# CAMS

5TH CATEGORY - HISTORIC RACING

### GROUP No

APPROVED VEHICLE SPECIFICATION

This form details the approved specifications of individual vehicle models in the 5th Category Historic car group. To be issued with an Historic Log Book, cars need to comply with these specifications, the physical appearance shown in the illustrations and the general historic rules as detailed in the current CAMS Manual of Motor Sport.

Make of Car:

Ford

Model:

Mustang Boss 302

Period of Original Manufacture: November 1968 - November 1969

CAMS Historic Group:

No

Date of Issue of this Document: 24th May 2000



# SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description:

Unitary Construction

Period of Manufacture: 1968-1969

Manufacturer:

Ford

Chassis no. from:

9-02 100001

Chassis no. location: Material:

Left Side Engine Bay Panel

Steel

Comments:

1.2 FRONT SUSPENSION

Description:

Independent by Upper Wishbonse & Lower Track Control Arm

Spring medium:

Coil Springs

Damper Type:

Telescopic

Adjustable: Yes

Anti-sway bar:

·Fitted

Adjustable: No

Adjustable: Yes

Suspension adjustable:

Yes

Method: Cester by tension rods; camber by cam at

TCA pivot.

Comments: Ride height and spring rate may be changed by variation of coil springs; change of sway-bar diameter permitted; dampers free subject to original mountings being used and period technology limitation.

1.3 REAR SUSPENSION

Description:

Live Rear Axle

Spring medium:

Leaf springs

Damper type:

Telescopic

Anti-sway bar:

No

Suspension adjustable: No

Comments: Addition of sway bar, trailing links, Panhard rod or Watts linkage permitted.

Dampers free subject to use of original mountings and period technology limitations.

1.4 STEERING

Type:

Recroulating Ball

Make:

Ford

Comments:

1.5 BRAKES

Front

Rear

Type:

Disc

Drum

Dimensions:

287mm x 23.8mm

254mm x 44.4mm

Material of drum/disc

Cast Iron

Cast Iron

No. cylinders/pots per wheel: Actuation:

Hydraulic

Hydraulic

Caliper: Make, Material, Type:

Kelsey Hayes - Ford floating caliper

Master cylinder make:

Ford

Servo Fitted: Yes Type:

Tandem

Comments: Components from other touring cars manufactured before 31/12/72 may be used subject to swept area limitation (note respective rear drum width\* on three models, which must be honoured). Twin master cylinders permitted subject to no structural modification of body shell. Brake bias adjustment permitted; adjustment by driver in normal driving position not permitted.

### SECTION 2 - ENGINE

2.1 ENGINE

Make:

Ford Boss 302

Model: No. cylinders:

Configuration:

90° V8

Cylinder Block-material:

Cast Iron 101.6mm Four Stroke Max. allowed:

103.1mm

Bore - Original: Stroke - original:

76.2mm

Max. allowed:

76.2mm

Capacity - original:

4949cc

Max. allowed:

5091

Cooling method: Identifying marks:

Water Cocled C9ZE-6015

Comments: Boss 302 is a unique four bolt main bearing block. The Historic Commission has approved the use of Ford Motorsport block Part No. M-6010-A4 manufactured up to circa 1993. A LATER FORD MOTORSPORT BLOCK CARRYING THE SAME PART NO. IS NOT ELIGIBLE. REFER ATTACHED PHOTOGRAPH IDENTIFYING THE ELIGIBLE CYLINDER

BLOCK

2.2 CYLINDER HEAD

Make:

Ford

No. of valves/cylinder-

Injet:

Exhaust:

4

No. of ports total:

8-Inlet:

4 Location: Cylinder Block

Exhaust: Drive:

Roller chain

No. of camshafts: Valve actuation:

Pushrods

Spark plugs/cylinder:

Identifying marks: C8FE or C9ZE are the only acceptable prefixes.

Comments:

2.3 LUBRICATION

Method:

Wet sump

Oil cooler standard:

No but permitted Location: May not be external to bodywork

Comments:

2.4 IGNITION SYSTEM

Type:

Coil and conventional type distributor

Make:

Autolite

Comments: Replacement distributors permitted, but must employ points (breakerless units not permitted). Regulations permit us eof electronic rev. limiters.

2.5 FUEL SYSTEM

Carburettor: Make:

Holly

Model: 9510

Freedom of number and type of carburettor is allowed subject to the carburettor. used being commercially available prior to 31/12/1972.

# SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make:

Ford

Type:

Diaphragm

Diameter:

267mm

No. of Plates: Actuation:

Hydraulic

Comments:

3.2 TRANSMISSION

Type:

4 speed synchromesh

Make:

Ford

Model:

"Top Loader"

No. forward speeds: 4

Gearbox location: Behind engine

Gearchange type and location: Remote floorshift

Case material:

Cast Iron

Identifying marks:

Comments:

3.3 FINAL DRIVE

Make: Ford

Model:

9" ring gear

Wheel drive method:

Rear

Differential: Both "Traction-tok" and Detroit "Locker" differentials were fitted as original

equipment

Comments: Regulations permit freedom of differential action.

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number:

Location: Gearbox to rear axle

Description:

Single piece tubular steel shaft with hardy-Spicer type U/Joints

Comments:

3.5 WHEELS & TYRES

Wheel type: Original:

Pressed steel

Allowed:

Pressed steel or period alloy

Fixture method:

Studs & nuts (5)

Wheel dia. & rim width

Original:

15" x 7°

Allowed

15" x 8"

Aspect ratio - minimum:

60%

Comments:

# SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location: Under rear of car - forms boot floor Capacity: 75 Litres

Fuel pump, type and location: Both mechanical (engine mounted and electric fuel pumps were

fitted as original equipment.

Comments:

4.2 ELECTRICAL SYSTEM

Voltage: 12 Volts

Alternator fitted

Battery Location:

Engine compartment or boot

Comments:

4.3 BODYWORK

Type:

Closed

Material:

Steel

2

No. of seats: Comments:

No. doors:

4.4 DIMENSIONS

Track - Front:

1506mm

2743mm

Rear:

1486mm

Wheelbase: Dry weight:

1238 Kg

Overall length:

4470mm

Comments:

4.5 SAFETY EQUIPMENT

Fire extinguisher required

Seat belt required Rollbar required

Electrical cut off switch required

Safety fuel tank optional

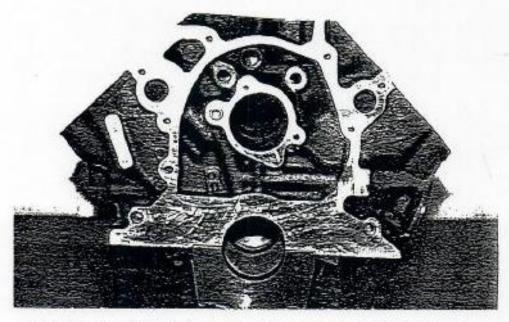
GH-Ford Mustang Boss 302.doc

### ATTACHMENT TO FORD MUSTANG BOSS 302 SPECIFICATION SHEET

Identification of Ford Motorsport Cylinder Block P/No.M-6016-A4 Approved by Historic Commission as a Replacement for Original Ford Mustang Boss 302 Cylinder Block P/No.C9ZE - 6015.



FRONT VIEW OF APPROVED BLOCK P/NO. M - 6010 - A4



FRONT VIEW OF LATER VERSION OF M - 6010 - A4 NOT APPROVED FOR HISTORICS

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



633 MAIN ST. STAMFORD, CONN. 06901 (203) 346-6233

Federation	Inter	na	tionals	de	1	Automobile
	PODM	OF	DECOCK	TOTO	M	

In accordance with Appendix "J" of the	ne International Sporting Code
Cylinder capacity	<u>4948.9 cm3 302 in3</u>
Manufacturer Ford Motor Company	Model 1969 Mustang Boss 302 (#63)
Serial # Chassis 9_02_100001	Manufacturer Pord
Serial # Engine None	Manufacturer Ford
Recognition valid from	List 69/2.
The manufacturing of the model descrives started on November 4,1968 and the didentical cars, in accordance with the was reached on January 17, 1969	ibed in this recognition form minimum production of 10,000 he specifications of this form,
(*) need not be answered for Group (**) only need to be answered for Gr.	



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

Vari on	19	rec #	1ist	_
on	19	rec #	list	
	19	rec #	list	
30		- 10202010		
BLARS			25	
Scam	p/Sign	nature o	f	
x a± y	onal :	Sporting	Authority	

JOHN V. OLIVEAU

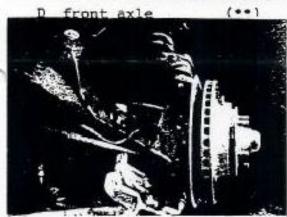
Norm	al evo	olution	of	the	type	
on	19	rec #		lis	ALCO !	
on	19	rec #		21:	st w	2
on	19	rec #		_11:	st_	

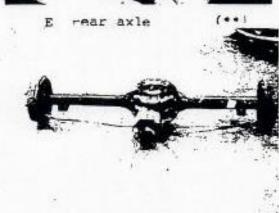
pour le Secrettaire de la CS!

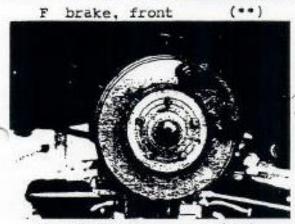
23 B

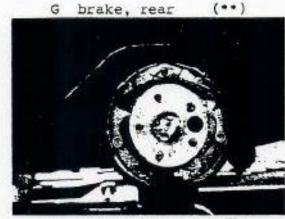




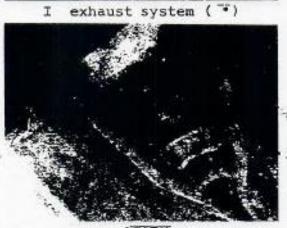








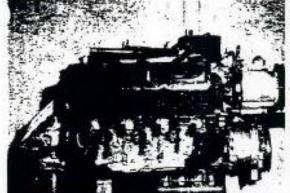




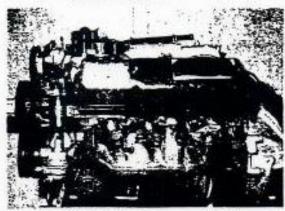
J ENGINE RIGHT



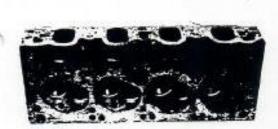
ENGINE LEFT



L COMBUSTION CHAMBER



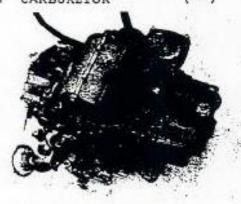
PISTON TOP



N CARBURETOR



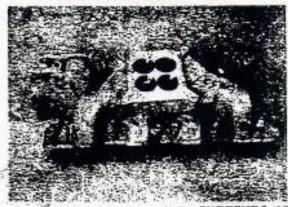
O ENGINE IN PLACE ( \*\* )



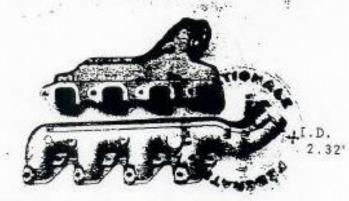
MANIFOLD INLET



MANIFOLD EXHAUST

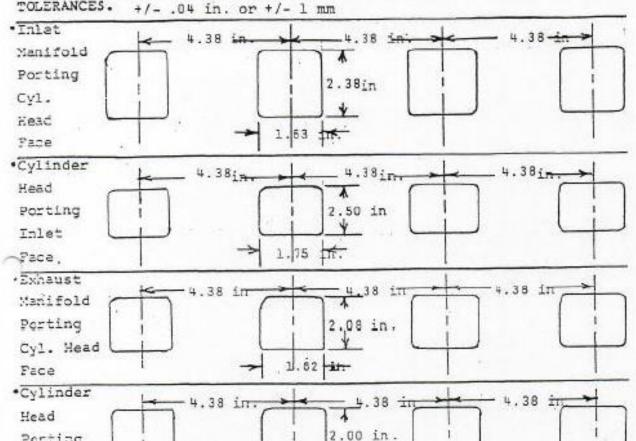


STAMP



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

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

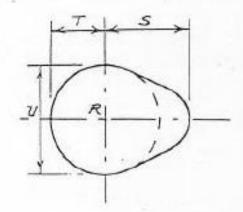


1.74



Face

Porting Exhaust



Inl	et cam			
5=	25.35	mm	.998	in
T=	17.73	mm	.698	in
U-	35.46	mm	1.396	in

#### Exhaust cam .99'8 in S- 25.35 mm T= 17.73 mm .698 in U- 35.46 mm 1.396

STAMP

302

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

### CAPACITIES & DIMENSIONS

( .. ) 1. Wheelbase 2743.2 mm 108.0 in At 0° Camber

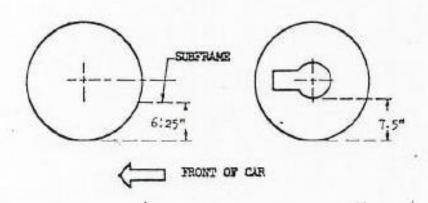
( \*\* ) 2. Front track 1506.2 mm 59.3 in + 0" Toe-In

(\*\*) 3. Rear track 1485.9 mm 58.5 in +

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

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.

Overall length of car

477 187.4 in CM

5. Overall width of car

182.1 CIII 71.7 in

- Overall height of car 6.
- 128 50.4 in
- gallons US 20
- Capacity of fuel tank (reserve included) 75.70 ltrs. gallons, Imp. 16.66
- Seating capacity Four (4) 8.
- Weight total weight of car with normal equipment, water, oil and spare wheel but without fuel or repair tools.

1238 kg 2764 1bs

7.

# CHASSIS & BODYWORK - Photos A, B, C

- (\*\*) 20. Chassis/body construction separate/unit construction
- Unit construction material/s (\*\*) 21.

Sheet Steel

- ( \*\* ) 22. Chassis material/s Steel separate construction
- Steel separate construction Body - material/s ( • • ) 23-
- Doors number Two (2)material/s Steel (\*\*) 24.
- (\*\*) 25. Hood material/s

Steel

( • • ) 26. Trunk Lid - material/s

Steel

Window, Rear - material/s

Glass

28. Windshield - material/s

Olass

29. Windows, front door - material/s

Glass None

30. Windows, rear door - material/s .31. Windows - actuating system

Regulator

32. Window, rear quarter - material/s

Glass/Hinged

# ACCESSORIES AND UPHOLSTERY

33. Heating, interior - yes

Optional

39. Air conditioning - yes

Optional

- no - ves 40. Ventilation
- ( \*) 41. Seats, front type of seat and upholstery Bucket/Vinyl
  - Seats, front weight 14 kg 35.2 1bs ea. (complete with supports & rails out of car) CHECK: BENCH BUCKET X CONSOLE INCLUDED Optional
  - 43. Seats, rear type of seat and upholstery Bench/Vinyl
  - 11.3 Weight 44. Bumper, front - material/s Steel kg 5.13 lbs
  - Weight 45. Bumper, rear - material/s Steel kg 5.76 lbs 12.7

### WHEELS

- Steel Type 50.
- Weight (per wheel, without tire)8.9 kg 19.51bs 51.
- Stud and Nut (5) 52. Method of attachment
- 15 in 381 mm 53. Rim, diameter
- 7 in 170.8 mm Rim, width 54.

### STEERING

Type 50.

Recirculating hall and

61. Servo assistance Cotional

62. Number of turns of steering wheel from lock

In case of servo assistance

### SUSPENSION

	20355	211-32-011				
( • • )	70.	Suspension, front (photo D) - typ	se i	apapdea الله	t	
( • • )	71.	Spring - type	C	oil		
( •)	72.	Stabilizer - if fitted		3		
	73.	Shock absorbers - number		wo (2)		
	74.	Туре	7	uoular-Ad	justable	
(**)	78.	Suspension, rear (photo E) - type	e :	Live Axle		-
( • • )	79.	Spring - type	I	leaf		
( •)	80.	Stabilizer - if fitted	1	lo o		
	81.	Shock absorbers - number	7	(2)		
	82.	Туре		Cubular-Ad	justable	
0	BRAK	ES (Photos E and F)				
()	90.	Method of operation		garaulic		
( •)	91.	Power assisted (if fitted) - typ	e :	edal Boos	t	
	92.	Master Cylinders - number and ty (indicate if duplex master cylin		ne (1) Du	Rear Rear	
	93.	Cylinders - number per wheel	0;5e	(1)	One (1)	)
	94.	Cylinders - wheel bore (indicate stepped bore dimension	60.2 mm ( s if appl	:.379in <u>æ</u> . icable)	2mm .87;	in
	Drum	n Brakes	From	<u>nt</u>	Rear	0
	95.	Diameter, inside	mm	in 25	4 mm 10	o in
	95.	Linings, length	mm	in/91	L2mm 19	. Hin
	97.	Linings, width	nm	in	44 mm 1	.75in
	98.	Shoes - number per brake		Two (		
0	99.	Area, total - per brake	mm2	in2 <sub>1,</sub>	,840 <sup>m,233</sup>	.65in2
8	Disc	Brakes	200			
	100.	Diameter, outside	257.0 nm		mm	in
	101.	Thickness of disc	23.8Dm	17/25/25/25	mm	in
	102.	Lining - length	124.5 mm		mm	in
	103.	Lining - width	52.6 mm	2.07 in	mm	in
	104.	Pads - number per brake Two			100000000000000000000000000000000000000	1921020
		4.4	000 5	no sim?	mm 2	1112



105. Area, total - per brake

mm2

13,097.5 nm220.3in2

inz

# ENGINE (Photos J and K)

- -) 130. Cycle two <u>four</u> Wankel
- (\*) 131. Cylinders number Eight (3)
- 10 ) 132. Cylinders arrangement Vee Wankel # of elements and basic dimensions
- ••) 133. Bore 101.6 mm 4.0 in
- ••) 134. Stroke 76.2 mm 3.0 in
- ••) 135. Cylinders capacity 619.4 cm3 37.8 in3
- ••) 136. Cylinders, total capacity4948.9 cm3 302 in3
- ••) 137. Cylinder Block material/s Cast Iron
- 138. Sleeves material/s (if fitted) None
- [ 139. Head, cylinder material/s [ast Iron number fitted Two (2)
- (++) 140. Port, inlet number Eight (8)
- ( •• ) 141. Port, exhaust number Eight (8)
- ( \*) 142. Compression ratio 10.5:1
- ( •) 143. Combustion chamber volume62.77cm3 3.826 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 45.72 mm 1.80 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 7.568 ltrs pts 8 qts US
- ( \*) 153. Cooler, oil yes no
  - 154. Cooling method Water Rediator
  - 1552. Cooling capacity of system 14.76 ltrs pts 16.1 qts US

- ( •) 156. Fan, cooling (if fitted) diameter44.6/43.6 cm 17.56/1739n
- ( •) 157. Fan, cooling number of blades 5/4 material/s Aluminum/Steel BEARINGS
- (\*\*) 158. Crankshaft, main type Insert diameter 57.11 mm 2.24 9 in
- (\*\*) 159. Connecting rod, big end typeInsertdiameter 53.9 mm 2.1230 in

### WEIGHTS

- ( \*) 160. Flywheel (clean) 9.07 kg 20.0 lbs + 5%
- ( \*) 161. Flywheel with clutch (all rotating parts) 30.30 kg 66.8 lbs +5%
- ( •) 162. Crankshaft 21.32 kg 47 lbs + 5%
  - 163. Connecting Rod .748 kg 1.65 lbs + 5%
- ( \*) 164. Piston with rings & pin .552 kg 1.216 1bs ± 5%

### . FOUR CYCLE ENGINES

- (\*\*) 170. Camshafts number One (1) naterial/s Alloy Iron
- ( • ) 171. Camshaft location Cylinder Block
- (\*\*) 172. Camshaft Drive, type Chain
- (\*\*) 173. Valve operation type ?appet,Pushrod, 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 56.642 mm 2.23 in
- ( \*) 182. Valve lift maximum 12.70 mm .50 in
  - 183. Springs, valve number Tvo (2)
  - 184. Spring type Coil and Flat
- ( • ) 185. Valves, per cylinder number One (1)
- ( •) 186. Tappet clearance for checking timing (cold).635 mm .025in
- ( \*) 187. Valves open at (with tolerance for tappet 41° BIC clearance indicated)
- ( \*) 188. Valves close at (with tolerance for tappet 79° ABC clearance indicated)
- ( •) 189. Air filter type

Dry Element





# MODEL '69 Mustang Boss RIA REC # 5003

### EXHAUST (See Photo Q )

- Manifold, exhaust material/s Cast Iron
- 196. Valves (overall) - diameter 43.43 mm 1.71 in
- 197. Valve, lift - maximum 12.70 mm .50 in
- 198. Valve Springs/valve - number Two (2)
- 199. Springs - type Coil and Flat
- Valves number per cylinder One (1) (\*\*) 200.
- ( \*) 201. Tappet clearance for checking timing (cold) .635 mm .025
- A \*) 202. Valves open at (with tolerance for tappet 85" BBC clearance indicated)
- ( \*) 203. Valves close at (with tolerance for tappet 35° ATC clearance indicated)

### CARBURETION (See Photo N)

- 210. Carburetors, fitted number One (1)
- 211. Type Downflow
- ( \*) 212. Make Holley
- ( \*) 213. Model 9510
  - Carburetors number of mixture passages Four (4)
- ( \*) 215. Carburetor flange hole diameter of exit port 42.875 mm 1.688 in
  - 216. Venturi throat diameter+ 33.35 mm 1.313 in

### INJECTION

220. Pump - nake

None Fitted

- 221. Plungers' number
- ( \*) 222. Pump model
  - 223. Injectors - location
  - 224. Injectors - total number
- ( \* | 225. Inlet pipe minimum diameter

in

+ For variable throat type carburetors, indicate minimum liftof shutter mechanism such as pistons in S.U. STAMP STAMP

### ENGINE ACCESSORIES

- ( •) 230. Pump, fuel mechanical and/or electrical
  - 231. Number fitted One (1) Each Two (2) Total
  - 232. Ignition system type Battery and Coll
  - 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 Balt
  - 238. Voltage, generator volts 12.8
  - 239. Battery number One (1)
  - 240. Location Engine Compartment or Trunk
  - 241. Voltage volts 12 amp hrs 45

### ENGINE & CAR PERFORMANCE as declared by mfr. in catalogue

- (\*) 250. Horsepower maximum engine output 290 at 6000 rpm SAE (indicate SAE or DIN)
- ( \*) 251. RPM maximum 6000 output at that figure 290
- ( •) 252. Torque maximum 345 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 26.7 cm 10.5 in
- 263. Linings diameter inside 16.5 cm 6.5 in
  - Linings diameter outside 26.7 cm 10.5 in

264. Method of operation Mechanical

STAMP STAMP

Boss . 302

M

Cl

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.		nual  # Teeth	Autom	atic  # Teeth	Alter	automatic  # Teeth		
1	2.78	23 32 30 15	2.46	5	2.32			
2	-1-93	23 31 30 21	1.46	2.02:1	1.69	23 28 25 18		
3 .	1.36	23 25 30 24	1.00	0	1.29	23 28 25 15 23 28 25 18 23 25 23 25 23 25		,
4	1.0	Direct		vert tall	1.0	Direct		
5				Cor at S				
6		-		Torque Ratio				
reverse	2.78		2.20	76	2.32		ŧ	

278. Overdrive - type None Fitted

279. Forward gears on which overdrive can be selected

280. Overdrive - ratio

### FINAL DRIVE

(\*\*) 290. Type Hypoid, Semi-Floating, Straddle, Mounted Pinion

(\*\*) 291. Differential - type Locking-By Ratchet or Friction

(\*\*) 292. Limited Slip Differential (if fitted) - type ≠ Positive locking by Ratchet or Friction

293. Ratio

3.25 3.50 3.70 3.91 4.11 4.30

Teeth - number

Specify friction or positive locking type

### IMPORTANT

MAKE

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, P, G, H, J, K, O.

Optional equipment affecting preceding information:

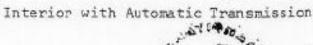
CATALOGUE PART NUMBER MUST BE GIVEN

S7MS-6675-B Sump Guard.





Automatic Transmission Photo H
Code #C4



STAMP

