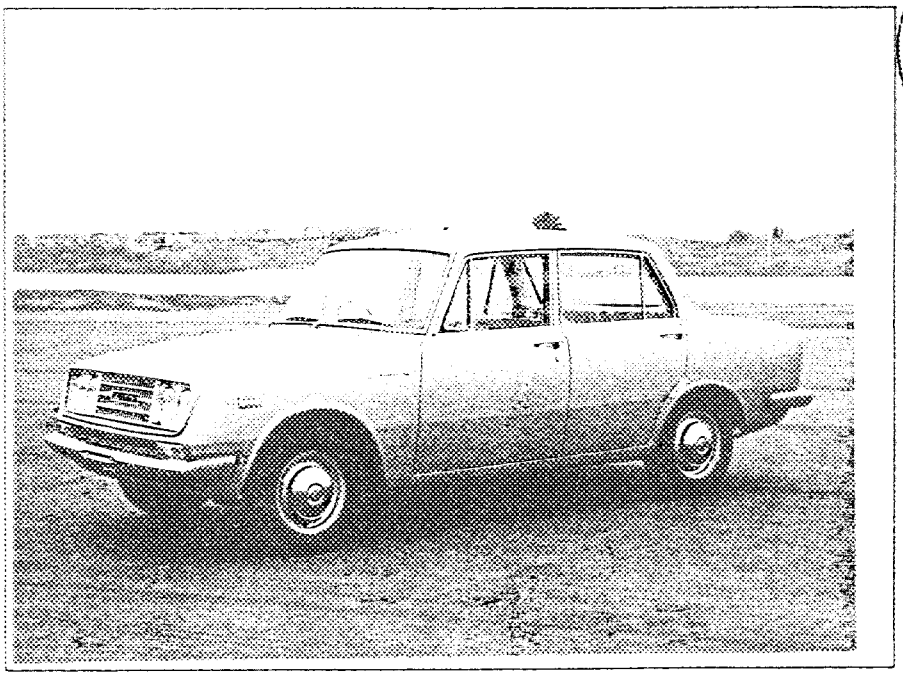
Manufacturer: Toyota Motor Co.,Ltd.

Manufacturer: Toyota Motor Co.,Ltd.

List: 142

The manufacturing of the model described in this recognition form was started on March 1965 and the minimum production of 1000 identical cars, in accordance with the specifications of this form was reached on Nov. 1965

Photograph A, 3/4 view of car from front



JAPAN AUTOMOBILE FEDERATION

東京都港区芝公園第三号地一番
機械振興会館内
社団法人 日本自動車連盟

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

Kametaro Fujita
Chairman of C.S.J.

SPORTING COMMISSION OF JAPAN

Stamp and signature of the F.I.A.

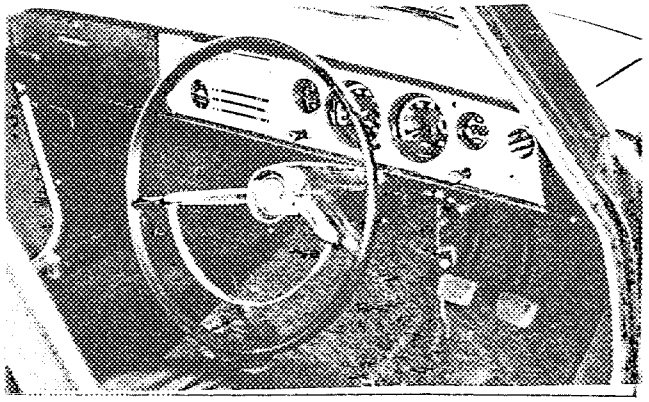
Toyota

Photograph Model RT 40S

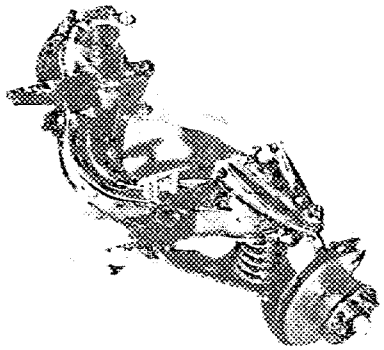
F.I.A. Sect. No.

A 3/4 view of car from rear

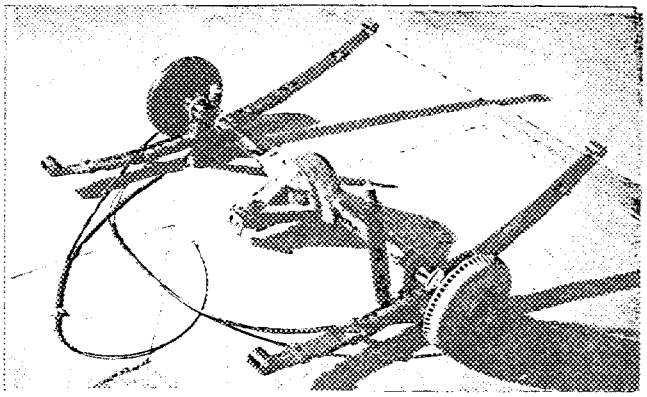
C interenior view of car through driver's door (open or removed)



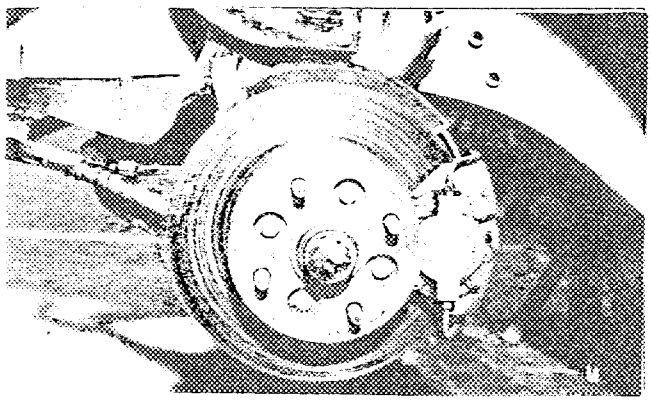
D front axle complete, removed from car. Without wheels.



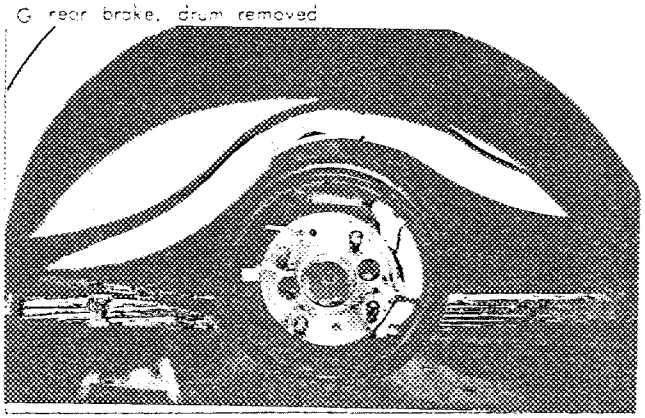
E Rear axle complete without wheels, removed from car.



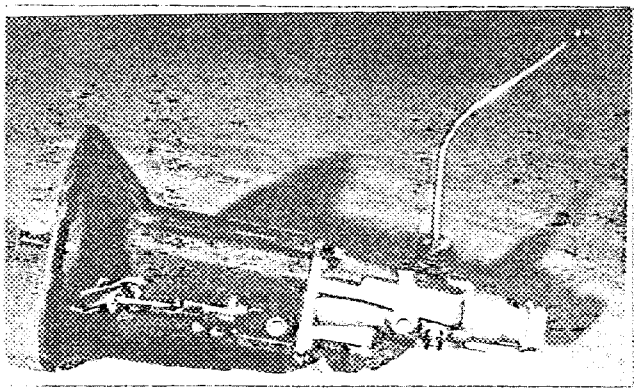
F front brake, drum removed



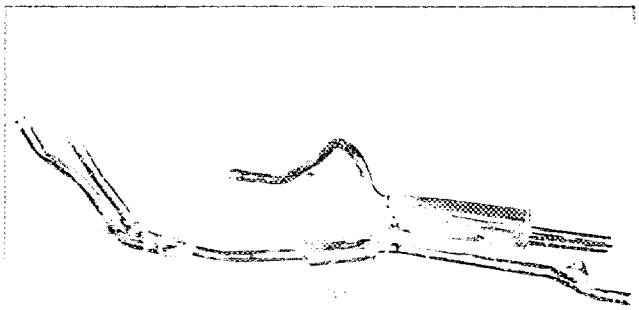
G rear brake, drum removed



B Exhaust, view from side



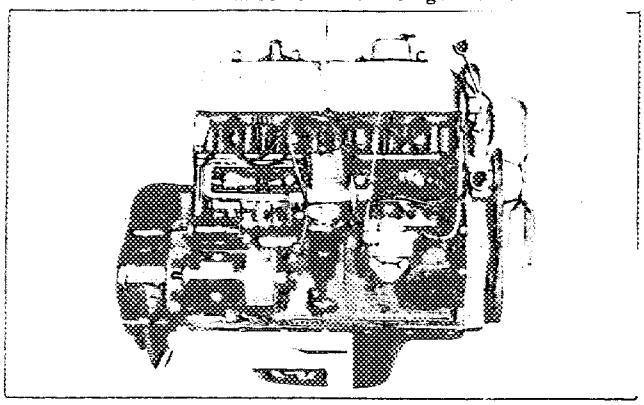
I silencer + exhaust pipes after exhaust manifold.



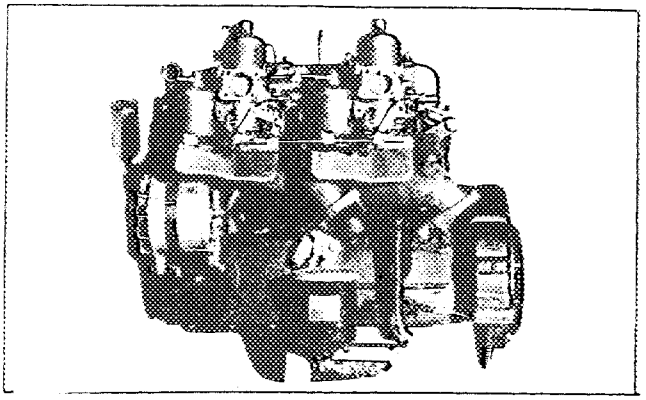
Make Toyota

Photograph Model RT 40S F. I. A. Rec. No

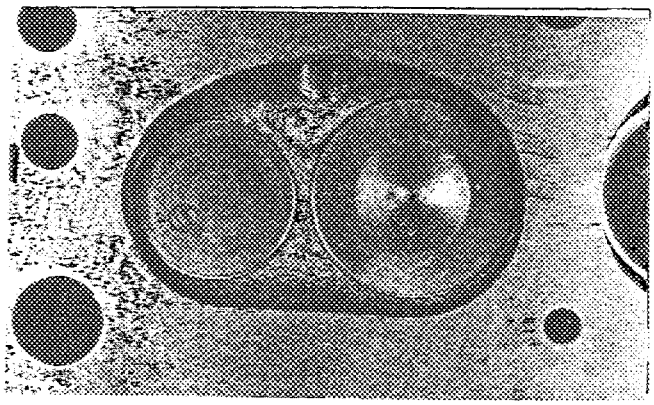
J engine unit out of car, from right. With clutch and accessories but without air filter nor gear-box.



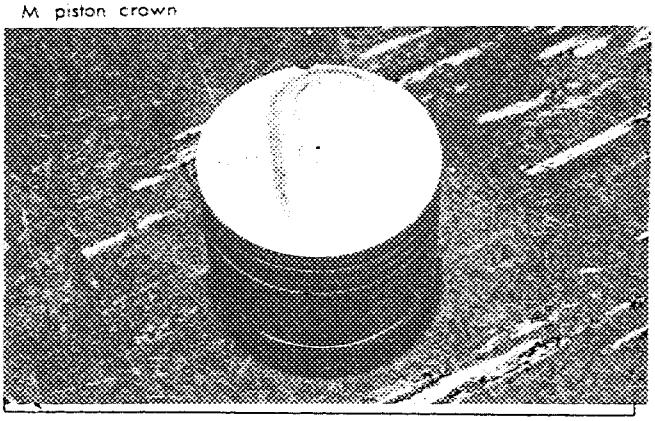
K Engine unit out of car, from left. With clutch and accessories but without gear-box nor air filter.



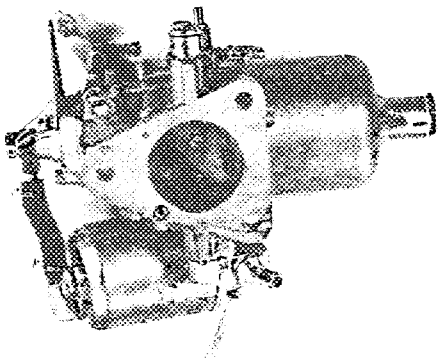
L combustion chamber



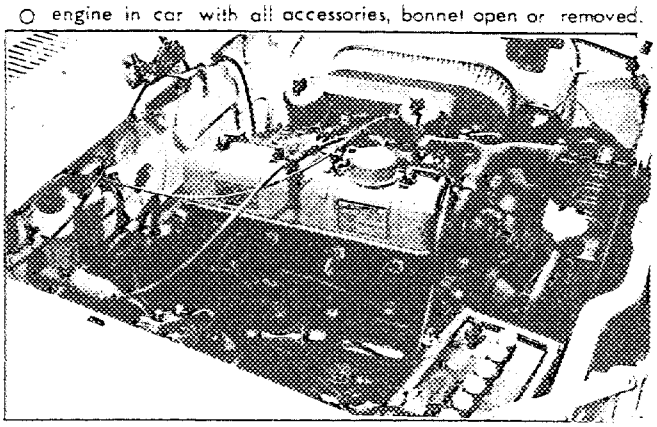
M piston crown



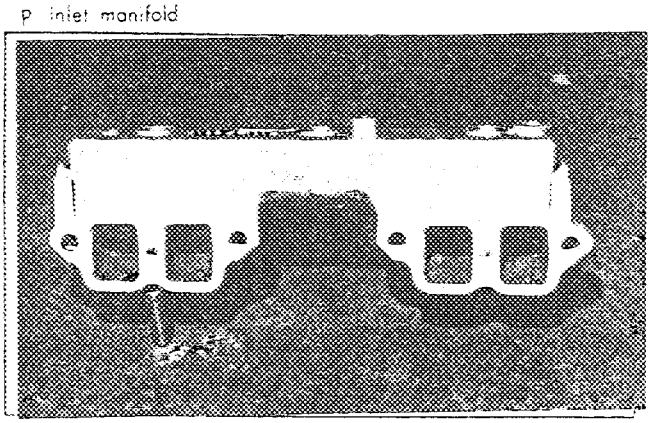
N Carburettor (view from side of manifold)



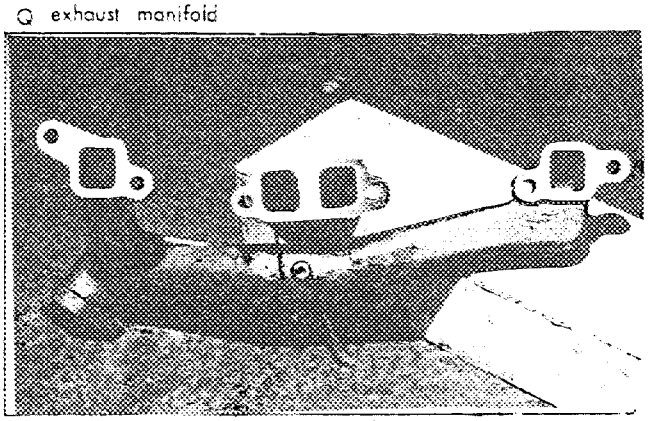
O engine in car with all accessories, bonnet open or removed.



P inlet manifold



Q exhaust manifold



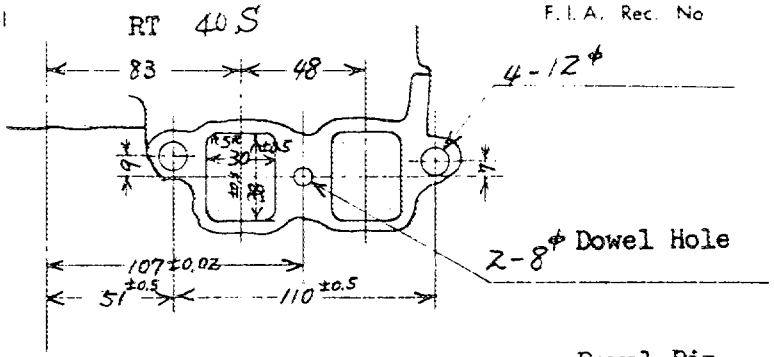
Make Toyota

Model RT 40S

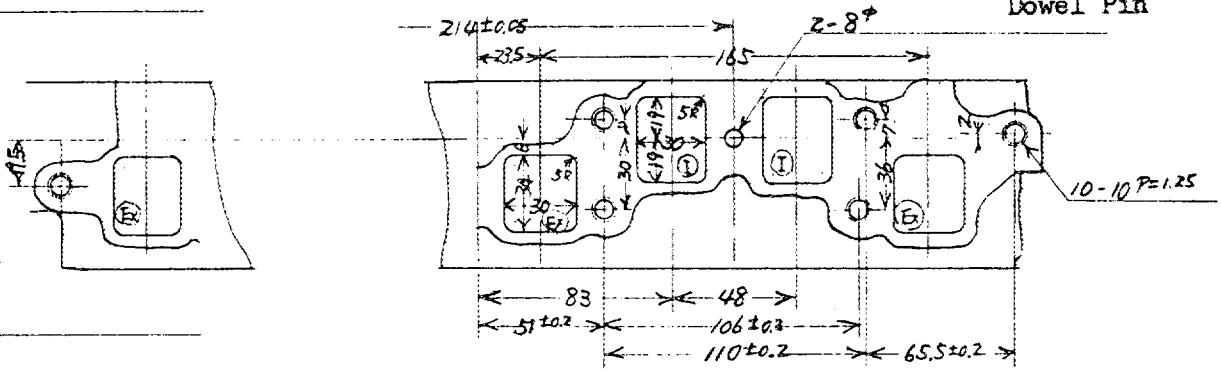
F.I.A. Rec. No

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

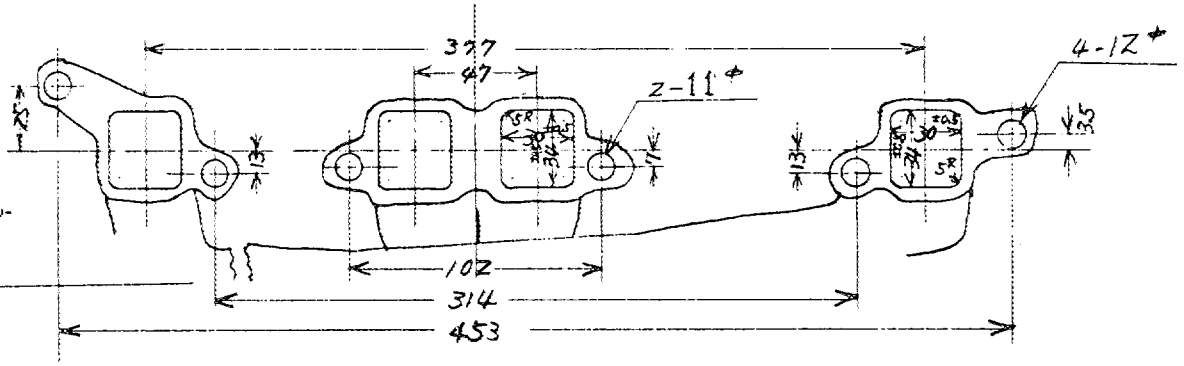
True position of all ports is 1 DIA.



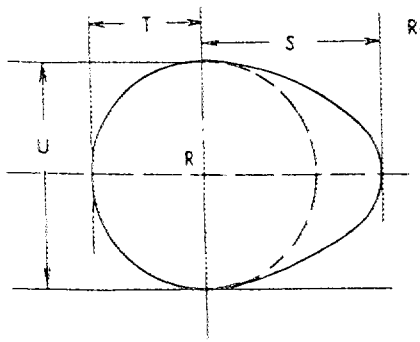
Drawing of entrance to inlet port of cylinder-head. Indicate scale or dimensions and manufacturing tolerance.



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.



R=centre of camshaft.

Inlet cam				
S =	22.7	mm	0.895	inches
T =	15.6	mm	0.615	inches
U =	31.2	mm	1.23	inches
Exhaust cam				
S =	22.7	mm	0.895	inches
T =	15.5	mm	0.610	inches
U =	31.0	mm	1.22	inches

Make Toyota Model RT 40S F. I. A. Rec. Rec. No

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

CAPACITIES AND DIMENSIONS

1. Wheelbase	2420	mm	95.3	inches	
2. Front track	1290	mm	50.8	inches *	
3. Rear track	1270	mm	50.0	inches *	
4. Overall length of the car	406.5,	cm			inches
5. Overall width of the car	155	cm			inches
6. Overall height of the car	142	cm			inches

7. Capacity of fuel tank (reserve included) 45 l trs

11.9 Gallon US Gallon Imp.

8. Seating capacity 5

9. Weight, total weight of the car with normal equipment, water, oil and spare wheel but without fuel nor repair tools :

925 kg 2037 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 wihch 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	

Make Toyota Model RT 40S F.I.A. Rec. No

CHASSIS AND COACHWORK (Photographs A, B and C)

20. Chassis / body construruction : [redacted] / unitary construction
21. Unitary construction, material (s) Steel Plate

Separate construction

22. Material (s) of chassis
23. Material (s) of coachwork
24. Number of doors 4 Material (s) Steel Plate
25. Material (s) of bonnet Steel Plate
26. Material (s) of boot lid Steel Plate
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 Glass
31. Sliding system of door windows Vertical, Manual
32. Material (s) of rear-quarter light Glass

ACCESSORIES AND UPHOLSTERY

38. Interior heating : [redacted] - no
39. Air-conditioning : [redacted] - no
40. Ventilation : yes - [redacted]
41. Front seats, type of seat and upholstery Separate, Vinyl Leather
42. Weight of front seat (s), complete with supports and rails, out of the car :

18 kg (per piece) lbs

43. Rear seats, type of seat and upholstery Bench, Vinyl Leather
44. Front bumper, material (s) Steel Plate Weight 3.9 kg inches
45. Rear bumper, material (s) Steel Plate Weight 5.8 kg inches

WHEELS

50. Type Pressed Disc Wheel
51. Weight (per wheel, without tyre) 5.8 (4J-13) / 6.7 (4½J-14) kg lbs
52. Method of attachment Four Hub Bolts and Nuts
53. Rim diameter 330, 356 mm 13, 14 inches
54. Rim width 102, 114 mm 4, 4½ inches

STEERING

60. Type Worm and Sector Roller, Recirculating Ball (for Export)
61. Servo-assistance : [redacted] - no
62. Number of turns of steering wheel from lock to lock 3-3/4
63. In case of servo-assistance -

Make Toyota Model RT 40S F. I. A. Rec. No

SUSPENSION

70. Front suspension (photogr. D), type Independent by Double Wishbones
71. Type of spring Coil Spring
72. Stabiliser (if fitted) Torsion Bar
73. Number of shockabsorbers 2 74. Type Hydraulic Telescopic Double Action
76. Rear suspension (photogr. E), type Hotchkiss Drive
79. Type of spring Semi-elliptic Leaf Spring
80. Stabiliser (if fitted) -
81. Number of shockabsorbers 2 82. Type Hydraulic Telescopic Double Action

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	1		1	
94. Bore of wheel cylinder (s)	mm 2-1/8	in.	mm 5/8	in.
Drum brakes				
95. Inside diameter	mm	in.	228.6 mm	in.
96. Length of brake linings	mm	in.	249,199 mm	in.
97. Width of brake linings	mm	in.	35 mm	in.
98. Number of shoes per brake				
99. Total area per brake	mm^2	sq. in.	157 x 10^2 mm^2	sq. in.
Disc brakes				
100. Outside diameter	268 mm	in.	mm	in.
101. Thickness of disc	10.4 mm	in.	mm	in.
102. Length of brake linings	54 mm	in.	mm	in.
103. Width of brake linings	47 mm	in.	mm	in.
104. Number of pads per brake	2			
105. Total area per brake	51 x 10^2 mm^2	sq. in.	mm^2	sq. in.

Make Toyota | Model RT 40S | 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 80.5 mm 3.16 in. | 134. Stroke 78 mm 3.07 in.

135. Capacity per cylinder 397 cm³ 24.2 cu. in.

136. Total cylinder-capacity 1587 cm³ 96.9 cu. in.

137. Material (s) of cylinder block Cast Iron

138. Material (s) of sleeves (if fitted) -

139. Cylinder-head, material (s) Cast Iron | Number fitted 1

140. Number of inlet ports 4 | 141. Number of exhaust ports 4

142. Compression ratio 9.2

143. Volume of one combustion chamber 47 cm³ cu. in.

144. Piston, material Al Alloy | 145. Number of rings 3

146. Distance from gudgeon pin centre line to highest point of piston crown

43 mm inches

147. Crankshaft : [redacted] / stamped | 148. Type of crankshaft : integral / [redacted]

149. Number of crankshaft main bearings 3

150. Material of bearing cap Cast Iron

151. System of lubrication : [redacted] / oil in sump

152. Capacity, lubricant 3.5 ltrs pts quarts US

153. Oil cooler : [redacted] / no | 154. Method of engine cooling Forced Water Circulation

155. Capacity of cooling system 7.2 ltrs ([redacted]) pints quarts US

156. Cooling (if fitted), dia. 30 cm inches

157. Number of blades of cooling fan 2

Bearings

158. Crankshaft main, type Plain Bearing, Two Halves Dia. 58 mm in.

159. Connecting rod big end, type Plain Bearing, Two Halves Dia. 50 mm in.

Weights

160. Flywheel (clean) 12 kg lbs

161. Flywheel with clutch (all turning parts) 19 kg

162. Crankshaft 15 kg lbs | 163. Connecting rod 0.4 kg lbs

164. Piston with rings and pin 0.46 kg lbs

Make Toyota Model RT 40S F.I.A. Rec. No

FOUR STROKE ENGINES

170. Number of camshafts 1 171 Location Cylinder Block

172. Type of camshaft drive Gear

173. Type of valve operation Push Rod & Rocker

INLET (see page 4) *

180 Material(s) of inlet manifold Cast Al-Alloy

181. Diameter of valves 43 mm 1.69 inches

182 Max. valve lift 10.6 ± 0.3 mm 0.42 ± 0.01 in. 183. Number of valve springs 2

184. Type of spring Coil Spring 185. Numbdr of valves per cylinder 1

186. Tappet clearance for checking timing (cold) 0.20 mm inches

187. Valves open at (With tolerance for tappet clearance indicated) B.T.D.C. 26° ± 2.5°

188. Valves close at (with tolerance for tappet clearance indicated) A.B.D.C. 66° ± 2.5°

189. Air filter, type Dry

EXHAUST (see page 4)

195. Material (s) of exhaust manifold Cast Iron

196. Diameter of valves 34 mm 1.34 inches

197. Max. valve lift 10.6 ± 0.3 mm 0.42 ± 0.01 198. 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) 0.36 mm inches

202. Valves open at (with tolerance for tappet clearance indicated) B.B.D.C. 66° ± 2.5°

203. Valves close at (with tolerance for tappet clearance indicated) A.T.D.C. 26° ± 2.5°

CARBURETION (photograph N)

210. Number of carburettors fitted 2 211. Type SU, Variable Venturi

212. Make Aisan 213. Model 21100 - 32010) Set
21100 - 32020)

214. Number of mixture passages per caburettor 1

215. Flange hold diameter of exit port(s) of carburetteor 44 mm in.

216. [redacted] / minimum diam. with piston at maximum height

32 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 injecters

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 RT 40S F. I. A. Rec. No.

ENGINE ACCESSORIES

230. Fuel pump : mechanical [redacted] 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: [redacted] alternator - number fitted 1 237. 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 RERFORMANCES (as declared by manufacturer in catalogue)

250. Max. engine output 90 PS (type of horsepower: JIS) at 5800 rpm

251. Maximum rpm 6000 output at that figure 90 PS

252. Maximum torque 12,8 kg-m at 4200 rpm

253. Maximum speed of the car 160 km / hour miles / hour

Make Toyota Model RT 40 S 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: 20.3 cm — inches

263. Dia. of linings, inside: 14 cm — in. outside: 20 cm — in.

264. Method of operating clutch: Hydraulic

GEAR BOX (photograph H)

Manual Type, make:

270. ~~Method of operation~~: Toyota

271. No. of gear-box ratios forward: 4 — 272. Synchronized forward ratios: All

273. Location of gear-shift: Floor

274. Automatic, make: Toyota — type: Hydraulic Operating

275. No. of forward ratios: 2 — 276. Location of gear-shift: Steering Column or Floor

277.	Manual Ratio	Manual No. teeth	Automatic Ratio	Automatic No. teeth	~~Alternative~~ manual/~~automatic~~ Ratio	~~Alternative~~ manual/~~automatic~~ No. teeth	~~Alternative~~ manual/~~automatic~~ Ratio	~~Alternative~~ manual/~~automatic~~ No. teeth
1	3.673	31/18 32/15	1.82	23+28/28	3.337	31/18 31/16		
2	2.114	31/18 27/22	1		1.948	31/18 26/23		
3	1.403	31/18 22/27			1.340	31/18 21/27		
4	1				1			
5								
6								
reverse	4.183	31/18 34/14	1.82	23+28/28	4.183	31/18 34/14		

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: 3.70 , 4.111

Number of teeth: 37/10 , 37/9

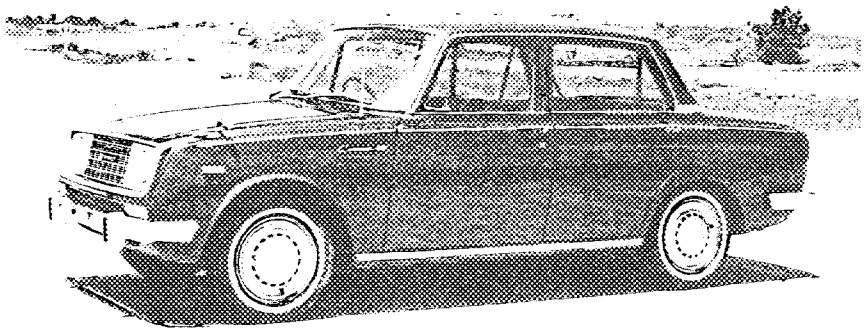
Make Toyota Model RT 40 S F.I.A. Rec. No

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, 186, 187, 188, 189, 201, 202, 203, 212, 213, 215, 216, 222, 225, 230, 236, 250, 251, 252, 253, 255 page 4 and Photographs I, M and N,

During the scrutineering of 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 equipement affecting preceeding 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 RT 40 S 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^2 sq. in.

305. Exhaust ports, length measured around cylinder wall mm inches

306. Height exhaust port mm in. 307. Area mm^2 sq. in.

308. Transfer port, length measured around cylinder wall mm inches

309. Height transfer port mm in. 310. Area. mm^2 sq. in.

311. Piston ports, length measured around piston mm inches

312. Height piston port 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. Drawing of cylinder ports.

330. Supercharging—state full details hereafter :

JAPAN AUTOMOBILE FEDERATION

Chairman

of Technical Subcommission

Osamu Hirao