



AUTOMOBILE COMPETITION COMMITTEE
FOR THE UNITED STATES, F.I.A., INC.

413 MAIN ST.
STAMFORD, CONN. 06901
(203) 348-6233

C
427
G II

1508
Group II

Federation Internationale de l'Automobile
FORM OF RECOGNITION

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

Cylinder capacity 6982.4 cm3 426.1 in3
 Lincoln/Mercury Divn.
 Manufacturer Ford Motor Co. Model 1968 Cougar 427
 Serial # Chassis 8F91W-500001 Manufacturer Lincoln/Mercury Divn. Ford Motor Co.
 Serial # Engine None Manufacturer Lincoln/Mercury Divn. Ford Motor Co.
 Recognition valid from 1st Jan. 1968 List 1968/1

The manufacturing of the model described in this recognition form was started on August 23, 1967 and the minimum production of 1,000 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.
Hubert...
 FEDERAL MOTOR RACING ASSOCIATION
 1000 W. 17th St. Chicago, Ill. 60608

MAKE Mercury

MODEL 1968 Cougar 427

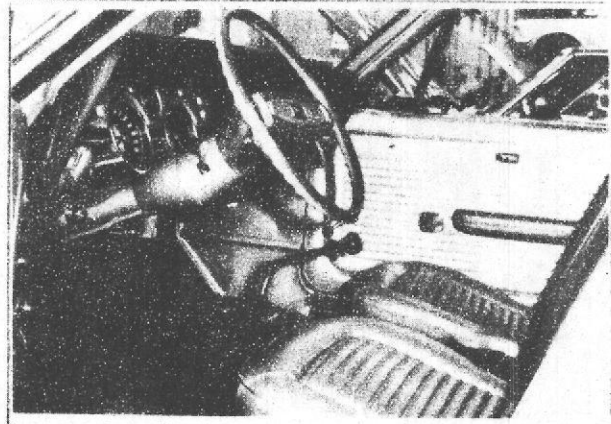
FIA REC # 1568

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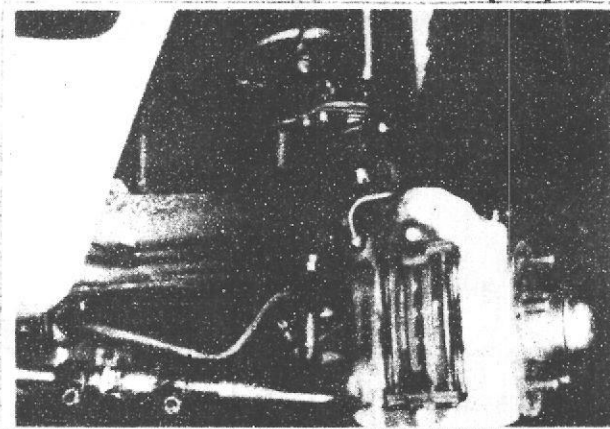
B 3/4 rear car (**)



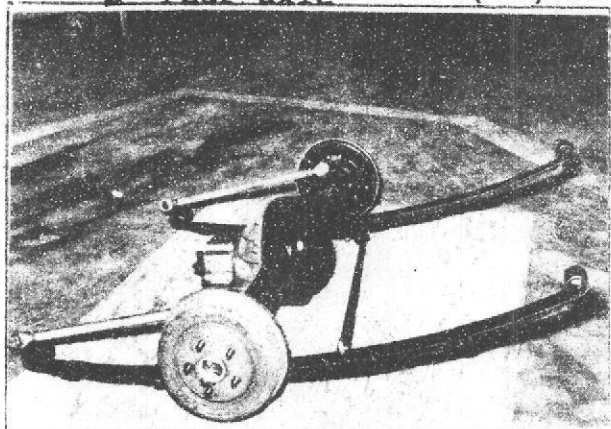
C interior-car (**)



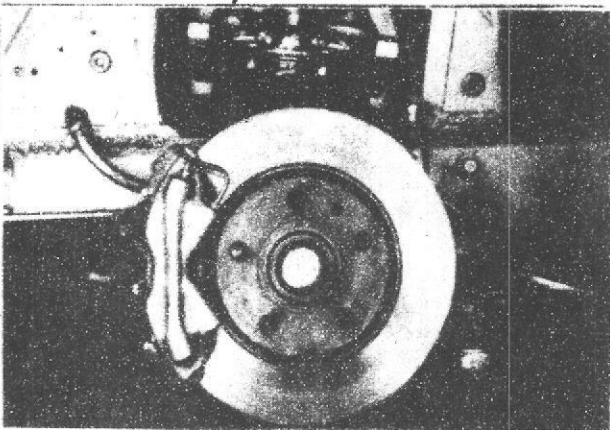
D front axle (**)



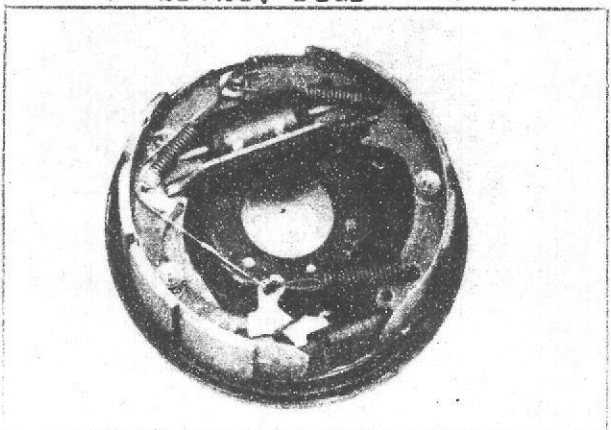
E rear axle (**)



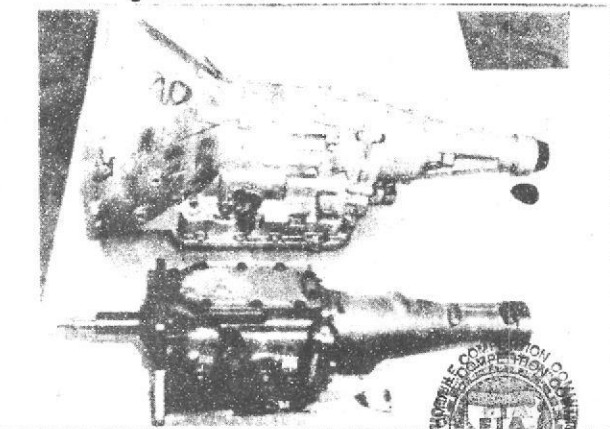
F brake, front (**)



G brake, rear (**)



H gear box (**)



I exhaust system (*)



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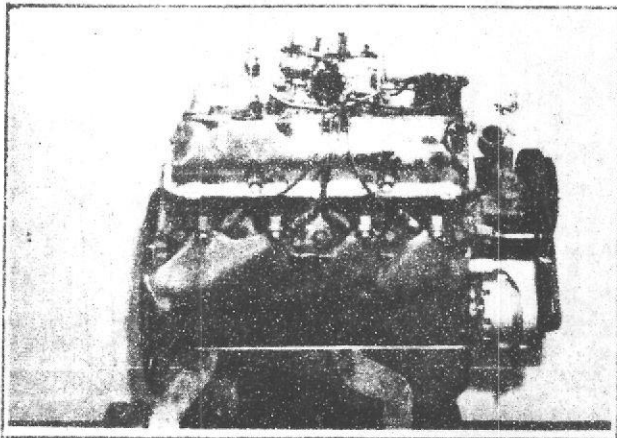
MAKE Mercury

MODEL 1968 Cougar 427

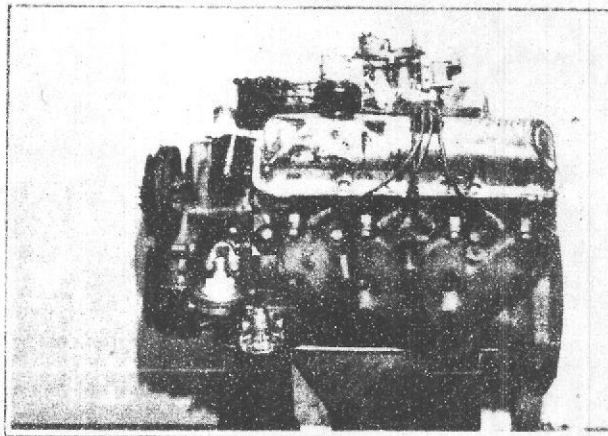
FIA REC # 1508

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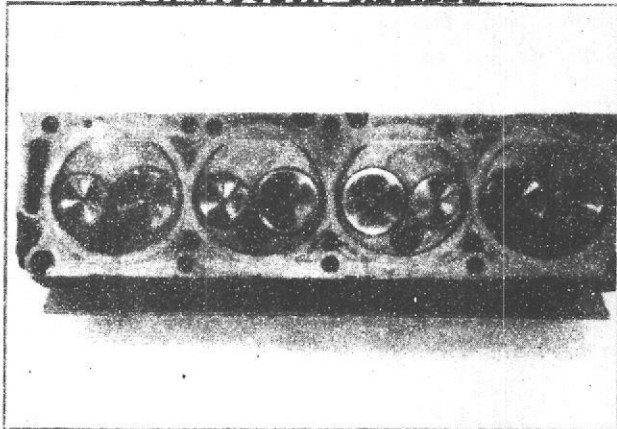
J ENGINE RIGHT (**)



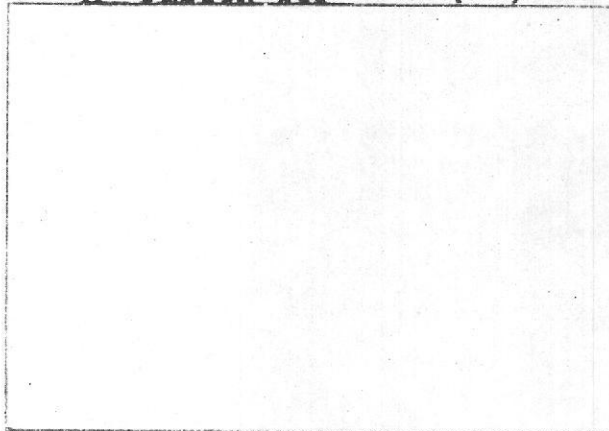
K ENGINE LEFT (**)



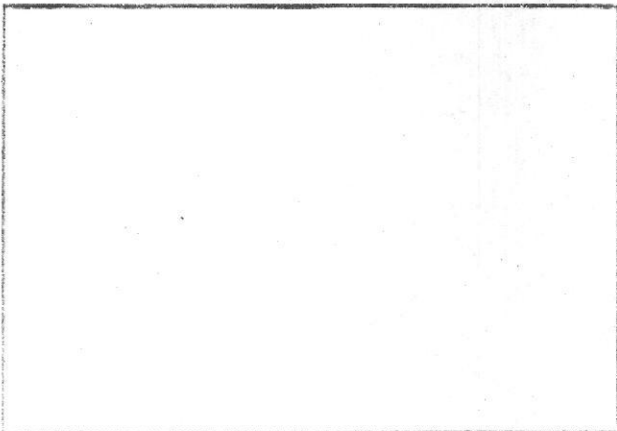
L COMBUSTION CHAMBER



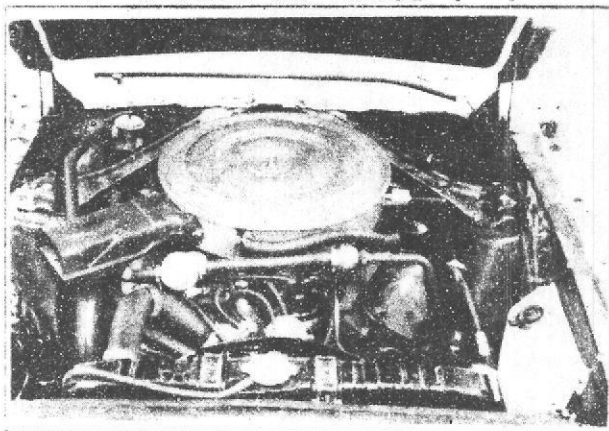
M PISTON TOP (*)



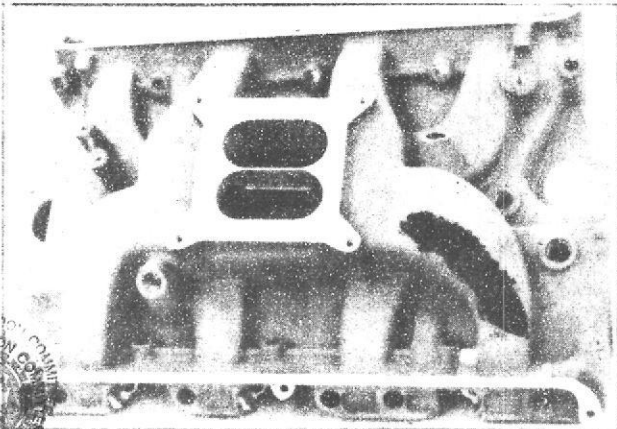
N CARBURETOR (*)



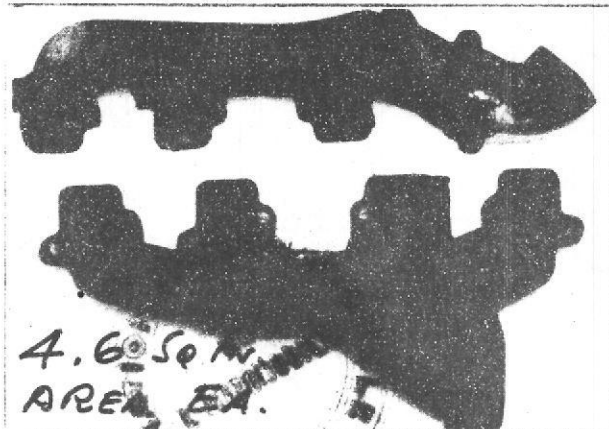
O ENGINE IN PLACE (**)



P MANIFOLD INLET



Q MANIFOLD EXHAUST



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

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MODEL 1968 Cougar 427 FIA REC # 1518

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

***Inlet**

- Manifold
- Porting
- Cyl.
- Head
- Face

***Cylinder**

- Head
- Porting
- Inlet
- Face

INFORMATION ON THIS PAGE

DOES NOT APPLY TO GROUP II

***Exhaust**

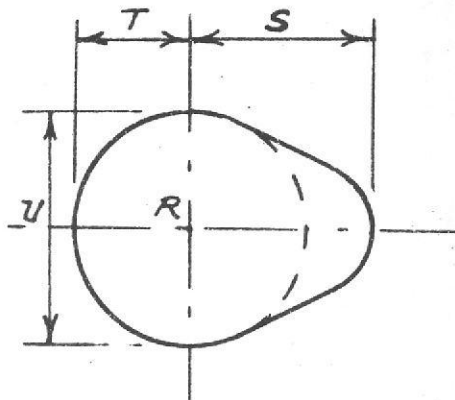
- Manifold
- Porting
- Cyl. Head
- Face

CARS

***Cylinder**

- Head
- Porting
- Exhaust
- Face

CAM



Inlet cam

S= mm in
 T= mm in
 U= mm in

Exhaust cam

S= mm in
 T= mm in
 U= mm in

STAMP



MAKE Mercury MODEL 1968 Cougar 427 FIA REC # 1508

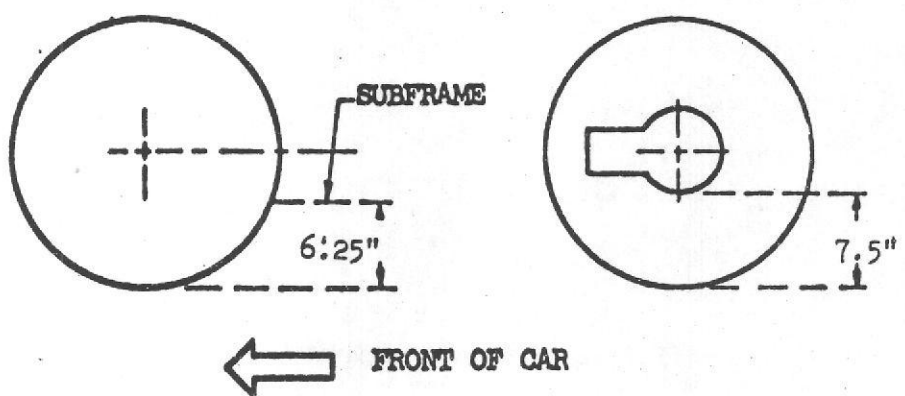
IMPORTANT: Questions 1 through 9 must be answered in two measuring systems, one of which must be the metric system.
See conversion table at index.

CAPACITIES & DIMENSIONS

- (**) 1. Wheelbase 2819.4 mm 111 in
 - (**) 2. Front track - with 7" wheels 1526.5 mm 60.1 in + at 0° camber - 0" toe-in
 - (**) 3. Rear track - with 7" wheels 1518.9 mm 59.8 in +
- + Differences in track resulting from use of optional* See Note Below wheel and rim sizes must be stipulated on recognition application forms. (For track with other wheels see option page)

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) 140/128.7/64.3 ltrs.
37/34/17 gallons US gallons, Imp.
- 8. Seating capacity
- (**) 9. Weight - total weight of car with normal equipment, water, oil and spare wheel but without fuel or repair tools.
1410 kg 3116lbs



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 - numberTwo(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 DNA
- 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 Bucket - vinyl
- 42. Seats, front - weight 14.8 Kg 32.5 lbs EA.
(complete with supports & rails out of car) ~~36.2 lbs~~
- CHECK: BENCH BUCKET X CONSOLE INCLUDED
- 43. Seats, rear - type of seat and upholstery Bench - cloth and/or vinyl
- 44. Bumper, front - material/s steel kg 7.48 lbs 16.5 Weight
- 45. Bumper, rear - material/s steel kg 6.57 lbs 14.5 Weight

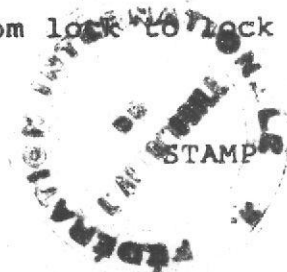
WHEELS

- 50. Type Steel
- 51. Weight (per wheel, without tire) 5.9kg 13 lbs
- 52. Method of attachment Stud and Nut (five)
- 53. Rim, diameter 381 mm 15 in
- 54. Rim, width 178/203 mm 7/8 in

STEERING

- 60. Type Recirculating balls and nut
- 61. Servo assistance DNA
- 62. Number of turns of steering wheel from lock to lock 3.7
- 63. In case of servo assistance DNA

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MAKE Mercury MODEL 1968 Cougar 427 FIA REC # 1518 G II

SUSPENSION

- (**) 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 Sway bar/traction bars/panhard rod
- 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 DNA
- 92. Master Cylinders - number and type One (1) - dual
(indicate if duplex master cylinder) Front Rear
- 93. Cylinders - number per wheel 4 1 or 4 (option)
- 94. Cylinders - wheel bore 49.2 mm 1.937in 23 mm .906 in or
(indicate stepped bore dimensions if applicable) 41.3mm 1.625 in.

Drum Brakes

- | | <u>Front</u> | <u>Rear</u> |
|------------------------------|-----------------------|-------------|
| 95. Diameter, inside | mm in254mm | 10 in |
| 96. Linings, length | mm in495mm | 19.5in |
| 97. Linings, width | mm in63.5mm | 2.5in |
| 98. Shoes - number per brake | | Two (2) |
| 99. Area, total - per brake | mm2 in2 / mm248.75in2 | 31.432 |

Disc Brakes

- | | | (option) |
|------------------------------|------------------|-------------------------|
| 100. Diameter, outside | 303.8 mm 11.96in | 287mm 11.3in |
| 101. Thickness of disc | 31.8 mm 1.25in | 20.3mm .8in |
| 102. Lining - length | 136.1 mm 5.36in | 123mm 4.875in |
| 103. Lining - width | 48.3 mm 1.90in | 45.97mm 1.81in |
| 104. Pads - number per brake | Two (2) | Two (2) |
| 105. Area, total - per brake | 13,147.3 mm2 | 20,361in2 / mm217.65in2 |
| | | 12,214 |

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MAKE Mercury MODEL 1968 Cougar 427 FIA REC # 1508

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 107.56 mm 4.23 in
- (**) 134. Stroke 96.11 mm 3.78 in
- (**) 135. Cylinders - capacity 872.8 cm3 53.26 in3
- (**) 136. Cylinders, total capacity 6982.4 cm3 426.1 in3
- (**) 137. Cylinder Block - material/s Cast Iron
- (**) 138. Sleeves - material/s (if fitted) DNA
- (**) 139. Head, cylinder - material/s Cast Iron number fitted Two (2)
- (**) 140. Port, inlet - number Eight (8) - Four (4) per head
- (**) 141. Port, exhaust - number Eight (8) - Four (4) per head
- (*) 142. Compression - ratio DNA
- (*) 143. Combustion chamber - volume cm3 in3 DNA
- (*) 144. Piston - material/s DNA
- (*) 145. Rings - number DNA
- (*) 146. Distance from gudgeon pin centre line to highest point of piston crown mm in DNA
- (**) 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 5.68 ltrs pts 6 qts US
- (*) 153. Cooler, oil - yes no DNA
- 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 cm in DNA
- (*) 157. Fan, cooling - number of blades material/s DNA

BEARINGS

- (**) 158. Crankshaft, main - type Insert diameter 69.819 mm 2.7488 in
- (**) 159. Connecting rod, big end - type Insert diameter 61.935 mm 2.4388 in

WEIGHTS

- (*) 160. Flywheel (clean) kg lbs DNA
- (*) 161. Flywheel with clutch (all rotating parts) kg lbs DNA
- (*) 162. Crankshaft kg lbs DNA
- 163. Connecting Rod kg lbs DNA
- (*) 164. Piston with rings & pin kg lbs DNA

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, push rod, rocker

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 55.75 mm 2.195 in
- (*) 182. Valve lift - maximum mm in DNA
- 183. Springs, valve - number Two (2)
- 184. Spring - type Coil
- (**) 185. Valves, per cylinder - number One (1)
- (*) 186. Tappet - clearance for checking timing (cold) mm DNA in
- (*) 187. Valves - open at (with tolerance for tappet clearance indicated) DNA
- (*) 188. Valves - close at (with tolerance for tappet clearance indicated) DNA
- (*) 189. Air filter - type DNA

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MAKE Mercury

MODEL 1968 Cougar 427RIA REC # 1508

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EXHAUST (See Photo Q)

195. Manifold, exhaust - material/s Cast Iron
196. Valves (overall) - diameter 44.02 mm 1.733 in
197. Valve, lift - maximum mm in DNA
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) DNA
mm in
- (*) 202. Valves - open at (with tolerance for tappet clearance indicated) DNA
- (*) 203. Valves - close at (with tolerance for tappet clearance indicated) DNA

CARBURETION (See Photo N)

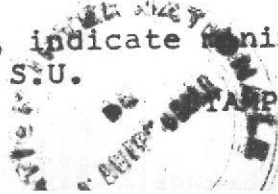
210. Carburetors, fitted - number One (1)
211. Type 4V Down Draft
- (*) 212. Make DNA
- (*) 213. Model DNA
214. Carburetors - number of mixture passages Four (4)
- (*) 215. Carburetor - flange hole diameter of exit port DNA
mm in
216. Venturi - throat diameter+ mm in DNA

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 type - Two (2) Total
- 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 Rear of Car
- 241. Voltage - volts 12 amp hrs 53

ENGINE & CAR PERFORMANCE as declared by mfr. in catalogue

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

DRIVE TRAIN

Clutch

- 260. Type Dry Plate
- 261. Plates - number of driven One (1)
- 262. Plates - diameter 29.2 cm 11.5 in
- 263. Linings - diameter - inside 17.78 cm 7 in
- Linings - diameter - outside 29.2 cm 11.5 in
- 264. Method of operation Mechanical

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MAKE Mercury

MODEL 1968 Cougar

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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	2.32	$\frac{23}{25}$ $\frac{32}{15}$	2.46		2.32	$\frac{23}{25}$ $\frac{32}{25}$	2.22	$\frac{23}{24}$ $\frac{32}{15}$
2	1.69	$\frac{23}{25}$ $\frac{28}{18}$	1.46		1.54	$\frac{23}{25}$ $\frac{27}{19}$	1.43	$\frac{23}{24}$ $\frac{26}{19}$
3	1.29	$\frac{23}{25}$ $\frac{25}{21}$	1.00		1.19	$\frac{23}{25}$ $\frac{24}{22}$	1.19	$\frac{23}{24}$ $\frac{24}{21}$
4	1.00	Direct			1.00	Direct	1.00	Direct
5								
6								
reverse			2.175					

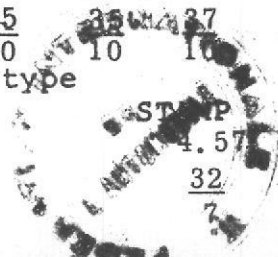
278. Overdrive - type DNA

279. Forward gears on which overdrive can be selected DNA

280. Overdrive - ratio DNA

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 3.10 3.24 3.40 3.50 3.70 3.89 4.11 4.33
- Teeth - number $\frac{39}{13}$ $\frac{31}{10}$ $\frac{39}{12}$ $\frac{35}{10}$ $\frac{35}{10}$ $\frac{37}{10}$ $\frac{35}{9}$ $\frac{37}{9}$ $\frac{39}{9}$
- (\neq) Specify friction or positive locking type



4.57 4.71 4.86 5.14
 $\frac{32}{7}$ $\frac{33}{7}$ $\frac{34}{7}$ (12) $\frac{36}{7}$

MAKE Mercury

MODEL 1968 Cougar 427 FIA REC # 1508

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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

S7MR-6650-B

Differential Cooler Kit, includes:

*10.9 LGs
CAP 1.3 QT*

- 1 - Radiator - oil
- 1 - Duct - air and flange assembly
- 1 - Plenum Box
- 2 - Pump - oil circulating
- 1 - Bracket, pump mount

Required, lines, fittings and attaching hardware

S8MR-7009-A

Transmission Cooler Kit, includes:

*6.2 LGs
CAP .9 QT*

- 1 - Radiator - oil
- 1 - Pump - oil circulating
- 1 - Duct, air and flange assembly
- 1 - Plenum Box

Required lines, fittings and attaching hardware

S1MR-61615-A

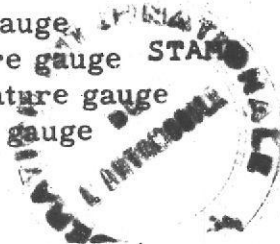
Bucket Seat Assembly, Driver & Passenger - 12 pounds each

S7MC-10849-A

High Performance Instrument Cluster, includes:

- 1 - Panel - instrument
- 1 - Tachometer
- 1 - Oil pressure gauge
- 1 - Oil temperature gauge
- 1 - Water temperature gauge
- 1 - Fuel pressure gauge
- 1 - Speedometer

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MAKE Mercury MODEL 1968 Cougar FIA REC # 1508 ⁴²⁷

Optional Equipment - CATALOGUE PART NUMBER MUST BE GIVEN

7379020 Deletion Option - deletes all sealers, sound deadeners and exterior trim.

S8MR-1103-A Knock-off Wheel and Hub Kit, includes: **78 U.S.**
4 - Hubs
4 - Nuts - quick-off
4 - Wheels
Required attaching hardware

S8MR-19715-A Rear Ventilator - Flow-Thru, includes:
1 - Plenum, duct and valve assembly
1 - Grille, outlet trim
1 - Grille, inlet

S8MR-6393-A Bell Housing Support Bracket

S8MR-2025-A Rear Disc Brake Kit, includes: **65 U.S.**
2 - Disc, brake
1 - Caliper assembly, disc brake, R.H. rear
1 - Caliper assembly, disc brake, L.H. rear
1 - Bracket, caliper mount - R.H.
1 - Bracket, caliper mount - L.H.
Required lines, fittings and attaching parts.

S8MR-5790-A Watts Link - rear axle

C6AZ-6B068-B 8V Induction Kit, includes: **54.5 U.S.**
1 - 8V manifold
2 - Carburetors
Required lines, linkage, fittings, attaching parts.

S8MK-2120-A Front Disc Brake Kit, includes: **63 U.S.**
2 - Disc, brake
1 - Caliper assembly, disc brake, R.H. front
1 - Caliper assembly, disc brake, L.H. front
1 - Bracket, caliper mount, R.H.
1 - Bracket, caliper mount, L.H.
Required lines, fittings and attaching parts.



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MAKE Mercury MODEL: 1968 Cougar 427 RIA REC # 1508

Applicable Dimensions:

100 Diameter, outside	287mm	11.3 in
101 Thickness of disc	20.3mm	.8 in.
102 Lining - length	123mm	4.875 in.
103 Lining - width	45.97mm	1.81 in.
104 Pads - number per brake	Two (2)	
105 Area, total - per brake	12,214mm	17.65 in.2

Alternate Wheel

Track

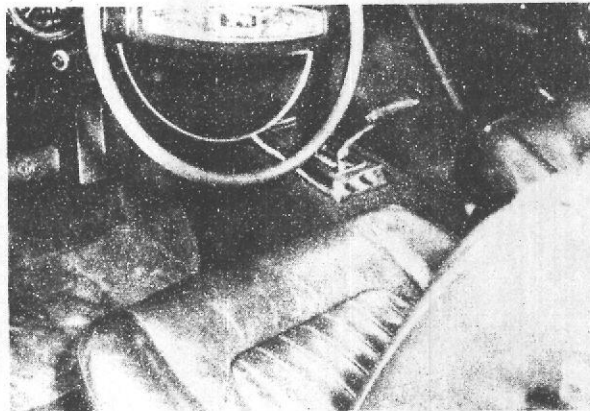
		<u>Front</u>	<u>Rear</u>
S7MR-1007-H/J	15" x 8" - 381mm x 203mm	60.6	59.0

Optional Wheels

C7ZZ-1007-D	15" x 6" - 381mm x 152.4mm	58.4	58.1
S7MR-1007-M/N	15" x 9" - 381mm x 228.6mm	61.1	38.0
S8MR-1007-A/B	15" x 10" - 381mm x 254mm	61.1	58.0



37 GAL. GAS TANK WITH
EXTERNAL FILLER ASSY.



INTERIOR OF CAR WITH
AUTOMATIC GEARBOX

36 46.

