

MAKE MERCURY MODEL 1968 COUGAR 390 FIA REC # 5203

C
390
GI



Telephone: (203) 348-6233

Cable Address: "ACCUSFIA" Stamford, Conn.

AUTOMOBILE COMPETITION COMMITTEE FOR THE UNITED STATES, FIA, INC.

433 MAIN STREET, STAMFORD, CONN. 06901

Federation Internationale de l'Automobile
FORM OF RECOGNITION

In accordance with Appendix "J" of the International Sporting Code

I N D E X

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CONVERSION TABLE:

1 inch / pouce	2.54 cm	
1 foot / pied	30.479 cm	
1 square inch / pouce carre	6.452 cm ²	
1 cubic inch / pouce cube	16.387 cm ³	
1 pound (lb.) / livre	453.593 gr	
1 pint (U.S.)	.473 ltrs	.833 pt. Imp.
1 quart (U.S.)	.946 ltrs	.833 qt. Imp.
1 gallon (U.S.)	3.785 ltrs	.833 gal. Imp.
1 pint (Imp.)	.568 ltrs	1.20 pt. U.S.
1 quart (Imp.)	1.136 ltrs	1.20 qt. U.S.
1 gallon (Imp.)	4.546 ltrs	1.20 gal. U.S.



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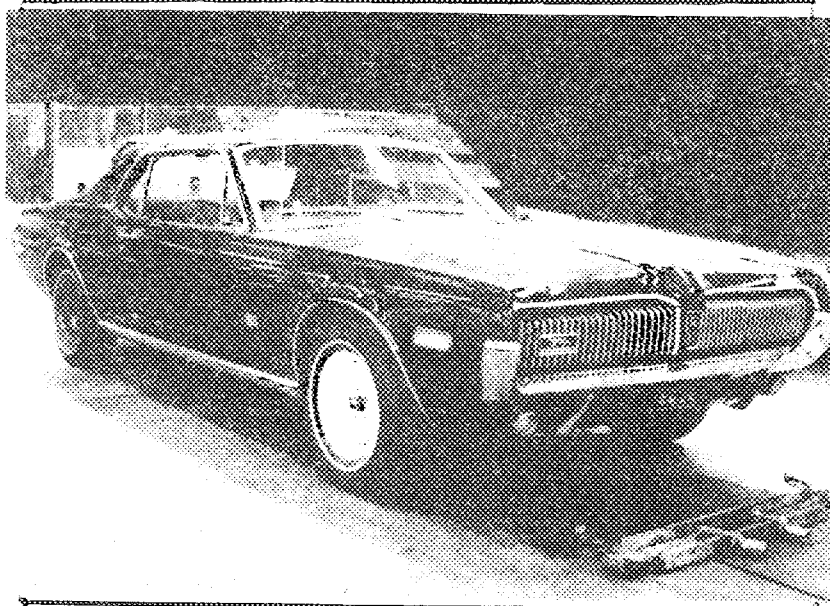
Cylinder capacity 6384 cm³ 389.5 in³
 Lincoln Mercury Division
 Manufacturer Ford Motor Company Model 1968 Cougar 390
 Serial # Chassis 8F91S 500001 Manufacturer Lincoln Mercury Division
Ford Motor Company
 Serial # Engine None Manufacturer Lincoln Mercury Division
Ford Motor Company

Recognition valid from _____ List _____

The manufacturing of the model described in this recognition form was started on AUGUST 23, 1967 and the minimum production of 10,000 identical cars, in accordance with the specifications of this form, was reached on NOVEMBER 30, 1967.

- (*) need not be answered for Group II and III cars.
- (**) only need to be answered for Group IV cars.

A 3/4 Front View Car **



The vehicle described in this form has been subject to the following amendments:

Variants
 on 19 rec # list
 on 19 rec # list
 on 19 rec # list

Normal evolution of the type
 on 19 rec # list
 on 19 rec # list
 on 19 rec # list

Stamp/Signature of
National Sporting Authority

John V. Oliveau
JOHN V. OLIVEAU
TECHNICAL DIRECTOR
ACCUS, F.I.A., INC.

Stamp/Signature
F.I.A.

11 1968

MAKE MERCURY

MODEL 1968 COUGAR 390

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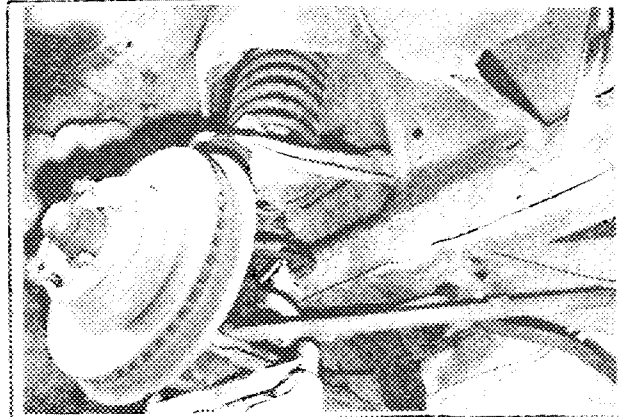
B 3/4 rear car (**)



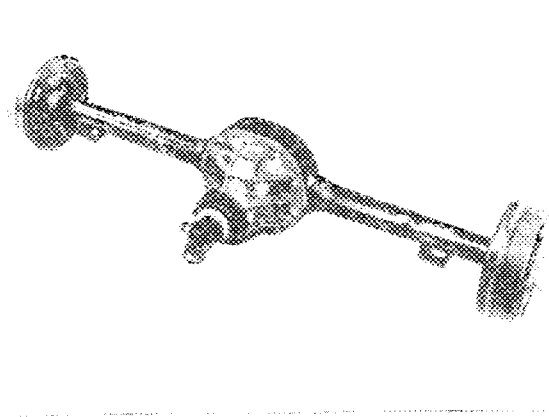
C interior-car (**)



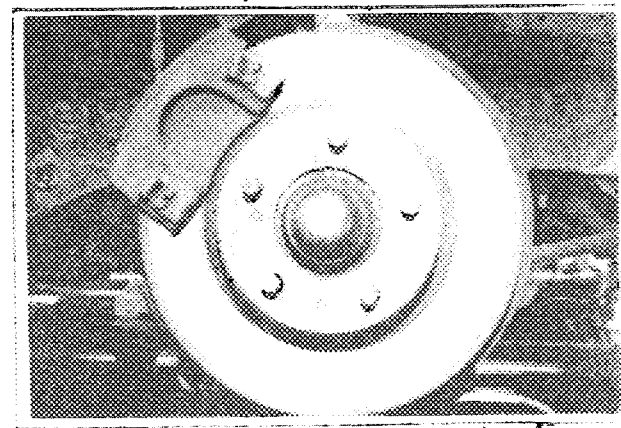
D front axle (**)



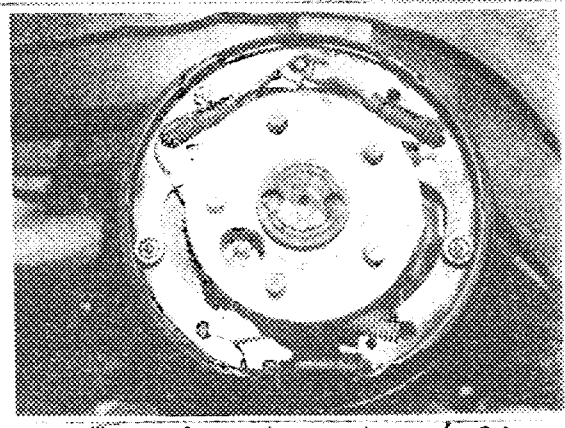
E rear axle (**)



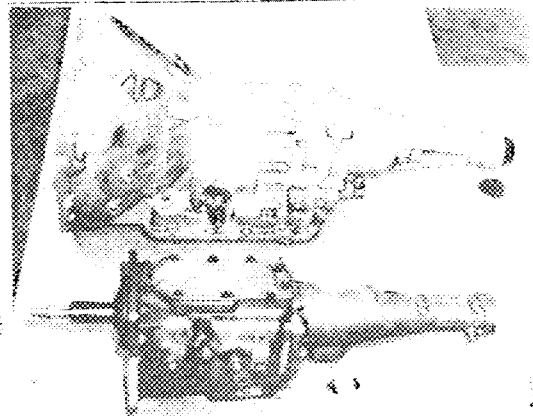
F brake, front (**)



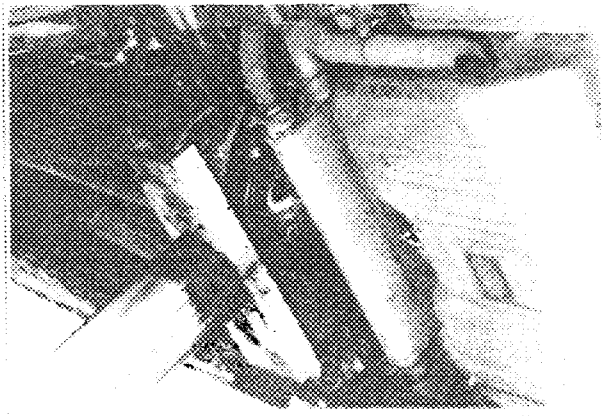
G brake, rear (**)



H gear box (**)



I exhaust system (*)



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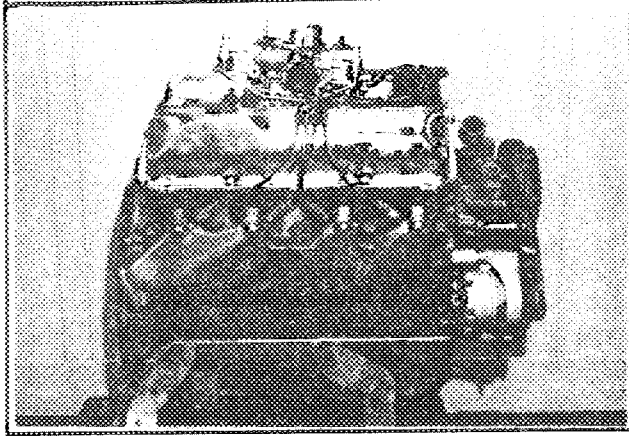
MAKE MERCURY

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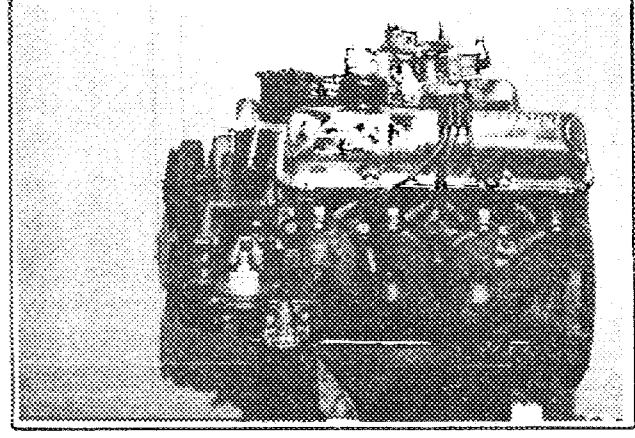
FIA REC # 5203

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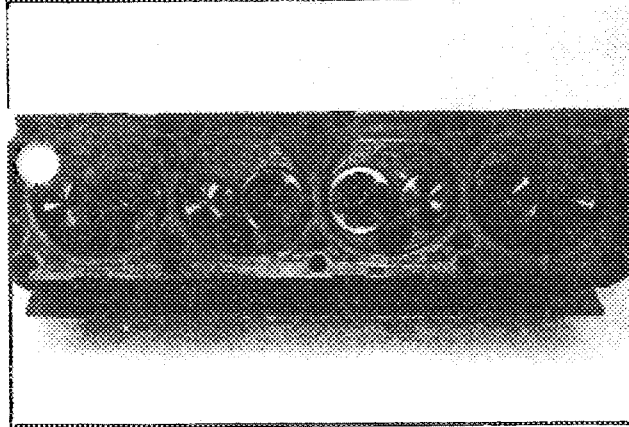
J ENGINE RIGHT (**)



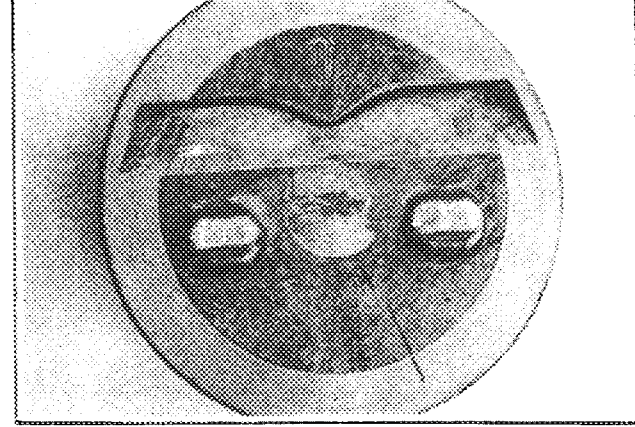
K ENGINE LEFT (**)



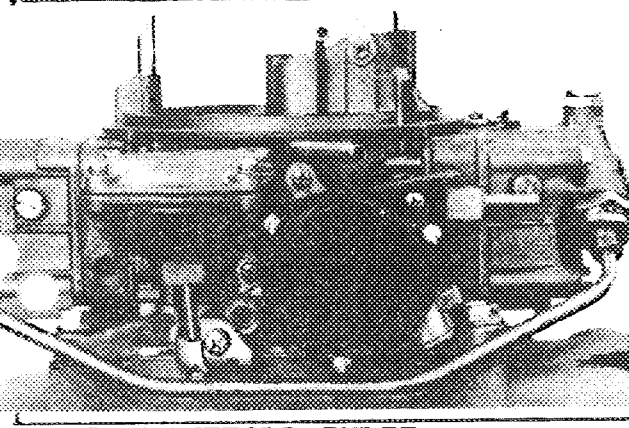
L COMBUSTION CHAMBER



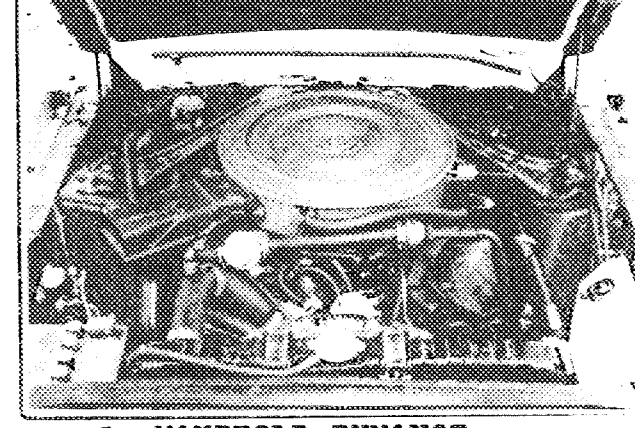
M PISTON TOP (*)



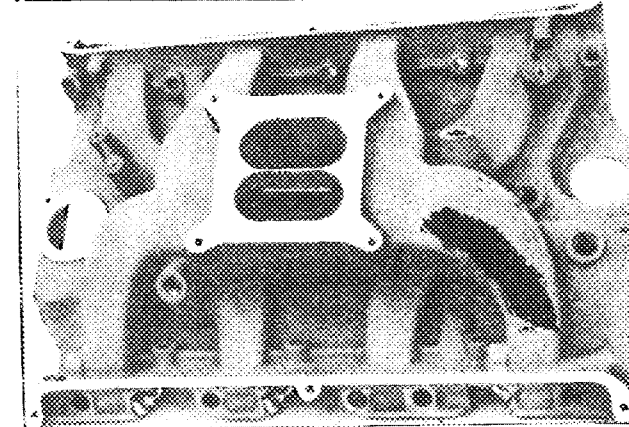
N CARBURETOR (*)



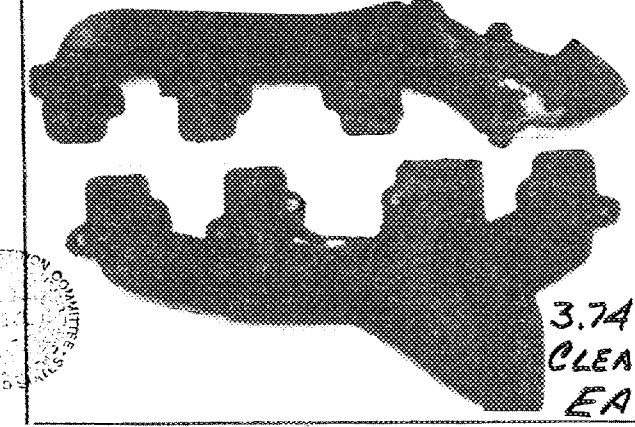
O ENGINE IN PLACE (**)



P MANIFOLD INLET



Q MANIFOLD EXHAUST



3.74 SQ. IN.
CLEAR AREA
EA.



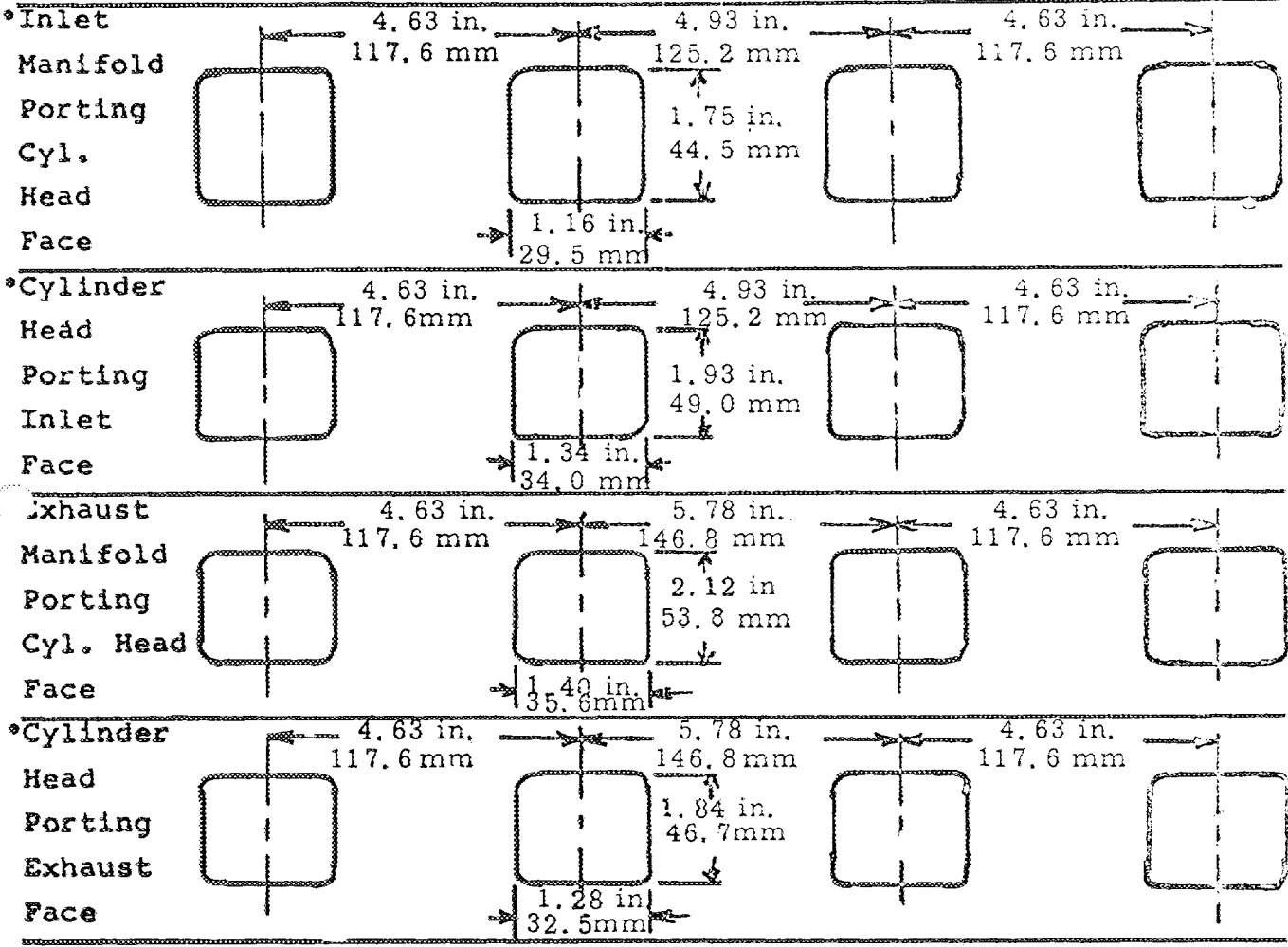
Strip out: ALL SKETCHES MUST INDICATE ACTUAL DIMENSIONS AND MANUFACTURER'S TOLERANCES.

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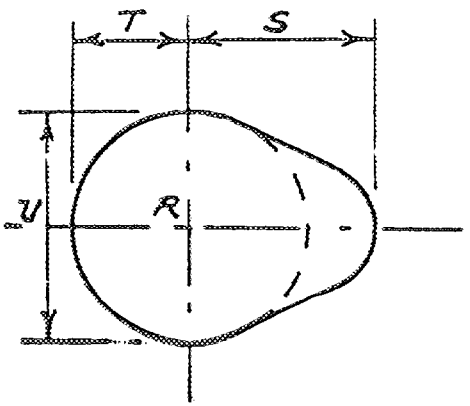
STAMP

(3)

ALL SKETCHES MUST INDICATE ACTUAL DIMENSIONS AND MANUFACTURER'S TOLERANCES. $\pm .04$ in. or ± 1.0 mm



CAM



Inlet cam

S=	26.0	mm	1.025	in
T=	19.0	mm	.747	in
U=	37.9	mm	1.494	in

Exhaust cam

S=	26.2	mm	1.030	in
T=	19.0	mm	.747	in
U=	37.95	mm	1.494	in

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IMPORTANT: Questions 1 through 9 must be answered in two measuring systems, one of which must be the metric system. See conversion table at index.

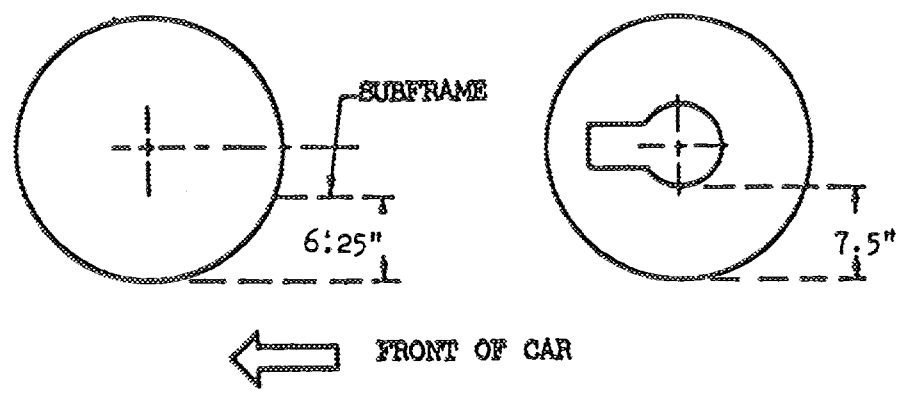
CAPACITIES & DIMENSIONS

(**)	1. Wheelbase	2819.4	mm	111	in	
(**)	2. Front track	1483.4	mm	58.4	in +	at 0° Camber -
(**)	3. Rear track	1475.7	mm	58.1	in +	0" Toe-In

+ Differences in track resulting from use of optional wheel and rim sizes must be stipulated on recognition application forms. *See Note Below

Dimensional relationship between track (front and/or rear) and ground clearance resulting from use of optional wheel sizes shall also be stipulated and a sketch illustrating suspension reference points shall be shown below to establish the "reference chassis height." The reference chassis height dimension is to be used only when checking track and shall not affect eligibility of car in any manner.

Sketch, Ground Clearance: Dimensional Suspension & Chassis Reference Points"



*NOTE: Geometry changes in front suspension will alter track.

4.	Overall length of car	483.4	cm	190.3	in
5.	Overall width of car	181.1	cm	71.3	in
6.	Overall height of car	131.3	cm	51.7	in
7.	Capacity of fuel tank (reserve included)	140.0/128.7/64.3	ltrs.		
		37/34/17	gallons US		gallons, Imp.
8.	Seating capacity	Four (4)			
(**)	9. Weight - total weight of car with normal equipment, water, oil and spare wheel but without fuel or repair tools.	1373	kg	3035	lbs



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CHASSIS & BODYWORK - Photos A, B, C

- (**) 20. Chassis/body construction - separate/unit construction
- (**) 21. Unit construction - material/s Sheet Steel
- (**) 22. Chassis - material/s Steel separate construction
- (**) 23. Body - material/s Steel separate construction
- (**) 24. Doors - number Two(2) material/s Steel
- (**) 25. Hood - material/s Steel
- (**) 26. Trunk Lid - material/s Steel
- 27. Window, Rear - material/s Glass
- 28. Windshield - material/s Glass
- 29. Windows, front door - material/s Glass
- 30. Windows, rear door - material/s D.N.A.
- 31. Windows - actuating system Regulator
- 32. Window, rear quarter - material/s Glass

ACCESSORIES AND UPHOLSTERY

- 38. Heating, interior - yes no
- 39. Air conditioning - yes no
- 40. Ventilation - yes no
- (*) 41. Seats, front - type of seat and upholstery Bench - Vinyl and/or Cloth
- 42. Seats, front - weight
(complete with supports & rails out of car) 16.0 kg 35.2(pair) lbs

CHECK: BENCH _____ BUCKET X CONSOLE INCLUDED _____

- 43. Seats, rear - type of seat and upholstery Bench - Vinyl and/or Cloth
- 44. Bumper, front - material/s Steel kg 7.48lbs 16.5 Weight
- 45. Bumper, rear - material/s Steel kg 6.57lbs 14.5 Weight

WHEELS

- 50. Type Steel
- 51. Weight (per wheel, without tire) 8.9 kg 19.5 lbs
- 52. Method of attachment Stud and Nut (Five)
- 53. Rim, diameter 356-381 mm 14-15 in
- 54. Rim, width 152-152 mm 6-6 in

STEERING

- 60. Type Recirculating Ball and Nut
- 61. Servo assistance (Optional)
- 62. Number of turns of steering wheel from lock to lock 4.6
- 63. In case of servo assistance 3.7

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SISUSPENSION

(**) 70. Suspension, front (photo D) - type Independent
 (**) 71. Spring - type Coil
 () 72. Stabilizer - if fitted Yes
 73. Shock absorbers - number Two (2)
 74. Type Tubular - Adjustable
 (**) 78. Suspension, rear (photo E) - type Live Axle
 (**) 79. Spring - type Leaf
 () 80. Stabilizer - if fitted No
 81. Shock absorbers - number Two (2)
 82. Type Tubular - Adjustable

BRAKES (Photos E and F)

(**) 90. Method of operation Hydraulic
 () 91. Power assisted (if fitted) - type Pedal Boost
 92. Master Cylinders - number and type One (1) - Dual
 (indicate if duplex master cylinder) Front Rear
 93. Cylinders - number per wheel 1 1
 94. Cylinders - wheel bore 60.32 mm 2.375 in 23 mm .906 in
 (indicate stepped bore dimensions if applicable)

Drum Brakes

	<u>Front</u>	<u>Rear</u>
95. Diameter, inside	mm in 254mm	10 in
96. Linings, length	mm in 495mm	19.5 in
97. Linings, width	mm in 63.5mm	2.5 in
98. Shoes - number per brake	Two (2)	
99. Area, total - per brake	mm ² in ² 31,75	mm ² 48.75 in ²

Disc Brakes

100. Diameter, outside	287 mm	11.3 in	mm	in
101. Thickness of disc	23.00 mm	.940 in	mm	in
102. Lining - length	124.5 mm	4.9 in	mm	in
103. Lining - width	46.48 mm	1.83 in	mm	in
104. Pads - number per brake	Two (2)			
105. Area, total - per brake	11,580 mm ²	217.9 in ²	mm ²	in ²

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ENGINE (Photos J and K)

- (**) 130. Cycle two four Wankel
- (**) 131. Cylinders - number Eight (8)
- (**) 132. Cylinders - arrangement VEE Wankel - # of elements and basic dimensions
- (**) 133. Bore 102.9 mm 4.05 in
- (**) 134. Stroke 96.0 mm 3.78 in
- (**) 135. Cylinders - capacity 798 cm3 48.7 in3
- (**) 136. Cylinders, total capacity 6384 cm3 389.5 in3
- (**) 137. Cylinder Block - material/s Cast Iron
- (**) 138. Sleeves - material/s (if fitted) None Fitted
- (**) 139. Head, cylinder - material/s Cast Iron number fitted Two (2)
- (**) 140. Port, inlet - number Eight (8) - 4 Per Head
- (**) 141. Port, exhaust - number Eight (8) - 4 Per Head
- (*) 142. Compression - ratio 10.5
- (*) 143. Combustion chamber - volume 68.7 cm3 4.2 in3
- (*) 144. Piston - material/s Aluminum Alloy with Steel Struts
- (*) 145. Rings - number Three (3)
- (*) 146. Distance from gudgeon pin centre line to highest point of piston crown 45.2 mm 1.78 in
- (*) 147. Crankshaft - ~~cast~~-~~forged~~-~~mach~~ from solid
- (**) 148. Crankshaft - type - integral - sectioned - # of sections
- (**) 149. Crankshaft, main bearings - number Five (5)
- (**) 150. Bearing cap - material/s Cast Iron
- 151. Lubrication - system - dry sump/oil in sump
- 152. Lubricant - capacity 4.7 ltrs pts 5 qts US
- (*) 153. Cooler, oil - yes no
- 154. Cooling - method Water Radiator
- 155. Cooling - capacity of system 19.39 ltrs pts 20.5 qts US

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- (*) 156. Fan, cooling (if fitted) - diameter 46.36 cm 18.25 in
- (*) 157. Fan, cooling - number of blades 7 material/s Steel

BEARINGS

- (**) 158. Crankshaft, main - type insert diameter 69.82 mm 2.7488 in
- (**) 159. Connecting rod, big end - type insert diameter 61.94 mm 2.4384 in

WEIGHTS

- (*) 160. Flywheel (clean) 11.2 kg 29 lbs
- (*) 161. Flywheel with clutch (all rotating parts) 23.6kg 52.0lbs
- (*) 162. Crankshaft 29.1 kg 64.4 lbs
- 163. Connecting Rod .77 kg 1.69 lbs
- (*) 164. Piston with rings & pin .83 kg 1.82 lbs

FOUR CYCLE ENGINES

- (**) 170. Camshafts - number One (1) material/s Alloy Iron
- (**) 171. Camshaft - location Cylinder Block
- (**) 172. Camshaft Drive, type Chain
- (**) 173. Valve operation - type Tappet, Pushrod, Rocker Arms

INLET (See Photo P) (for addtl info re 2 stroke engines and super charged, see page 15)

- 180. Inlet manifold - materials Aluminum
- 181. Valves (overall) - diameter 51.74 mm 2.037 in
- (*) 182. Valve lift - maximum 12.2 mm .481 in
- 183. Springs, valve - number Two (2)
- 184. Spring - type Coil
- (**) 185. Valves, per cylinder - number One (1)
- (*) 186. Tappet - clearance for checking timing (cold) 0 mm 0 in
- (*) 187. Valves - open at (with tolerance for tappet clearance indicated) 18° BTC
- (*) 188. Valves - close at (with tolerance for tappet clearance indicated) 72° ABC
- (*) 189. Air filter - type Dry Element

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195. Manifold, exhaust - material/s Cast iron
196. Valves (overall) - diameter 39.78 mm 1.566 in
197. Valve, lift - maximum 12.45 mm .490 in
198. Valve Springs/valve - number Two (2)
199. Springs - type Coil
- (**) 200. Valves - number per cylinder One (1)
- (*) 201. Tappet - clearance for checking timing (cold)
0 mm 0 in
- (*) 202. Valves - open at (with tolerance for tappet clearance indicated) 82° BBC
- (*) 203. Valves - close at (with tolerance for tappet clearance indicated) 28° ATC

CARBURETION (See Photo N)

210. Carburetors, fitted - number One (1)
211. Type 4V Down Draft
- (*) 212. Make Holley
- (*) 213. Model 9510
214. Carburetors - number of mixture passages Four (4)
- (*) 215. Carburetor - flange hole diameter of exit port
39.6 mm 1.561 in
216. Venturi - throat diameter+ Prim. Sec. mm in Prim. Sec.
31.8 33.3 1.25 1.3125

INJECTION

220. Pump - make
221. Plungers - number None Fitted
- (*) 222. Pump - model
223. Injectors - location
224. Injectors - total number
- (*) 225. Inlet pipe - minimum diameter mm in

For variable throat type carburetors, indicate minimum lift of shutter mechanism such as pistons in S.U.

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ENGINE ACCESSORIES

- (*) 230. Pump, fuel - mechanical and/or electrical
231. Number fitted One (1) Each - Total 2
232. Ignition system - type Battery and Coil
233. Distributors - number One (1)
234. Coils, ignition - number One (1)
235. Spark plugs - number per cylinder One (1)
236. Generator (or Alternator) - number fitted One (1)
237. Drive - method Belt
238. Voltage, generator - volts 12.8
239. Battery - number One (1)
240. Location Front of Car
241. Voltage - volts 12 amp hrs 45

ENGINE & CAR PERFORMANCE as declared by mfr. in catalogue

- (*) 250. Horsepower - maximum engine output 335 at 4800 rpm
(indicate SAE or DIN)
(*) 251. RPM - maximum 4800 output at that figure 335
(*) 252. Torque - maximum 427 at 3200 rpm
(*) 253. Speed - maximum km/hour miles/hour

DRIVE TRAIN

Clutch

260. Type Dry Plate
261. Plates - number of driven One (1)
262. Plates - diameter 27.94 cm 11 in
263. Linings - diameter - inside 11.78 cm 7 in
Linings - diameter - outside 27.94 cm 11 in
264. Method of operation Mechanical

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Gear Box (Photo H)

- (**) 270. Manual type - make Ford
- (**) 271. Ratios, forward - number Four (4)
- 272. Ratios, forward - number synchronized Four (4)
- 273. Gear-Shift - location Floor optional -
- (**) 274. Automatic - make Ford type Hydraulic with Planetary Gears and Torque Converter
- (**) 275. Ratios, forward - number Three (3)
- 276. Gear-Shift - location Floor

277.	Manual		Automatic		Alternative manual/automatic			
	Ratio	# Teeth	Ratio	# Teeth	Ratio	# Teeth	Ratio	# Teeth
1	2.78	$\frac{23}{30}$ $\frac{32}{15}$	2.46		2.32	$\frac{23}{25}$ $\frac{32}{15}$		
2	1.93	$\frac{23}{30}$ $\frac{31}{21}$	1.46	Torque Converter Maximum Ratio at Stall 2.02:1	1.69	$\frac{23}{25}$ $\frac{28}{18}$		
3	1.36	$\frac{23}{30}$ $\frac{25}{24}$	1.00		1.29	$\frac{23}{25}$ $\frac{25}{21}$		
4	1.00	Direct			1.00	Direct		
5								
6								
reverse	2.78		2.175		2.32			

- 278. Overdrive - type D.N.A.
- 279. Forward gears on which overdrive can be selected D.N.A.
- 280. Overdrive - ratio D.N.A.

FINAL DRIVE

- (**) 290. Type Hypoid - Semi-Floating - Straddle Mounted Pinion
- (**) 291. Differential - type Locking - By Ratchet or Roller
- (**) 292. Limited Slip Differential (if fitted) - type \neq Positive Locking (Ratchet or Roller)
- 293. Ratio 3.0 3.50 3.70 3.89 4.11 3.25
- Teeth - number $\frac{39}{13}$ $\frac{35}{10}$ $\frac{37}{10}$ $\frac{35}{9}$ $\frac{37}{9}$ $\frac{39}{12}$
- (\neq) Specify friction or positive locking type

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IMPORTANT

The conformity of the car with the following items of the present recognition form is to be disregarded during the technical inspection when the vehicle has been entered in Group II (Touring Cars) or III (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, 250, 251, 252, 253, 255, photos I, M, N & items on page 5 as indicated.

During the technical inspection of cars entered in Group IV (Sports Cars) 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 & photos A, B, D, E, F, G, H, J, K, O.

Optional equipment affecting preceding information:

CATALOGUE PART NUMBER MUST BE GIVEN

S7MS-6675-B	Sump Guard	17.4 LBS
W-64000	Power Steering	28. LBS
W-65000	Air Conditioning	75. LBS
SLMK-6642-A	Engine Oil Cooler Kit - Includes:	9.6 LBS CAP 1.7 QT
	1 Radiator - Oil	
	1 Adapter	
	2 Hoses	
	Required Fittings, Brackets, Gaskets, Attaching Parts	

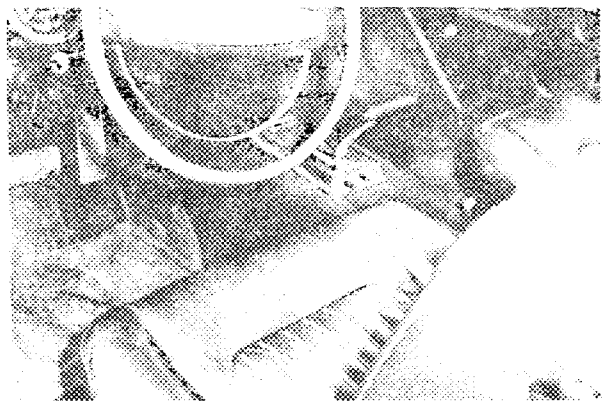
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Optional Equipment - CATALOGUE PART NUMBER MUST BE GIVEN



INTERIOR OF CAR WITH AUTOMATIC GEARBOX

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