AMA-40A

AMA Specifications—Passenger Car

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MANUFACTURER	CAR NAME	
FORD MOTOR COMPANY	COUGAR	
MAILING ADDRESS	MODEL YEAR	ISSUED: 10-1-68
P.O. Box 2053 — Dearborn, Mich. 48121	1969	REVISED (•) 4-3-69

NOTES:
1. The General Specifications herein are those in effect at date of compilation and are subject to change without notice by the manufacturer.
2. UNLESS OTHERWISE INDICATED:
   a. Specifications apply to standard models without optional equipment. Significant deviations are noted.
   b. Nominal design dimensions are used throughout these specifications.

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BODY – TYPES AND STYLE NAMES –

Body type, style names; use manufacturer's code for series & body style.

BODY MODEL	MODEL NUMBER
Cougar	
2-Door Hardtop	65A
2-Door Hardtop	65C*
2-Door Convertible	76A
Cougar XR-7	
2-Door Hardtop	65B
2-Door Convertible	76B
Cougar Eliminator	
2-Door Hardtop	65E

* Bench Seat

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CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions

(All dimensions in inches unless otherwise indicated)

All dimensions to ground are for comparative purposes only. Dimensions are to be shown for: 4-Dr. Sedan, 2-Dr. H.T., 4-Dr. H.T., Convertible and Station Wagon.

MODEL		SAE Ref. No.	65	76
WIDTH				
Track – Front		W101	58.5	
Track – Rear		W102	58.5	
Maximum overall car width		W103	74.2	
Body width at No. 2 pillar		W117	71.7	
LENGTH				
Body "O" to front of dash		L 30	1.3	
Wheelbase		L101	111.1	
Overall car length		L103	193.8	
Overhang – front		L104	36.6	
Overhang – rear		L105	46.1	
Body upper structure length		L123	93.5	85.8
Body "O" line to ℄ of rear wheel		L127	91.6	
Body "O" line to w/s cowl point		L130	10.4	
HEIGHT				
Passenger Distribution (front & rear)			2-1	
Trunk/Cargo load (lbs.)			None	
Overall height		H101	51.5	
Cowl height		H114	36.2	
Deck height		H138	35.6	36.5
Rocker panel – front	To ground	H112	8.7	
	From front wheel ℄			
Rocker panel – rear	To ground	H111	7.6	
	From rear wheel ℄			
Windshield slope angle		H122	52.5°	
GROUND CLEARANCE				
Bumper to ground – front		H102	16.9	
Bumper to ground – rear		H104	16.7	
Angle of approach		H106	24.6°	
Angle of departure		H107	15.0°	
Ramp breakover angle		H147	12.0°	
Min. running clearance (Specify)		H156	4.8 (Exhaust System)	

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CAR AND BODY DIMENSIONS

See Pages 25, 26 for SAE Dimension Definitions

(All dimensions in inches unless otherwise indicated)

MODEL	SAE Ref. No.	65	76
FRONT COMPARTMENT			
Effective head room	H61	37.4	38.2
Max. eff. leg room – accelerator	L34	41.1	
H Point to Heel point	H30	7.8	
H Point travel	L17	4.9	
Shoulder room	W 3	55.9	
Hip room	W 5	55.2	
Upper body opening to ground	H50	46.4	46.3
REAR COMPARTMENT			
H Point couple distance	L50	29.2	27.3
Effective head room	H63	35.8	35.9
Min. effective leg room	L51	32.1	30.3
H Point to Heel point	H31	10.0	
Min. knee room	L48	.7	-2.8
Rear Compartment room	L 3	23.2	21.1
Shoulder room	W 4	54.5	43.2
Hip room	W 6	52.4	43.6
Upper body opening to ground	H51	—	—
LUGGAGE COMPARTMENT			
Usable luggage capacity	V 1	10.2	8.9
Liftover height	H195	27.2	
Position of spare tire storage		Flat - Right Side of Trunk	
Method of holding lid open		Torsion Bar	
STATION WAGON – THIRD SEAT			
Shoulder Room	W85		
Hip room	W86		
Effective leg room	L86		
Effective head room	H86		
Seat facing direction			
STATION WAGON – CARGO SPACE			
Cargo length at floor – front seat	L202		
Cargo length at belt – front seat	L204		
Cargo width – Wheelhouse	W201		
Opening width at belt	W204		
Maximum cargo height	H201		
Rear opening height	H202		
Cargo volume index (cu. ft.) $\frac{W4 \times L204 \times H201}{1728}$	V2		

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POWER TEAMS

(Indicate whether standard or optional)

MODEL AVAILABILITY	ENGINE					TRANSMISSION	AXLE RATIO (Std. first) (Indicate A C ratio)		
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP RPM	Torque RPM		1	2	3
All except Eliminator	351	2V	9.5	250 @ 4600	355 @ 2600	Manual 3 Spd. Manual 4 Spd. Automatic	2.75 3.00 2.75	3.25, 3.00 3.25 3.25, 300	3.25, 3.00 3.25, 3.00 3.25, 3.00
GT	351	2V	9.5	250 @ 4600	355 @ 2600	Manual 3 Spd. Manual 4 Spd. Automatic	3.00 3.00 3.00	3.25 3.25 3.25	3.00, 3.25 3.00, 3.25 3.00, 3.25
All	351	4V	10.7	290 @ 4800	385 @ 3200	Manual 3 Spd. Manual 4 Spd. Automatic	3.00 3.00 3.00	3.25 3.25 3.25	3.25, 3.00 3.25, 3.00 3.25, 3.00
All	390	4V	10.5	320 @ 4600	427 @ 3200	Manual 3 Spd. Manual 4 Spd. Automatic	3.00 3.00 2.75	3.25 3.25 3.25, 3.00	3.25, 3.00 3.25, 3.00 3.25, 3.00
GT	390	4V	10.5	320 @ 4600	427 @ 3200	Manual 3 Spd. Manual 4 Spd. Automatic	3.25 3.25 3.25	3.00 3.00 3.00	3.25, 3.00 3.25, 3.00 3.25, 3.00
All	428	4V	10.6	335 @ 5200	440 @ 3400	Manual 4 Spd. Automatic	3.25 3.25	3.50 3.50, 3.00	3.50, 3.91 4.30 3.50, 3.91 4.30
Ram Air	428	4V	10.6	335 @ 5200	440 @ 3400	Manual 4 Spd. Automatic	3.50 3.50	 3.00	3.50, 3.91 4.30 3.00, 3.50 3.91, 4.30

NOTE: All A/C ratios 3.00:1 unless noted. (N/A 428 Man. Trans.)

1. Standard
2. Optional
3. Locking

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MODEL	CID	351-2V	351-4V	390-4V	428-4V
ENGINE – GENERAL					
Type, no. cyls., valve arr.		90°V, 8 Cyl., OHV			
Bore and stroke (nominal)		4.002 x 3.50		4.052 x 3.784	4.132 x 3.984
Piston displacement, cu. in.		351		390	428
Bore spacing (℄ to ℄)		4.38		4.63	
No. system (front to rear)	L. Bank	5-6-7-8		5-6-7-8	
	R. Bank	1-2-3-4		1-2-3-4	
Firing order		1-3-7-2-6-5-4-8		1-5-4-2-6-3-7-8	
Compres. ratio (nominal)		9.0(9.5 Max)	10.2(10.7 Max)	10.0:1(10.5:1 Max)	10.2:1(10.6:1 Max)
Cylinder Head Material		Cast Iron			
Cylinder Block Material		Cast Iron			
Cyl. Sleeve-Wet, dry, none		None			
Number of mtg. points	Front	Two			
	Rear	One			
Engine installation angle		4°		4° 40'	
Taxable horsepower $\frac{Dia^2 \times No.\ Cyl.}{2.5}$		51.2		52.49	54.58
Publishing max. bhp* @ eng. RPM		250 @ 4600-2V 290 @ 4800-4V		320 @ 4600	335 @ 5200
Publishing max. torque * (lb. ft. @ RPM)		355 @ 2600-2V 385 @ 3200-4V		427 @ 3200	440 @ 3400
Recommended fuel regular – premium		Regular-2V Premium-4V		Premium	
ENGINE – PISTONS					
Material		Aluminum Alloy with Steel Struts			
Description and finish		Autothermic, Slipper Skirt, Cam Ground, and Tin Plated			
Weight (piston only) oz.		22.86		23.1	24.4
Clearance (limits)	Top land	.0304-.0408		.024-.0316	.024-.0316
	Skirt Top	.0018-.0026 (a)		.0015-.0023 (a)	.0023-.0031(a)
	Skirt Bottom	-		-	-
Ring groove depth	No. 1 ring	.202-.209		.208-.215	.211-.218
	No. 2 ring	.202-.209		.210-.217	.213-.220
	No. 3 ring	.184-.191		.1945-.2015	.194-.201
	No. 4 ring	-		-	-

* Max. bhp (brake horsepower) and max. torque corrected to 60° F and 29.92 in. Hg atmospheric pressure.

(a) At Centerline and 90° to Axis of Pin Hole.

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MODEL CID	351-2V-4V	390-4V	428-4V

ENGINE – RINGS

Function (top to bottom)	No. 1, oil or comp.	Compression		
	No. 2, oil or comp.	Compression		
	No. 3, oil or comp.	Oil Control		
	No. 4, oil or comp.	None		
Compression	Description - material, coating, etc.	#1 Cast Iron Alloy, Barrel Face, Moly. Filled Groove. 390-428, Cast Iron Alloy, Straight Face, Chrome Plated. #2 Cast Iron Alloy, Tapered Face, Scraper Groove, Oxide Coated (a)		
	Width	#1 & #2 (.077-.078)	#1 (.0777) #2 (.0935)	#1 (.0777) #2 (.0775)
	Gap	#1 and #2 (.010-.020)		
Oil	Description - material, coating, etc.	Multi-Piece: Two Rails and One Spacer-Expander. Rails: Steel (SAE-1070) Chrome Plated and Black Oxide Coated. Spacer-Expander: Rustless Steel (SAE-30201) (b)		
	Width	.187		
	Gap	.015-.055 Rails Only		
Expanders		Part of Oil Ring Assembly		

ENGINE – PISTON PINS

Material			Steel (SAE 5015) (SAE-1016 Optional)		
Length			3.025	3.160	3.170
Diameter			.9124-.9118	.9754-.9749 (Select Fit)	
Type	Locked in rod, in piston, floating, etc.		Press Fit in Rod	Full Floating Tubular	
	Bushing	In rod or piston	None	In Rod	
		Material	-	Bronze	
Clearance	In piston		.0002-.0004	.0001-.0003	
	In rod		Press Fit	.0001-.0003	
Direction & amount offset in piston			Right .0625	Right .0625	

ENGINE – CONNECTING RODS

Material		Forged Steel (SAE 1041-H)		
Weight (oz.)		24.92	27.09	29.7
Length (center to center)		5.956	6.488	6.488
Bearing	Material & Type	Plated Copper-Lead Alloy on Steel Back (Replaceable Insert)		
	Overall length	.706-.726	.724-.734	
	Clearance (limits)	.0007-.0025	.0008-.0026	
	End play	.010-.020 (2 Rods)		

(a) 390 & 428 Straight Face, 390 Phosphate Coated.
(b) 428 Blued Steel (AISI-C-1075).

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ENGINE – CRANKSHAFT

MODEL CID			351-2V-4V	390-4V	428-4V
Material			Nodular Cast Iron Alloy, Precision Molded		
Vibration damper type			Tuned, Elastic Suspended, Inertia Member		
End thrust taken by bearing (No.)			Three	Three	
Crankshaft end play			.004-.008	.004-.010	
Main bearing	Material & type		Plated Copper-Lead Alloy on Steel Back (Replaceable Insert) (a)		
	Clearance		.0012-.0029	.0005-.0025	
	Journal dia. and bearing overall length	No. 1	2.9998 x .880	2.7488 x .907	
		No. 2	2.9998 x .880	2.7488 x .907	
		No. 3	2.9998 x 1.132	2.7488 x 1.117	
		No. 4	2.9998 x .880	2.7488 x .907	
		No. 5	2.9998 x .880	2.7488 x .907	
		No. 6	-	-	
		No. 7	-	-	
	Dir. & amt. cyl. offset		R. B. Leads .84	Right Bank Leads .88	
Crankpin journal diameter			2.3107	2.4384	

ENGINE – CAMSHAFT

Location			In Block Above Crankshaft		
Material			Special Alloy Cast Iron, Precision Molded, Induction Hardened, Phosphate Coated		
Bearings	Material		SAE 15 Lead Base Babbit on SAE 1010 Steel Back (Replaceable)		
	Number		Five		
Type of Drive	Gear or chain		Chain		
	Crankshaft gear or sprocket material		Sintered Iron or Steel		
	Camshaft gear or sprocket material		Aluminum Die Cast Body with Molded Nylon Teeth		
	Timing chain	No. of links	58	48	
		Width	.637 (.750 Alternate)	.875 (.890 Alternate)	
		Pitch	.375	.50	

ENGINE – VALVE SYSTEM

Hydraulic lifters (Std., opt., NA)		Standard		
Valve rotator, type (intake, exhaust)		Two Piece	Ford Free Turn (Intake and Exhaust)	None
Rocker ratio		1.60:1	1.73:1	
Operating tappet clearance (indicate hot or cold)	Intake	Zero (.083-.183)(b)	Zero (.100-.200) (b)	Zero
	Exhaust	Zero (.083-.183)(b)	Zero (.100-.200) (b)	Zero

(a) 351-2V-4V Unplated.

(b) Tappets Collapsed.

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MODEL			CID	351-2V-4V	390-4V	428-4V
ENGINE – VALVE SYSTEM (cont.)						
Timing (based on top of ramp points)	Intake		Opens (°BTC)	11	16	18
			Closes (°ABC)	65	60	72
			Duration - deg.	256	256	270
	Exhaust		Opens (°BBC)	68	55	82
			Closes (°ATC)	22	21	28
			Duration - deg.	270	256	290
	Valve opening overlap			33	37	46
Intake	Material			#1 Sil-Chrome, Hardened Face & Foot, Chrome Plated Stem & Foot (a)		
	Overall length			5.070	5.446	5.446
	Actual overall head dia.			1.849-1.834	2.037-2.022	2.097-2.082
	Angle of seat & face			Seat 44° 30'-45° Face 45° 30'-45° 45'		Seat 59°30'-60°F. 60°30'-60°45'
	Seat insert material			None		
	Stem diameter			.3423-.3416	.3718-.3711	.3718-.3711
	Stem to guide clearance			.0010-.0027	.0010-.0027	.0010-.0027
	Lift (@ zero lash)			.418	.438	.481
	Outer spring press. & length		Valve closed (lb.@in.)	79-87 @ 1.79	85-95 @ 1.82	86-94 @ 1.82
			Valve open (lb.@in.)	204-226 @ 1.34	209-231 @ 1.38	271-299 @ 1.32
	Inner spring press. & length		Valve closed (lb.@in.)	Damper Only	Damper Only	Damper Only
			Valve open (lb.@in.)	Damper Only	Damper Only	Damper Only
Exhaust	Material			21-4N Steel, Aluminized Head, Chrome Plated Stem & Foot (b)		
	Overall length			5.070	5.426	5.426
	Actual overall head dia.			1.548-1.533	1.566-1.551	1.660-1.645
	Angle of seat & face			Seat 44° 30' to 45° 00' Face 45° 30' to 45° 45'		
	Seat insert material			None		
	Stem diameter			.3418-.3411	.3713-.3706	.3708-.3701
	Stem to guide clearance			.0015-.0032	.0015-.0032	.0020-.0037
	Lift (@ zero lash)			.448	.438	.489
	Outer spring press. & length		Valve closed (lb.@in.)	79-87 @ 1.79	85-95 @ 1.82	86-94 @ 1.82
			Valve open (lb.@in.)	204-226 @ 1.34	209-231 @ 1.38	271-299 @ 1.32
	Inner spring press. & length		Valve closed (lb.@in.)	Damper Only	Damper Only	Damper Only
			Valve open (lb.@in.)	Damper Only	Damper Only	Damper Only

ENGINE – LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure	
	Connecting rods	Pressure	
	Piston pins	Timed Pres. Stream	Oil Mist
	Camshaft bearings	Pressure	
	Tappets	Pressure	
	Timing gear or chain	Metered Pressure	Splash
	Cylinder walls	Oil Mist, Splash	Pres. Stream

(Continued)

(a) 390 No Chrome Plate, 351 SAE 1047 Steel, Aluminized Head, Chrome Plated Stem & Foot.

(b) 428 Hardened Foot, 390 Cast Austenitic Steel.

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MODEL CID	351-2V-4V	390-4V	428-4V

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	Rotor		
Normal oil pressure (lb. engine rpm)	35-55 PSI @2000	45-65	40-60
Oil press. sending unit (elect. or mech.)	Electrical		
Type oil intake (floating, stationary)	Stationary Shrouded Screen in Sump		
Oil filter system (full flow, part., other)	Full Flow		
Filter replacement (element, complete)	Complete		
Capacity of c case, less filter-refill (qt.)	4.0		
Oil grade recommended (SAE viscosity and temperature range)	Multi-Viscosity +32°F & Above - SAE 20W40 0° and Above - SAE 10W40 -10°F to +90°F - SAE 10W30 Below -10°F (-32° Max) SAE 5W30		Single Viscosity +90°F & Above - SAE 40 +32°F to +90°F - SAE 30 +10°F to +32°F - SAE 20-20W -10°F to +10°F - SAE 10W
Engine Service Reqmt. (MM, MS, etc.)	MS		

ENGINE – EXHAUST SYSTEM

		351-2V	351-4V		
Type (single, single with cross-over, dual, other)		Single	Dual	Dual	Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)		One Reverse Flow	Two Reverse Flow	Two Reverse Flow	Two Reverse Flow
Exhaust pipe dia. (O.D., wall thick.)	Branch	2.25x.084 Lam	2.25x.084 Lam	2.00x.084 Lam	2.25x.084 Lam
	Main	2.50x.075 Solid	2.50x.075 Solid	2.25x.075 Solid	2.25x.075 Solid
Tail pipe dia. (O.D. & wall thickness)		2.25x.060 Solid	2.00x.060 Solid	2.00x.060 Solid	2.00x.060 Solid

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	Induction System (Closed System)
	Optional	None
Control Unit	Make and model	Ford (AC, Chicago Screw, or Eaton)
	Location	Rocker Cover
	Energy source (manifold vacuum, carburetor air stream, other)	Manifold Vacuum
	Control method (variable orifice, fixed orifice, other)	Variable Orifice
Complete system	Discharges (to intake manifold, carb. air intake, air cleaner intake, other)	Carburetor Spacer and/or Carburetor Air Cleaner (351-390) Intake Manifold and Carburetor Air Cleaner (428)
	Air inlet (breather cap, carburetor air cleaner, other)	Carburetor Air Cleaner
	Flame arrestor (screen, check valve, other)	Emission Valve and Air Cleaner Filter

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MANUAL TRANSMISSION

MODEL	CID	351-2V	351-4V	390-4V

ENGINE – EXHAUST EMISSION CONTROL

Type (Air injection, engine modifications, other)			Engine, Carburetor and Distributor Modifications.		
Air Injection Pump	Type		None		
	Displacement				
	Drive ratio				
	Drive type				
	Relief valve (type)				
	Filter (describe)				
Air Injection System	Air distribution (head, manifold, etc.)		None		
	Point of entry				
	Injection tube I.D.				
	Check valve type				
	Backfire protection (type)				
Carburetor	Make		Autolite		
	Model		C9ZF-9510-A	C9ZF-9510-C	C9ZF-9510-E
	Barrel size		1.689	1.437 Pri.,1.562 Sec.	1.562 Pri.,1.6875 Sec.
	(a) Idle speed	Drive	—	—	—
		Neutral	650	650	700
	Idle A/F mixture		.083 @ 11.0 CFM	.078 @ 11.0 CFM	.078 @ 12 CFM
Distributor	Aux. Adv. Systems (type)		See Page 13		
	Make				
	Model				
	Cent'fgal adv. in crank degrees @ eng. rpm	Start (rpm)			
		Intermed. points deg. @ rpm			
		Max. deg. @ rpm			
	Vacuum adv. in crank degrees @ eng. rpm	Start (in Hg) Intermed. points deg. @ in. Hg Max. deg. @ in.			
	Vacuum Source				
Timing - Crank degrees @ rpm					
Cooling System			See Page 11		
Exhaust System			See Page 8		

(a) With lights and air conditioning on.

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MODEL CID — AUTOMATIC TRANSMISSION

ENGINE – EXHAUST EMISSION CONTROL

			CID	351-2V	351-4V	390-4V
Type (Air injection, engine modifications, other)				Engine, Carburetor and Distributor Modifications		
Air Injection Pump	Type			None		
	Displacement					
	Drive ratio					
	Drive type					
	Relief valve (type)					
	Filter (describe)					
Air Injection System	Air distribution (head, manifold, etc.)			None		
	Point of entry					
	Injection tube I.D.					
	Check valve type					
	Backfire protection (type)					
Carburetor	Make			Autolite		
	Model			C9ZF-9510-B	C9ZF-9510-D	C9ZF-9510-F
	Barrel size			1.689	1.437 Pri, 1.562 Sec	1.562 Pri, 1.6875 Sec
	(a) Idle speed	Drive		550	550	550
		Neutral		—	—	—
	Idle A/F mixture			.085@11.0 C.F.M.	.075@12.5 C.F.M.	.070 @ 14. C.F.M.
Distributor	Aux. Adv. Systems (type)			See Page 13		
	Make			Autolite		
	Model			C9OF-12127-M	C9OF-12127-T	C7AF-12127-AC
	Cent'fgal adv. in crank degrees @ eng. rpm	Start (rpm)		0°-4° @ 1000	0°-4° @ 975	0°-2° @ 920
		Intermed. points deg. @ rpm		10° @ 1400 17.5° @ 3000	18° @ 1850 19.7° @ 3000	11° @ 1400 17.8° @ 3000
		Max. deg. @ rpm		24.5° @ 4000	24° @ 4000	24.5° @ 4000
	Vacuum adv. in crank degrees @ eng. rpm	Start (in Hg)		0°-2° @ 5" 0°-6° @ 5.7" 10°-16° @ 8.8" 11°-16° @ 10"	0°-2° @ 5" 0°-6° @ 6.3" 10°-16° @ 10" 18°-24° @ 15" 20°-25° @ 17"	0°-2.6° @ 8" 2°-9.5° @ 10" 14°-20° @ 15" 20°-25° @ 21.5"
		Intermed. points deg. @ in. Hg				
		Max. deg. @ in.				
	Vacuum Source			Carburetor		
Timing - Crank degrees @ rpm				6° BTC @ Idle (b)		
Cooling System				See Page 11		
Exhaust System				See Page 8		

(a) With Lights and Air Conditioning On.
(b) Set with vacuum line off distributor (initial timing).

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MODEL	CID	Manual Transmission	Automatic Transmission
		428-4V, CJ	428-4V, CJ

ENGINE – EXHAUST EMISSION CONTROL

Type (Air injection, engine modifications, other)			Air Injection, Engine, Carburetor and Distributor Modifications	
Air Injection Pump	Type		Positive Displacement, Vane Type	
	Displacement		19.3 Cubic Inches Per Revolution	
	Drive ratio		1.21:1 (1.25:1 with A/C)	
	Drive type		V-Belt and Pulley	
	Relief valve (type)		Pressure Sensitive-Poppet	
	Filter (describe)		Centrifugal	
Air Injection System	Air distribution (head, manifold, etc.)		Manifold	
	Point of entry		Exhaust Ports in Cylinder Heads	
	Injection tube I.D.		.260	
	Check valve type		Spring Load Plate-Poppet	
	Backfire protection (type)		Air By-Pass or Anti-Backfire Valve	
Carburetor	Make		Holley	
	Model		C9AF-9510-M	C9AF-9510-N
	Barrel size		1.68 Primary & Secondary	1.68 Primary & Secondary
	(a) Idle speed	Drive	—	650
		Neutral	700	—
	Idle A/F mixture		.0835 @ 18.5 C.F.M.	.0855 @ 20. C.F.M.
Distributor	Aux. Adv. Systems (type)		See Page 13	
	Make			
	Model			
	Cent'fgal adv. in crank degrees @ eng. rpm	Start (rpm)		
		Intermed., points deg. @ rpm		
		Max. deg. @ rpm		
	Vacuum adv. in crank degrees @ eng. rpm	Start (in Hg) Intermed. points deg. @ in. Hg Max. deg. @ in.		
	Vacuum Source			
Timing - Crank degrees @ rpm				
Cooling System			See Page 11	
Exhaust System			See Page 8	

(a) With Lights and Air Conditioning On.

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MODEL	CID	351-2V-4V	390-4V	428-4V

ENGINE – FUEL SYSTEM

(See supplemental page for Details of Fuel Injection, Supercharger, etc. if used)

Induction type: Carburetor, fuel injection, supercharger.			Carburetor (Downdraft)		
Fuel Tank	Refill capacity (U.S. gals.)		17		
	Filler location		Left Rear Quarter Panel		
Fuel Pump	Type (elec. or mech.)		Mechanical		
	Locations		Left Side of Engine		
	Pressure range		5.0 - 6.0		
Vacuum booster (std., optional, none)			None		
Fuel Filter	Type		#1 Saran Plastic	#2 Nylon and Monel Cloth	
	Locations		#1 in Fuel Tank (Permanent)	#2 in-Line at Carburetor	
Carburetor	Choke type		Automatic		
	Intake manifold heat control (exhaust or water)		Exhaust and Water		
	Air cleaner type	Standard	Dry-Replaceable Element		
		Optional	None		
	Idle speed (spec. neutral or drive)	Manual	650 (Neutral)	700	
		Automatic	550 (Drive)	650	
	(a)	Idle A/F mix.	See Pages 9, 9A, 9B		

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type	Barrel Size
			Make	Model		
				-9510-		
All	351	Manual	Autolite	C9ZF-A	One-2V	1.689
	351	Automatic	Autolite	C9ZF-B	One-2V	1.689
All	351	Manual	Autolite	C9ZF-C	One-4V	1.437 Pri.
	351	Automatic	Autolite	C9ZF-D	One-4V	1.562 Sec.
All	390	Manual	Autolite	C9ZF-E	One-4V	1.562 Pri.
	390	Automatic	Autolite	C9ZF-F	One 4V	1.6875 Sec.
All	428	Manual	Holley	C9AF-M	One-4V	1.68 P & S
	428	Automatic	Holley	C9AF-N	One-4V	

(a) With lights and air conditioning on.

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MODEL CID 351-2V-4V

ENGINE – COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)			Pressure		
Radiator cap relief valve pressure			12-15 PSI		
Circulation thermostat	Type (choke, bypass)		Choke - Poppet or Sleeve Valve		
	Starts to open at (°F)		188°-192°F, Full Open 212° (Alt. 196°-203°F, Full Open 220°F)		
Water pump	Type (centrifugal, other)		Centrifugal		
	GPM @ 1000 pump rpm		14		
	Number of pumps		One		
	Drive (V-belt, other)		V-Belt		
	Bearing type		Double Row, Sealed, Ball and Roller Bearings		
By-pass recirculation type (inter., ext.)			External		
Radiator core type (cellular, tube and fin, other)			Down-Flow, Tube and Slit Fin		
Cooling system capacity	With heater (qt.)		14.6		
	Without heater (qt.)		13.6		
	Opt. equipment-specify (qt.)		16.1 (2)(4)		
Water jackets full length of cyl. (yes, no)			Yes		
Water all around cylinder (yes, no)			Yes		
Radiator hose	Lower	Number and type (molded, straight)	One, Molded		
		Inside diameter	1.75		
	Upper	Number and type (molded, straight)	One, Molded		
		Inside diameter	1.50		
	By-pass	Number and type (molded, straight)	One, Molded		
		Inside diameter	.615		
Cooling Package			1 or 2	Air Conditioning	
Fan	Number of blades & spacing		4 Uneven	7 Uneven	
	Diameter		17.50 x 2.00	17.50 x 2.00	
	Ratio-fan to crankshaft rev.		.95:1	1.13:1	
	Fan cutout type		None	Thermo-Modulated	
	Bearing type		Sealed, Ball and Roller (Water Pump Bearing)		
*Drive belts (indicate belt used by letter)	Arrangement		1 or 2 and 3	4	3 and 4
	Generator or alternator		A	C	A
	Water Pump and Fan		A B	C	A E
	Power Steering		B		E
	Air Conditioning			D	D
	Crankshaft		A B	C D	A E D
	Idler			D	D

* Drive Belt Dimensions	A	B	# C	D	E	F	G	H	I	J	K
Angle of V	36°	36°	36°	36°	36°						
Nominal length (SAE)	40.25	47.25	40.25	54.00	48.00						
Width	15/32	15/32	15/32	1/2	15/32						

1. Std. Cooling 2. Extra Cooling 3. Power Steering 4. Air Conditioning
Dual Belts

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MODEL CID 390-4V

ENGINE – COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)			Pressure
Radiator cap relief valve pressure			12-15 PSI
Circulation thermostat	Type (choke, bypass)		Choke - Poppet or Sleeve Valve
	Starts to open at (°F)		188°-195°F (Fully Open 212°F) (Alt. 196°-203°F Full Open 220°F)
Water pump	Type (centrifugal, other)		Centrifugal
	GPM @ 1000 pump rpm		17
	Number of pumps		One
	Drive (V-belt, other)		V-Belt
	Bearing type		Double Row, Sealed, Ball and Ball Bearings
By-pass recirculation type (inter., ext.)			External
Radiator core type (cellular, tube and fin, other)			Down-Flow, Tube and Slit Fin
Cooling system capacity	With heater (qt.)		20.1
	Without heater (qt.)		19.1
	Opt. equipment-specify (qt.)		20.1 With Air Conditioning or Extra Cooling
Water jackets full length of cyl. (yes, no)			Yes
Water all around cylinder (yes, no)			Yes
Radiator hose	Lower	Number and type (molded, straight)	One, Molded
		Inside diameter	1.75 @ Radiator, 2.07 @ Water Pump
	Upper	Number and type (molded, straight)	One, Molded
		Inside diameter	1.50 @ Radiator, 1.75 @ Water Outlet (Engine)
	By-pass	Number and type (molded, straight)	One, Straight
		Inside diameter	.615

Cooling Package		Standard or Extra Cooling	Air Conditioning	
Fan	Number of blades & spacing	7 Uneven	7 Uneven	
	Diameter	18.25 X 2.00	18.25 X 2.00	
	Ratio-fan to crankshaft rev.	.94:1	1.25:1	
	Fan cutout type	Thermo-Modulated	Thermo-Modulated	
	Bearing type	Sealed, Ball and Ball (Water Pump Bearing)		
*Drive belts (indicate belt used by letter)	Arrangement	1 or 2 and 3	4	3 and 4
	Generator or alternator	A	C	E
	Water Pump and Fan	A	C	E F
	Power Steering	B		F
	Air Conditioning		D	D
	Crankshaft	A B	C D	E F D
	Idler		D	D

* Drive Belt Dimensions	A	B	# C	D	E	F	G	H	I	J	K
Angle of V	36°	36°	36°	36°	36°	36°					
Nominal length (SAE)	44.75	44.00	44.25	55.00	44.25	51.50					
Width	15/32	1/2	15/32	1/2	15/32	15/32					

1. Std. Cooling 2. Extra Cooling 3. Power Steering 4. Air Conditioning
Dual Belts

Form Rev. 3-67

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MODEL CID 428-4V

ENGINE – COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)			Pressure
Radiator cap relief valve pressure			12 - 15 PSI
Circulation thermostat	Type (choke, bypass)		Choke - Poppet or Sleeve Valve
	Starts to open at (°F)		188°-195°F, Full Open 212°F (Alt. 196°-203°F Full Open 220°F
Water pump	Type (centrifugal, other)		Centrifugal
	GPM @ 1000 pump rpm		17
	Number of pumps		One
	Drive (V-belt, other)		V-Belt
	Bearing type		Double Row, Sealed, Ball and Ball Bearings
By-pass recirculation type (inter., ext.)			External
Radiator core type (cellular, tube and fin, other)			Down-Flow, Tube and Slit Fin
Cooling system capacity	With heater (qt.)		19.3
	Without heater (qt.)		18.3
	Opt. equipment-specify (qt.)		19.3 With Air Conditioning
Water jackets full length of cyl. (yes, no)			Yes
Water all around cylinder (yes, no)			Yes
Radiator hose	Lower	Number and type (molded, straight)	One, Molded
		Inside diameter	1.75 @ Radiator, 2.07 @ Water Pump
	Upper	Number and type (molded, straight)	One, Molded
		Inside diameter	1.50 @ Radiator, 1.75 @ Water Outlet (Engine)
	By-pass	Number and type (molded, straight)	One, Straight
		Inside diameter	.615

Cooling Package		Standard or Extra Cooling	Air Conditioning	
Fan	Number of blades & spacing	7 Uneven (A)	7 Uneven	
	Diameter	18.25 X 2.00	18.25 X 2.00	
	Ratio-fan to crankshaft rev.	.94:1	1.25:1	
	Fan cutout type	Thermo-Modulated	Thermo-Modulated	
	Bearing type	Sealed, Ball and Ball (Water Pump Bearing)		
*Drive belts (indicate belt used by letter)	Fan	1 or 2 and 3	4	3 and 4
	Generator or alternator	A	D	F
	Water Pump	A B	D	F G
	Power Steering	C		G
	Air Conditioning		E	E
	Crankshaft	A C	D E	F G E
	Air Pump	B	E	E

* Drive Belt Dimensions	# A	B	C	# D	E	F	G	H	I	J	K
Angle of V	35°	36°	36°	36°	36°	36°	36°				
Nominal length (SAE)	42.00	35.00	44.00	41.00	62.50	41.00	51.50				
Width	15/32	15/32	1/2	15/32	1/2	15/32	15/32				

1. Std. Cooling 2. Extra Cooling 3. Power Steering 4. Air Conditioning

Dual Belts (A) 6 Blade, 18" Dia., No Clutch, with 3.9 or 4.3:1 Axle Ratio .94:1 Fan Ratio

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MODEL			CID	351-2V-4V	390-4V	428-4V
ELECTRICAL – SUPPLY SYSTEM						
Battery	Make and Model -10655-			Autolite C9AF-A (a)		C9AF-D
	Voltage Rtg. & Total Plates			12 Volt, 54 Plates		12 V., 78 Plates
	SAE Designation & Amp. Hr. Rtg.			17 MIA, 45 AMP., Hr.		17H3A, 80 AMP. Hr.
	Location			Right Front Engine Compartment		
	Terminal grounded			Negative		
Generator or Alternator	Make			Autolite (a)		
	Model			C6AF-10300-B	C9AF-10300-A	C9ZF-10300-B
	Type and rating			3 Phase, Full Wave Bridge Rectified, Self Limiting		
	Output at engine idle (neutral)					
	Ratio–Gen. to Cr/s rev.			2.40:1	2.54:1	2.54:1
Regulator	Make			Autolite		
	Model			C8AF-10316-A (C8TF-10316-A With 55 AMP. + Alternators)		
	Type			Two Unit Voltage Control and Field Relay		
	Cutout relay	Closing voltage - generator rpm		2.5-4.0 Volts at 75°F		
		Reverse current to open		Not Applicable		
	Regulated	Voltage		13.5-15.3 @ 50° -125°F on Lower Contacts (Shorting Stage)		
		Current		Not Applicable		
	Voltage test conditions	Temperature		75°F		
		Load		5 AMPS.		
		Other		- - -		
ELECTRICAL – STARTING SYSTEM						
Starting Motor	Make (Autolite)			(a)		
	Model -11001-			C7AF-F	C9AF-B	C8AF-A
	Rotation (drive end view)			Clockwise		
Motor control	Switch (solenoid, manual)			Solenoid		
	Starting procedure					
Motor Drive	Engagement type			Positive (Electro-Mechanical)		
	Pinion meshes (front, rear)			Front		
	Number of teeth	Pinion		9		
		Flywheel	Manual	164	184	184
			Auto.	164	184	184
	Flywheel tooth face width		Manual	.365		
			Auto.	.365		

(a) For All Other Applications See Page 12A

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MODEL

BATTERY APPLICATIONS (-10655-)

Engine-CID	Transmission	Air Cond.	Standard	Optional
351-2V-4V	Manual	#	C9AF-B (55AH)	C9AF-C (70AH)
390-4V	Manual	#	C9AF-A (45AH)	55AH or 70AH
351-390	Automatic	#	C9AF-B (55AH)	C9AF-C (70AH)
428-4V	Man. & Auto.	#	C9AF-D (80AH)	(Engine Compartment)
428-4V	Man. & Auto.	#	C9ZF-A (85AH)	(Trunk Installation)

With or without Air Conditioning

ALTERNATOR APPLICATIONS (-10300-)

Engine-CID	Standard	Ratio	Air Conditioned No P/S	Air Conditioned With P/S	Ratio
351-2V-4V	C6AF-B (42A)	2.40	C6AF-G (55A)	C6AF-F (55A)	2.60
390-4V	C9AF-A (42A)	2.54	C9AF-B (55A)	C9SF-A (55A)	2.73
428-4V	C9ZF-B (55A)	2.54	C9ZF-B (55A)	C9ZF-C (55A)	2.73

STARTING MOTOR APPLICATIONS

Engine-CID	Manual Transmission	Automatic Transmission
351-2V-4V	C7AF-11001-F	C7AF-11001-B
390-4V	C9AF-11001-B	C9AF-11001-B
428-4V	C8AF-11001-A	C8AF-11001-A

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MODEL	CID	MANUAL TRANSMISSION 351-2V	351-4V	390-4V

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.		Standard		
	Transistorized – Std., Opt., N.A.		N.A.		
	Other (specify)		None		
Coil	Make		Autolite		
	Model		C9AF-12024-B		C5AF-12024-B
	Amps	Engine stopped	4.5		
		Engine idling	2.5		
Distributor	Make		Autolite		
	Model		C9OF-12127-M	C9OF-12127-N	C9AF-12127-K
	Cent'fgal adv. in c'shaft degrees @ engine rpm (nominal)	Start (rpm)	0°-4° @ 1000	0°-4° @ 1000	0°-4° @ 1160
		Intermediate points deg. @ rpm	8°-12° @ 1400 15°-20° @ 3000	12°-16° @ 1800 14.6°-19.4° @ 3000	10.5°-14.5° @ 1800 15.5°-20° @ 3000
		Max. deg. @ rpm	19.5°-24.5° @ 4000	17°-22° @ 4000	19.5°-24.5° @ 4000
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	0°-2° @ 5"	0°-3.4° @ 7.4"	0°-2° @ 5.2"
		Intermediate points, deg. @ in. Hg.	0°-6° @ 5.7" 10°-16° @ 8.8"	2°-9° @ 10" 11°-17° @ 15"	0°-6° @ 6.6" 7.2°-13.2° @ 10" 14°-20° @ 15"
		Max. deg. in. Hg.	11°-16° @ 10"	16°-21° @ 20"	18°-23° @ 21"
	Breaker gap (in.)		.014-.020		
	Cam angle (deg.)		26°-31°		
	Breaker arm tension (oz.)		17-21		
Timing	Crankshaft deg. @ rpm		6°BTC @ Idle (a)		
	Mark location		Crankshaft Damper		
Spark Plug	Make		Autolite		
	Model -12405-		C6AF-A(BF-42)	C0AF-B(BF-32)	C6AF-A(BF-42)
	Thread (mm)		18mm		
	Tightening torque (lb. ft.)		15-25		
	Gap		.032-.036		
Cable	Conductor type		Resistance Core Cable		
	Insulation type		Neoprene Sheath		
	Spark plug protector		Hypalon Boot		

ELECTRICAL – SUPPRESSION

Locations & type	Capacitor in Alternator and Voltage Regulator
	Resistance Core Ignition Cable and Hood Ground.

(a) Set with vacuum line off distributor.

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MODEL	CID	AUTOMATIC TRANSMISSION 351-2V	351-4V	390-4V

ELECTRICAL – IGNITION SYSTEM

Type	Conventional – Std., Opt., N.A.		Standard		
	Transistorized – Std., Opt., N.A.		N.A.		
	Other (specify)		None		
Coil	Make		Autolite		
	Model		C9AF-12024-B		C5AF-12024-B
	Amps	Engine stopped	4.5		
		Engine idling	2.5		
Distributor	Make		Autolite		
	Model		C9OF-12127-M	C9OF-12127-T	C7AF-12127-AC
	Cent'fgal adv. in c/shaft degrees@ engine rpm (nominal)	Start (rpm)	0°-4° @ 1000	0°-4° @ 975	0°-2° @ 920
		Intermediate points deg.@rpm	8°-12° @ 1400 15°-20° @ 3000	16°-20° @ 1850 17°-22.3° @ 3000	9°-13° @ 1400 15.5°-20° @ 3000
		Max. deg.@rpm	19.5°-24.5° @ 4000	19°-24° @ 4000	19.5°-24.5° @ 4000
	Vacuum adv. in c/shaft degrees@ in. Hg. (nominal)	Start (in. Hg.)	0°-2° @ 5"	0°-2° @ 5"	0°-2.6° @ 8"
		Intermediate points, deg.@in. Hg.	0°-6° @ 5.7" 10°-16° @ 8.8"	0°-6° @ 6.3" 10°-16° @ 10" 18°-24° @ 15"	2°-9.5° @ 10" 14°-20° @ 15"
		Max. deg. in. Hg.	11°-16° @ 10"	20°-25° @ 17"	20°-25° @ 21.5"
	Breaker gap (in.)		.014-.020		
	Cam angle (deg.)		26°-31°		
	Breaker arm tension (oz.)		17-21		
Timing	Crankshaft deg.@rpm		6°BTC @ Idle (a)		
	Mark location		Crankshaft Damper		
Spark Plug	Make		Autolite		
	Model -12405-		C6AF-A(BF-42)	C0AF-B(BF-32)	C6AF-A (BF-42)
	Thread (mm)		18mm		
	Tightening torque (lb. ft.)		15-25		
	Gap		.032-.036		
Cable	Conductor type		Resistance Core Cable		
	Insulation type		Neoprene Sheath		
	Spark plug protector		Hypalon Boot		

ELECTRICAL – SUPPRESSION

Locations & type	Capacitor in Alternator and Voltage Regulator, Resistance Core Ignition Cable, and Hood Ground

(a) Set with vacuum line off distributor.

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MAKE OF CAR COUGAR MODEL YEAR 1969 DATE ISSUED 10-1-68 REVISED (•)

ELECTRICAL – IGNITION SYSTEM

			MODEL CID 428-4V MANUAL TRANSMISSION	MODEL CID 428-4V AUTOMATIC TRANSMISSION
Type	Conventional – Std., Opt., N.A.		Standard	
	Transistorized – Std., Opt., N.A.		N.A.	
	Other (specify)		None	
Coil	Make		Autolite	
	Model		C5AF-12024-B	
	Amps	Engine stopped	4.5	
		Engine idling	2.5	
Distributor	Make		Autolite	
	Model		C8OF-12127-H	C8OF-12127-J
	Centrifgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	0°-4° @ 950	0°-4° @ 950
		Intermediate points deg. @ rpm	15°-19° @ 1450 19.4°-24° @ 3000	15°-19° @ 1450 19°-23.5° @ 2900
		Max. deg. @ rpm	22°-27° @ 4000	22°-27° @ 4000
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	0°-2.6° @ 7.6"	0°-3° @ 8"
		Intermediate points, deg. @ in. Hg.	0°-6° @ 8.6" 4°-9.6° @ 10"	2°-9.5° @ 10" 14°-20° @ 15"
		Max. deg. in. Hg.	14°-19° @ 15"	17°-22° @ 17"
	Breaker gap (in.)		.014-.018	.014-.020
	Cam angle (deg.)		26°-31°	
	Breaker arm tension (oz.)		17-21	
Timing	Crankshaft deg. @ rpm		6° BTC @ Idle (a) 1° BTC-1° ATC @ 700 RPM (b)	
	Mark location		Crankshaft Damper	
Spark Plug	Make		Autolite	
	Model		C0AF-12405-B (BF-32)	
	Thread (mm)		18mm	
	Tightening torque (lb. ft.)		15-25	
	Gap		.032-.036	
Cable	Conductor type		Resistance Core Cable	
	Insulation type		Neoprene Sheath	
	Spark plug protector		Hypalon Boot	

ELECTRICAL – SUPPRESSION

Locations & type	Capacitor in Alternator and Voltage Regulator, Resistance Core Ignition Cable and Hood Ground.	
(b) Vacuum Retard Characteristics, Crankshaft Degrees at Inches of Mercury	-2° @ 6.5" - 10.5"	None
	-4° @ 7.5" - 11.5"	
	-5°-7° @ 12"	

(a) Set with vacuum line off distributor.
(b) Read with vacuum line on distributor (428 Man. Only).

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MODEL CID		351-2V	351-4V	390-4V	428-4V
ELECTRICAL – INSTRUMENTS AND EQUIPMENT					
Speedometer	Type	Pointer			
	Trip odometer (yes,no)	No (a)			
Charge indicator – type		Warning Light (a)			
Temperature indicator – type		Electric Gage			
Oil pressure indicator – type		Warning Light (a)			
Fuel indicator – type		Electric Gage			
Other		#Safety Convenience Warning Lights — Low Fuel — Door Ajar — Optional Seat Belt Warning Light — Emergency Flasher			
Windshield wiper	Type – Standard	Electric — Two-Speed			
	Type – Optional	Electric — Variable Dwell			
Windshield washer	Type – Standard	Electric			
	Type – Optional				
Horn	Type	Electric			
	Number used	Two			
	Amp draw (each)	5.5 Amps Maximum (All Series)			
DRIVE UNITS – CLUTCH (Manual Transmission)					
Make & type		Semi-Centrifugal, Single-Disc Dry Plate			
Type pressure plate springs		Coil			
Total spring load (lb.)		1845	1845	1845	2100
No. of clutch driven discs		One			
Clutch facing	Material	Woven Asbestos			
	Outside & inside dia.	11x7	11x7	11x7	11-1/2x7
	Total eff. area (sq.in.)	113.1	113.1	113.1	130.0
	Thickness	.125	.125	.125	.125
	Engagement cushioning method	Torbend Disc			
Release bearing	Type & method of lubrication	Angular Contact, Prepacked Sealed			
Torsional damping	Methods: springs, friction material	Springs			

(a) Electric Gage — Low Fuel, Door Ajar, Park Brake Warning Light Tachometer trip odometer and Electric Clock.

* Not Applicable for 390-4V or 428-4V.

\# Directional Signal Light, Headlamp Beam Indicator Light, Brake System Warning Light Optional Electric Clock & Park Brake Warning Light.

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MODEL CID	351-2V	351-4V	390-4V	428-4V
DRIVE UNITS – TRANSMISSIONS				
Manual 3-speed (std. or opt.)	Standard	Standard	Standard	NA
Manual 4-speed (std. or opt.)	Optional	Optional	Optional	Standard
Manual with overdrive (std. or opt.)	NA	NA	NA	NA
Automatic (std. or opt.)	Optional	Optional	Optional	Optional

DRIVE UNITS – MANUAL TRANS.

Number of forward speeds			3-Speed (a)	4-Speed (b)	4-Speed (c)
Transmission ratios	In first		2.42:1	2.78:1	2.32:1
	In second		1.61:1	1.93:1	1.69:1
	In third		1.00:1	1.36:1	1.29:1
	In fourth		—	1.00:1	1.00:1
	In reverse		2.33:1	2.78:1	2.32:1
Synchronous meshing, specify gears			1-2-3	1-2-3-4	1-2-3-4
Shift lever location			Column	Floor	
Lubricant	Capacity (pt.)		3.5	4.0	4.0
	Type recommended		ESW-M2C83-B		
	SAE viscosity number	Summer	SAE 80		
		Winter	SAE 80		
		Extreme cold	SAE 80		

DRIVE UNITS – MANUAL TRANS. W/OVERDRIVE
(For transmission data see manual transmission section)

Type (planetary or other)			Not Available
Manual lockout (yes, no)			
Downshift accelerator control (yes, no)			
Minimum cut-in speed			
Gear ratio			
Lubricant	Capacity (pt.) (Overdrive only)		
	Separate filler (yes, no)		
	Type recommended		
	SAE viscosity number	Summer	
		Winter	
		Extreme cold	

(a) Standard with 351-2V, 351-4V and 390-4V Engines.
(b) Optional with 351-2V, 351-4V and 390-4V Engines.
(c) Standard with 428-4V Engine. Optional with 351-2V, 351-4V and 390-4V Engines.

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MODEL	CID	ALL MODELS 351-2V	351-4V	390-4V	390-4V GT	428-4V

DRIVE UNITS – AUTOMATIC TRANSMISSION

Trade name		Select-Shift				
Type describe		Torque Converter w/Planetary Gears				
Selector location		Floor Lever				
List gear ratios Selector Pattern and indicate which are used in each selector position		P — Park R — Reverse 2.00:1 N — Neutral D — Drive 1.00:1 2 — Second 1.47:1 1 — First 2.40:1			2.175:1 1.00:1 1.46:1 2.46:1	
Max. upshift speed–drive range		76	82	91	91	97
Max. kickdown speed–drive range		71	75	82	82	88
Torque convertor	Number of elements	Three				
	Max. ratio at stall	2.05:1	2.05:1	2.05:1	2.05:1	2.05:1
	Type of cooling (air, liquid)	Liquid				
	Nominal diameter	12.00	12.00	12.00	12.00	12.00
Lubricant	Capacity–refill (pt.)	22	22	26	26	26
	Type recommended	Transmission M-2C33F (Type "F")				
Special transmission features		Isolation of 1st and 2nd Gear through Manual Shift. 1st or 2nd Gear Start-Up.				

DRIVE UNITS – PROPELLER SHAFT

Number used		One		
Type (straight tube, tube-in-tube, internal-external damper, etc.)		Exposed Cardboard Lined		
Outer diam. x length* x wall thickness	Manual 3-speed trans.	2.75 x 53.24" x .065" (a)	3.00" x 53.03" x .063" (b)	
	Manual 4-speed trans.	3.00" x 53.24" x .065" (a) 3.00 x 53.03" x .065 (b)	3.00" x 53.03" x .065" (b)	3.5" x 53.03" x .065" (b)
	Overdrive transmission	Not Available		
	Automatic transmission	3.00" x 53.54" x .065" (a)	3.00" x 49.64" x .065" (b)	3.5" x 49.64" x .065" (b)

* Center to center of universal joints, or to centerline of rear attachment.

(Continued)

(a) 1310 "U" Joints
(b) 1330 "U" Joints

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MODEL CID	ALL MODELS 351-2V	351-4V	390-4V	390-4V GT	428-4V

DRIVE UNITS – PROPELLER SHAFT (cont.)

Intermediate bearing	Type (plain, anti-friction)		None				
	Lubrication (fitting, prepack)		None				
Slip Yoke	Type						
	Number of teeth		28	28	28	28 Manual 31 Automatic	
	Spline O.D.		1-1/2	1-1/2	1-1/2	1-1/2 Manual 1-11/16 Automatic	
Universal joints	Make and Mfg. No.		Ford 1310		1330		
	Number used		Two				
	Type (ball and trunnion, cross)		Cross				
	Rear attach. (u-bolt, clamp, etc.)		"U" Bolt				
	Bearing	Type (plain, anti-friction)	Needle Roller				
		Lubric. (fitting, prepack)	Pre-Pack				
Drive taken through (torque tube or arms, springs)			Rear Springs				
Torque taken through (torque tube or arms, springs)			Rear Springs				

DRIVE UNITS – AXLE

Type (front, rear)			Rear				
Description			Conventional, semi-floating, straddle mounted pinion (8 Cyl.)				
Limited Slip differential, type			Traction-Lok				
Drive Pinion Offset			2.25				
No. of differential pinions			Two and Four				
Pinion adjustment (shim, other)			Shim				
Pinion bearing adj. (shim, other)			Collapsible Spacer and Solid Spacer				
Wheel bearing type			Single Row, Double Sealed Ball				
Lubricant	Capacity (pt.)		5				
	Type recommended		M2C-105-A*				
	SAE viscosity number	Summer	SAE 90				
		Winter	SAE 90				
		Extreme cold	SAE 90				

AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio		2.75:1	3.00:1	3.25:1	3.50:1	3.91	4.30
No. of teeth	Pinion	16	13	12	10	11	10
	Ring gear	44	39	39	35	43	43
Ring Gear O.D.		9"	9"	9"	9"	9"	9"

* ESW-M2C104-A for Traction-Lok Axle.

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MODEL	CID	ALL MODELS 351-2V	351-4V

DRIVE UNITS – WHEELS

Type & material			Stamped Steel
Rim (size & flange type)		Std.	14 x 5-1/2 JJ
		Opt.	14 x 6" Styled Wheel (c) 14 x 6" Stamped Wheel
Attachment	Type (bolt or stud)		Stud
	Circle diameter		4.5
	Number and size		Five — 1/2"

MODEL

DRIVE UNITS – TIRES

Standard	Size, ply rating, & ply		E78 — 14/4 PR
	Type (bias, radial, etc.)		Bias
	Full rated Inflation Press.	Front	25
		Rear	25
	Rev./Mile at 50 MPH		797
Optional	Size, ply rating, & ply		E70 x 14/4 PR (Belted) (a) F70 x 14/4 (Belted) (a) (c) FR70 x 14 Radial (a)

BRAKES – PARKING

Type of control		Foot-Operated Step-On/Handle Release
Location of control		L-Hand of Steering Column under Instrument Panel
Operates on		Rear Service Brake
If separate from service brakes	Type (internal or external)	—
	Drum diameter	—
	Lining size (length x width x thickness)	—

(a) With handling suspension & 14 x 6" wheel

(b) Tire pressures to provide maximum fuel economy
4 ply rated tires — inflate to 32 PSI maximum
8 ply rated tires — inflate to 40 PSI maximum

NOTE: When using maximum fuel economy inflation pressures any front and rear tire pressure differentials shown above must be maintained but do not exceed maximum pressure.

(c) Standard on Eliminator.

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MAKE OF CAR COUGAR MODEL YEAR 1969 DATE ISSUED 10-1-68 REVISED (•) 4-3-69

MODEL	CID	390-4V	428

DRIVE UNITS – WHEELS

Type & material			Stamped Steel	
Rim (size & flange type)		Std.	14 x 5-1/2 JJ	14 x 6 JJ Stamped Wheel
		Opt.	14 x 6 JJ — Stamped Wheel (a) 14 x 6 JJ — Styled Wheel (e)	14 x 6 JJ Styled Wheel (e)
Attachment	Type (bolt or stud)		Stud	
	Circle diameter		4.5	
	Number and size		Five — 1/2"	

MODEL

DRIVE UNITS – TIRES

Standard	Size, ply rating, & ply		E78 x 14/4 PR	E70 x 14/4 Belted
	Type (bias, radial, etc.)		Bias	
	Full rated Inflation Press.	Front	25	28
		Rear	25	28
	Rev./Mile at 50 MPH		797	792
Optional	Size, ply rating, & ply		E70 x 14/4 PR (Belted) (b) F70 x 14/4 PR (Belted) (b) (e) FR70 x 14 Radial (b)	

BRAKES – PARKING

Type of control		Foot-Operated Step-On/Hand Release
Location of control		L-Hand of Steering Column under Instrument Panel
Operates on		Rear Service Brake
If separate from service brakes	Type (internal or external)	—
	Drum diameter	—
	Lining size (length x width x thickness)	—

(a) Standard with G.T. package.
(b) With handling suspension and 14 x 6" wheels only.
(c) With A/C & 428; standard tire is F70-14.
(d) Tire pressures to provide maximum fuel economy.
4 ply rated tires — inflate to 32 PSI maximum
8 ply rated tires — inflate to 40 PSI maximum

NOTE: When using maximum fuel economy inflation pressures any front and rear tire pressure differentials shown above must be maintained but do not exceed the maximum pressure.

(e) Standard on Eliminator.

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MODEL CID | ALL

BRAKES – SERVICE

Type (drum) or (disc & no. of pistons)					Duo-Servo
Self adjusting (std., opt., N.A.)					Standard
Special Valving	Type (proportion, delay, metering, other)				—
Power brake make & type (remote, int., etc.)		Std.			—
		Opt.			Disc (a)
Effective area (sq. in.) *					146.0
Gross lining area (sq. in.) **					174.0
Swept area (sq. in.) ***					282.8
Front to Rear Effectiveness Relationship					60.8%
Drum	Diameter (nominal)	Front			10.0 Flared
		Rear			10.0
	Type and material				Cast Iron
Rotor	Outer working diameter				—
	Inner working diameter				—
	Working width				—
	Material & type (vented/solid)				—
Wheel cylinder bore	Front				1.094
	Rear				.875
Master Cylinder	Bore				1.00
	displacement distribution	Front	%		65
		Rear	%		35
Pedal arc ratio					6.24:1
Line pressure at 100 lb. pedal load					795
Shoe Clearance	Front				.015
	Rear				—
Brake lining	Bonded or riveted				Riveted
	Front Wheel	Material			Asbestos
		Size (length x width x thickness)	Prim. or outboard		2.50 x 8.46 x .18
			Second. or inboard		2.50 x 10.88 x .25
		Segments per shoe			One
	Rear Wheel	Material			Asbestos
		Size (length x width x thickness)	Prim. or outboard		2.00 x 8.46 x .18
			Second. or inboard		2.00 x 10.88 x .25
		Segments per shoe			One

* Excludes rivet holes, grooves, chamfers, etc. ** Includes rivet holes, grooves, chamfers, etc.

*** Total swept area for four brakes. (Widest lining contact width for each brake x its contact circumference.)

(a) Optional Disc Brakes Front see page 19A

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MAKE OF CAR COUGAR MODEL YEAR 1969 DATE ISSUED 10-1-68 REVISED (•)

MODEL	ALL MODELS
BRAKES – SERVICE	Optional — Disc Brakes
Type (drum) or (disc & no. of pistons)	Caliper Disc
Self adjusting (std., opt., N.A.)	Standard
Special Valving — Type (proportion, delay, metering, other)	1) Differential Valve & Warning Light Switch 2) Proportioning Valve (Rear brakes)
Power brake make & type (remote, int., etc.) — Std.	
Power brake make & type (remote, int., etc.) — Opt. Pkg.	Bendix Tandem Integral Dual Master Cylinder
Effective area (sq. in.) *	40.6
Gross lining area (sq. in.) **	40.6
Swept area (sq. in.) ***	232
Front to Rear Effectiveness Relationship	63%
Drum — Diameter (nominal) — Front	—
Drum — Diameter (nominal) — Rear	10.0
Drum — Type and material	Cast-Iron Disc, Duclite Iron Caliper
Rotor — Outer working diameter	11.3
Rotor — Inner working diameter	7.35
Rotor — Working width	.940
Rotor — Material & type (vented/solid)	Cast-Iron Vented
Wheel cylinder bore — Front	2.38
Wheel cylinder bore — Rear	See Page 19
Master Cylinder — Bore	1.000
Master Cylinder — displacement distribution — Front %	65
Master Cylinder — displacement distribution — Rear %	35
Pedal arc ratio	3.00
Line pressure at 100 lb. pedal load	1000 @ 20 HG
Shoe Clearance — Front	—
Shoe Clearance — Rear	—
Brake lining — Bonded or riveted	Bonded
Brake lining — Front Wheel — Material	Molded Asbestos
Brake lining — Front Wheel — Size (length x width x thickness) — Prim. or outboard	6.815 x 2.20 x .362
Brake lining — Front Wheel — Size (length x width x thickness) — Second. or inboard	4.95 x 2.07 x .362
Brake lining — Front Wheel — Segments per shoe	One Each Side of Disc
Brake lining — Rear Wheel — Material	(See Page 19)
Brake lining — Rear Wheel — Size (length x width x thickness) — Prim. or outboard	
Brake lining — Rear Wheel — Size (length x width x thickness) — Second. or inboard	
Brake lining — Rear Wheel — Segments per shoe	

* Excludes rivet holes, grooves, chamfers, etc. ** Includes rivet holes, grooves, chamfers, etc.
*** Total swept area for four brakes. (Widest lining contact width for each brake x its contact circumference.)

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MODEL CID	ALL MODELS 351-2V	351-4V	390-4V	428-4V

STEERING

Manual (std., opt., NA)					Standard
Power (std., opt., NA)					Optional
Adjustable steering wheel (tilt, swing, other)		Type and description			Dual Tilt
		(std., opt., NA)			Optional
Wheel diameter		Manual			16.0
		Power			16.0
Turning diameter (feet)	Outside front	Wall to wall (l. & r.)			40.83
		Curb to curb (l. & r.)			38.05
	Inside rear	Wall to wall (l. & r.)			
		Curb to curb (l. & r.)			
Outs. whl. angle w/ins. wh. at 20°					18° 40'
Manual	Gear	Type			Recirculating Ball and Nut Lube ESW-MIC87-A .55 Lb. ± .05
		Make			Ford
		Ratios	Gear		19.9
			Overall		25.3
	No. wheel turns (stop to stop)				4.64
Power	Type (coaxial, linkage, etc.)				Linkage
	Make				Ford
	Gear	Type			Recirculating Ball and Nut Lube ESW-M1C87-A .55 lbs. ± .05
		Ratios	Gear		16.0
			Overall		20.32
	Pump driven by				Belt Off Crankshaft Pulley Lube M-2C33-F
	No. wheel turns (stop to stop)				3.74
Linkage	Type				Parallelogram with Cross Link
	Location (front or rear of wheels, other)				Rear
	Drag link (trans. or longit.)				Transverse
	Tie rods (one or two)				Two
Steering Axis	Inclination at camber (deg.)				6-3/4° Theoretical Non-Adjustable
	Bearings (type)	Upper			Ball Joint
		Lower			Ball Joint
		Thrust			Friction Washer in Upper Ball Joint
Whl. Align. (range at curb wt. & preferred)	Caster (deg.)				+ 1/4° ± 1/2°
	Camber (deg.)				+ 1° ± 3/4°
	Toe-in (outside track inches)				3/16 ± 1/16
Steering spindle & joint type					Integral w/Wheel Spindle; Ball Socket Joints
Wheel Spindle	Diameter	Inner bearing			1.75 I. D.
		Outer bearing			.75 I. D.
	Thread size				3/4 - 16 NF3
	Bearing type				Tapered Roller

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MODEL CID	351-2V	351-4V	390-4V	390-4V GT	428-4V (c)

SUSPENSION – GENERAL

(See Supplement page for details on Air Suspension)

Provision for car leveling		None				
Provision for brake dip control		Tilted Upper Control Arm Anti-Dive Front Suspension				
Provision for acc. squat control		Asymmetrical Type Rear Spring Mounting				
Special provisions for car jacking		Special Notched Rocker Panel Positions Front and Rear on Each Side of Car				
Shock absorber front & rear	Type	Direct Acting				
	Make	Autolite				Gabriel
	Piston dia.	1.0	1.0	1.0	1.0 (a)	1-3/16 (b)
Other special features						

SUSPENSION – FRONT

Type and description		Independent S.L.A. with Drag Strut, Ball Joints, Coil Springs and Shock Absorbers Mounted Over Upper Arm				
Spring	Type	Coil				
	Material	Steel SAE 5160				
	Size (coil design height & I.D. bar length x dia.)	10.04 x 3.88 123" - 128" Length, .60" x .65" Diam.				
	Spring rate (lb. per in.)	260	260	260	320	365
	Rate at wheel (lb. per in.)	88	88	88	109	123
Stabilizer	Type (link, linkless, frameless) & Material	Link Type - Steel SAE 1090				
	Material & bar diameter	.72 Dia.	.72 Dia.	.95 Dia.	.95 Dia.	

SUSPENSION – REAR

Type and description			Hotchkiss Drive				
Drive and torque taken through			Rear Springs				
Spring	Type		Semi-Elliptical				
	Material		Spring Steel SAE 5160, 5147, 5155				
	Size (length x width, coil design height & I.D.; bar length & dia.)		59 x 2.50				
	Spring rate (lb. per in.)		85	85	85	150	150
	Rate at wheel (lb. per in.)		80	80	80	135	135
	Mounting insulation type		Silent Block Bushing Front — Split Type Rear				
	If leaf	No. of leaves	Four				
		Shackle (comp. or tens.)	Compression				
Stabilizer	Type (link, linkless, frameless)		None				
	Material		—				
Track bar type			None				

(a) 1-3/16 Gabriel used with G.T. Package.
(b) 1-3/16 Gabriel.
(c) Competition Handling Package.

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MODEL	ALL MODELS	
	65	76

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame)	Unitized Construction

BODY – MISCELLANEOUS INFORMATION

Drs. hinged (front, rr.)	Front doors	Front
	Rear doors	—
Type of finish (lacquer, enamel, other)		Enamel
Hood counterbalanced (yes, no)		Yes
Hood release control (internal, external)		External
Vh. Ident. No., Location Vehicle Indent. No. location Warranty Plate Location		Top of Instrument Panel on Driver's Side, Inboard of "A" Pillar Lock Face of Left Door
Engine No. location		Boss on Front Left Side of Cylinder Block
Theft protection - type		Door Locks, Ignition Key Start, Theft Retarder Ignition Switch
Vent window control method (crank, friction pivot)	Front	None
	Rear	Std. Qtr.-Crank Type
Seat cushion type	Front	Formed Wire
	Rear	Formed Wire
	3rd seat	None
Seat back type	Front	Formed Wire
	Rear	Formed Wire
	3rd seat	None
Windshield glass type (i.e., single curved - laminated plate)		Compound Curved, One Piece Laminated Plate
Side glass type (i.e., curved - tempered plate)		Curved, Tempered Sheet
Backlight glass type (i.e., compound curved - tempered plate, three piece)		Compound Curved, Tempered Plate, One Piece
Windshield glass exposed surface area		1138 / 1127
Side glass exposed surface area		1100 / 1074
Backlight glass exposed surface area		913 / 513
Total glass exposed surface area		3151 / 2714

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MODEL

CONVENIENCE EQUIPMENT

(Indicate whether standard, optional or NA on each series)

Power windows	Side windows	Yes
	Vent windows	—
	Backlight or tailgate	—
Power seats (specify type as well as availability)		NA
Reclining front seat back (R-L or both)		NA
Front seat head restrainer (R-L or both)		Opt.
Radios (specify type as well as availability)		Opt. Push Button AM, Opt. Push Button AM/FM Stereo Opt. AM Radio Stereosonic Tape System
Rear seat speaker		Opt. AM Radio Only.
Power antenna		NA
Clock		Optional
Air conditioner (specify type and availability)		Integrated with Heater
Speed warning device		NA
Speed control device		Opt.
Ignition lock lamp		NA
Dome lamp		NA ("C" Pillar Lights Avail.) except Convert.
Glove compartment lamp		Std.
Luggage compartment lamp		Opt.
Underhood lamp		Opt.
Courtesy lamp		Opt.
Map lamp		Opt. on Model 65, 63
Auto. trans. quad. lamp		Std. w/Optional Auto. Trans.
Cornering light lamp		NA
Dual Tilt Column		Opt.
Low Fuel Warning Lamp		Opt.
Door Ajar Warning Lamp		Opt.
Seat Belt Warning Lamp		Opt. with Deluxe Seatbelts

LAMP HEIGHT AND SPACING

Height above ground to center of bulb or marker	Headlamp	Highest *	24.3
		Lowest	NA
	Tail	Highest	22.8
		Lowest	NA
	Sidemarker	Front	18.7
		Rear	19.6
Distance from C/L of car to center of bulb	Headlamp	Inside	17.1
		Outside *	23.6
	Tail	Inside	9.3 16.0 Center
		Outside	23.5
	Directional	Front	23.6
		Rear	9.3 - 16.0 - 23.1 (Sequential)

* If single headlamps are used enter here.

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WEIGHTS

	CURB WEIGHT * POUNDS			% PASS. WEIGHT DISTRIBUTION				LIQUID WEIGHT	
				Pass. In Front		Pass. In Rear			
	Front	Rear	Total	Front	Rear	Front	Rear	Fuel	Coolant
Model									
COUGAR									
2-Door Hardtop 65A	1927	1476	3403	44	56	17	83	120	34
2-Door Hardtop 65C	1931	1481	3412	44	56	17	83	120	34
2-Door Convertible 76A	1965	1557	3522	43	57	19	81	120	34
COUGAR XR7									
2-Door Hardtop 65B	1935	1493	3428	44	56	17	83	120	34
2-Door Convertible 76B	1973	1574	3547	43	57	19	81	120	34
COUGAR ELIMINATOR #									
2-Door Hardtop 65E	1974	1533	3506	44	56	17	83	120	34

Accessories & Equipment Differential Weights				Remarks
351-4V Engine	+15	+28	+43	Automatic Transmission
390-4V Engine	+89	+30	+119	Automatic Transmission
428-4V Engine	+190	+62	+252	Automatic Transmission only
428-4V Engine	+196	+62	+258	Incl. G.T. Pkg., Power Steering & Auto.
3-Speed Manual	+13	-5	+8	351-2V & 4V
3-Speed Manual	-12	-2	-14	390-4V
3-Speed Manual	+16	-4	+12	351-2V & 4V
4-Speed Manual	-9	-1	-10	390-4V
4-Speed Manual	-10	+4	-6	428-4V
Air Conditioning	+75	0	+75	
Power Steering	+28	0	+28	
Power Disc Brakes	+15	+2	+17	
GT Equipment Group	+24	+20	+44	390 Only
Radio & Stereo Tape	+12	+4	+16	
AM/FM Radio	+8	+2	+10	
FR70-14 Wide Oval Radials	+7	+13	+20	
Speed Control	+5	+1	+6	Automatic Transmission only.
Dual Tilt Wheel	+4	+2	+6	
Heavy Duty Battery-55 AH	+8	-1	+7	
Vinyl Roof	+3	+6	+9	
Full Console	+8	+6	+14	

*Reference – SAE Aerospace-Automotive drawing standards, Section E 1.02 (d).

Includes 351 CID 4V. 3-Spd. Manual Trans. and Handling Package

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WEIGHTS

	CURB WEIGHT * POUNDS			% PASS. WEIGHT DISTRIBUTION				LIQUID WEIGHT	
				Pass. In Front		Pass. In Rear			
	Front	Rear	Total	Front	Rear	Front	Rear	Fuel	Coolant
Model									
FOR									
VEHICLE									
WEIGHT									
SEE									
PAGE	24								

Accessories & Equipment Differential Weights				Remarks
Radio AM	+5	+2	+7	
Single Rear Seat Speaker	0	+2	+2	AM Radio Only
Power Windows	+9	+12	+21	
E70-14 Belted Tires	+4	+8	+12	Std. on 428 CID
F70-14 Belted Tires	+7	+13	+20	Std. on Eliminator
Styled Steel Wheels	+1	+4	+5	(Wt over 14x6 Wheels) Std. on Eliminator
Wheel Covers	+1	+1	+2	
Rear Wdo. Defogger	+5	+7	+12	Model 65 Only
Battery — 70 AH	+17	-2	+15	
Glass Conv. Backlite	0	+3	+3	
Floor Mats	+2	+1	+3	
Visibility Light Group	+1	+1	+2	Std. XR-7
Convenience Check Group	+4	+2	+6	Std. XR-7
Clock Electric	+1	+1	+2	Std. XR-7
Bench Seat	+4	+5	+9	
Dual Exhaust	+10	+25	+35	351-2V Only
Traction-Lok Diff.	0	+3	+3	
Heater-Delete	-20	-6	-26	Hawaii Only
Forced Ventilation	+6	+2	+8	N.A. with A/C

*Reference – SAE Aerospace-Automotive drawing standards, Section E 1.02 (d).

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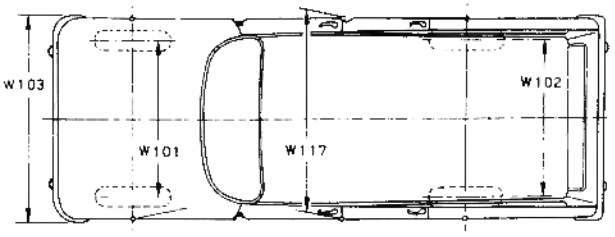
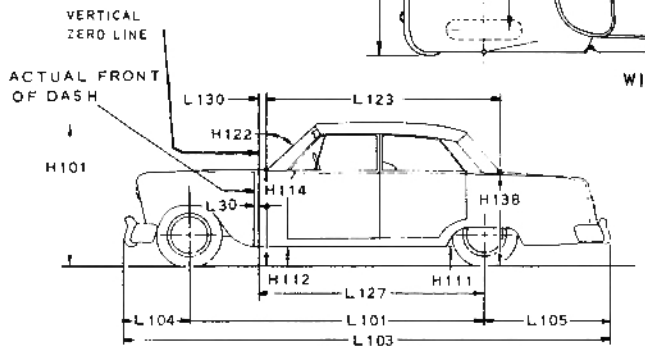
CAR AND BODY DIMENSIONS

KEY SHEET

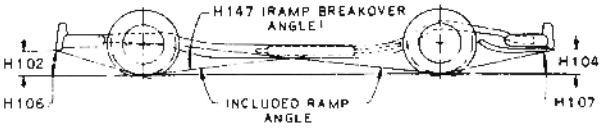
EXTERIOR CAR AND BODY DIMENSIONS



WIDTH

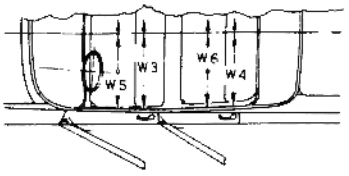


LENGTH & HEIGHT



GROUND CLEARANCE

INTERIOR CAR AND BODY DIMENSIONS



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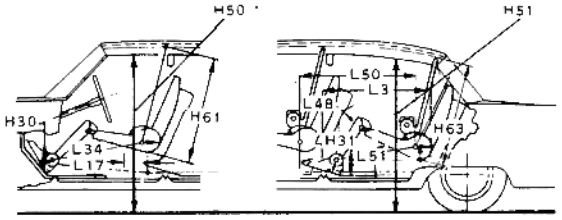
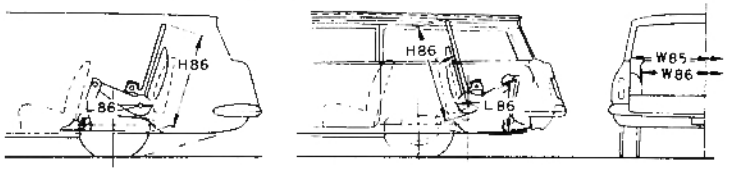
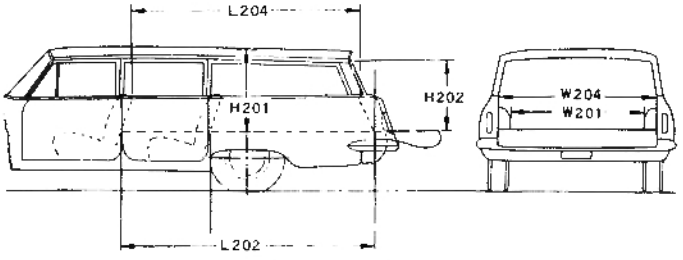


FRONT COMPT. REAR COMPT.



THIRD SEAT



CARGO SPACE

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CAR AND BODY DIMENSIONS

KEY SHEET

DIMENSION DEFINITIONS

EXTERIOR WIDTH DIMENSIONS

W101 WHEEL TREAD – FRONT. Measured at centerline of tires, with nominal camber, at ground.

W102 WHEEL TREAD – REAR. Measured at centerline of tires at ground.

W103 MAXIMUM OVERALL CAR WIDTH. Include bumpers, moldings, or sheet metal protrusions. Measured to outside of metal.

W117 MAXIMUM BODY WIDTH AT #2 PILLAR. Measured across body at #2 pillar, excluding hardware and applied moldings.

EXTERIOR LENGTH DIMENSIONS

L 30 VERTICAL ZERO LINE TO ACTUAL FRONT OF DASH. If actual Front of Dash is to the rear of Body Zero Line, it is identified by a minus (–) sign.

L101 WHEELBASE.

L103 OVERALL LENGTH. Include bumper guards if standard equipment.

L104 OVERHANG – FRONT. Measured from C/L of front wheels to front of car, including bumper guards if standard equipment.

L105 OVERHANG – REAR. Measured from C/L of rear wheels to rear of car, including bumper guards if standard equipment.

L123 BODY UPPER STRUCTURE LENGTH AT CAR CENTERLINE. The horizontal dimension from the Cowl Point to the Deck Point.

L127 VERTICAL ZERO LINE TO CENTERLINE OF REAR WHEELS. A horizontal dimension.

L130 VERTICAL ZERO LINE TO WINDSHIELD COWL POINT. The horizontal dimension from the vertical zero line to the theoretical intersection of extended windshield glass plane and normal cowl surface.

EXTERIOR HEIGHT DIMENSIONS

H101 OVERALL HEIGHT – DESIGN. Measured with the vehicle in Manufacturer's Design Weight attitude.

H114 COWL POINT TO GROUND. Measured at vehicle centerline.

H138 DECK POINT TO GROUND. Measured at vehicle centerline.

H112 ROCKER PANEL TO GROUND – FRONT. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at foremost point of rocker panel.

H111 ROCKER PANEL TO GROUND – REAR. The vertical dimension from ground to bottom of rocker panel, excluding flanges. Measured to the outside of sheet metal at front of rear wheel opening.

H122 WINDSHIELD SLOPE ANGLE. The angle between a vertical line and the windshield surface at car centerline. On compound-curved windshields the chord of the arc is used and limited to that section of the windshield comprehended by an 18-inch chord.

GROUND CLEARANCE DIMENSIONS

H102 BUMPER TO GROUND – FRONT. Minimum dimension, includes bumper guards.

H104 BUMPER TO GROUND – REAR. Minimum dimension, includes bumper guards.

H106 ANGLE OF APPROACH. The angle between ground and a line tangent to the front tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.

H107 ANGLE OF DEPARTURE. The angle between ground and a line tangent to the rear tire static loaded radius arc and the first point of interference, i.e., bumper, guard, gravel deflector, tail pipe, fender or other component, excluding license plate. This dimension may be determined graphically for reporting purposes.

H147 RAMP BREAKOVER ANGLE. The supplement of included ramp angle (180° minus included ramp angle) over which car can pass without interference; measured with car sitting on a level surface, using lines tangent to arcs of front and rear static loaded radii and intersecting at point on underside of car which defines the smallest angle.

H156 MINIMUM RUNNING GROUND CLEARANCE. Location of measurement on the car is to be clearly recorded.

FRONT COMPARTMENT DIMENSIONS

H 61 EFFECTIVE HEAD ROOM – FRONT. The dimension from H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.

L 34 MAXIMUM EFFECTIVE LEG ROOM – ACCELERATOR. Measured along a diagonal line from the Manikin ankle pivot center to the H Point plus a constant of 10.0 inches. For treadle type accelerator pedals, the leg room is measured with the Manikin's right foot on the accelerator pedal and the Manikin Heel Point at Accelerator Heel Point. All other types of accelerator pedals will be measured with the Manikin foot angle set at 87° and the shoe touching the pedal.

H 30 H POINT TO HEEL POINT – FRONT. The vertical dimension from the H Point to the Accelerator Heel Point.

L 17 H POINT TRAVEL. The horizontal dimension between the H Point in the most forward and rearward seat positions.

FRONT COMPARTMENT DIMENSIONS (Cont.)

W 3 SHOULDER ROOM – FRONT. The minimum lateral dimensions between the door garnish moldings or nearest interference, measured at the H Point station.

W 5 HIP ROOM – FRONT. The lateral dimension through the H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction if such construction exists.

H 50 UPPER BODY OPENING TO GROUND – FRONT. The vertical dimension from a point on the trimmed body opening to the ground, measured at the H Point station.

REAR COMPARTMENT DIMENSIONS

L 50 H POINT COUPLE DISTANCE. The horizontal dimension from the front seat H Point to the rear seat H Point.

H 63 EFFECTIVE HEAD ROOM – REAR. The dimension from the H Point to the headlining, plus a constant of 4.0 inches, measured along a line 8° to rear of vertical.

L 51 MINIMUM EFFECTIVE LEG ROOM – REAR. Measured along a diagonal line from the ankle pivot center to the H Point plus a constant of 10.0 inches, with the foot positioned to the nearest interference between the seat structure and toe, instep or lower leg.

H 31 H POINT TO HEEL POINT – REAR. The vertical dimension from the H Point to the Manikin Heel Point on the depressed floor covering.

L 48 MINIMUM KNEE ROOM – REAR. The minimum dimension from the Manikin knee pivot center to the back of the front seat back.

L 3 REAR COMPARTMENT ROOM. The horizontal dimension from the back of front seat to front of rear seat back at height tangent to the top of rear seat cushion.

W 4 SHOULDER ROOM – REAR. The minimum lateral dimension between the door garnish molding or nearest interference. Measured at H Point station.

W 6 HIP ROOM – REAR. The lateral dimension through H Point to trimmed body surfaces. Depress loose side wall cloth to trim foundation or other obstruction when such construction exists.

H 51 UPPER BODY OPENING TO GROUND – REAR. The vertical dimension from a point on the trimmed body opening to the ground, measured 13.0 inches forward of the H Point.

LUGGAGE COMPARTMENT DIMENSIONS

V 1 LUGGAGE CAPACITY – USABLE. The total luggage compartment luggage capacity in cubic feet with the tire and tools in place.

H195 LIFTOVER HEIGHT. Vertical dimension from the highest point on the luggage compartment lower opening to ground, excluding corner radii.

STATION WAGON – THIRD SEAT DIMENSIONS

W 85 SHOULDER ROOM – THIRD SEAT. The minimum lateral dimension between the door garnish moldings or nearest interference. Measured at H Point station.

W 86 HIP ROOM – THIRD SEAT. The lateral dimension through H Point to trimmed surfaces.

L 86 EFFECTIVE LEG ROOM – THIRD SEAT. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. With rear-facing third seat, foot is positioned in foot well or to nearest interference with rear end or rear closure.

H 86 EFFECTIVE HEAD ROOM – THIRD SEAT. The dimension from H Point to the headlining, plus a constant of 4.0 inches. Measured along a line 8° to rear of vertical.

STATION WAGON – CARGO SPACE DIMENSIONS

L202 CARGO LENGTH AT FLOOR – FRONT SEAT. The horizontal dimension, measured at the floor level from the rear of the front seat back to the normal inside limiting interference on the tailgate, on the car centerline.

L204 CARGO LENGTH AT BELT – FRONT SEAT. The horizontal dimension measured from the top rear of front seat back to a vertical extension line from the normal inside limiting interference at the top of the tailgate, on the car centerline.

W201 CARGO WIDTH – WHEELHOUSE. The minimum horizontal dimension, measured between wheelhousings at floor level.

W204 OPENING WIDTH AT BELT. The minimum horizontal dimension, measured between the nearest normal inside limiting interferences of the rear opening at the top of the tailgate.

H201 MAXIMUM CARGO HEIGHT. The maximum vertical dimension, measured from the top of the floor covering to the headlining, on the car centerline.

H202 REAR OPENING HEIGHT. The vertical dimension measured from the top of the floor covering to the normal inside limiting interference at the top of the rear opening, on the car centerline, with both tail-and liftgates fully open.

V 2 CARGO VOLUME INDEX BEHIND FRONT SEAT. The total volume in cubic feet above the normal load floor and behind the front seat with the liftgate and tailgate closed.

$$\frac{W4 \times L204 \times H201}{1728}$$

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