AMA-40A

AMA Specifications—Passenger Car

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MANUFACTURER	CAR NAME	
Pontiac Motor Division General Motors Corporation	Pontiac - Firebird	
MAILING ADDRESS	MODEL YEAR	ISSUED: 9-11-68
Pontiac, Michigan 48053	1969	REVISED (*)

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 Type	Body Style Number
Hardtop Coupe	22337
Convertible	22367

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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.	FIREBIRD	
			22337	22367
WIDTH				
Track – Front		W101	60	
Track – Rear		W102	60	
Maximum overall car width		W103	73.9	
Body width at No. 2 pillar		W117	--	
LENGTH				
Body "O" to front of dash		L 30	0.5	
Wheelbase		L101	108.1	
Overall car length		L103	191.1	
Overhang – front		L104	40.7	
Overhang – rear		L105	42.3	
Body upper structure length		L123	90.0	89.9
Body "O" line to ℄ of rear wheel		L127	90.0	
Body "O" line to w/s cowl point		L130	9.5	
HEIGHT				
Passenger Distribution (front & rear)			2-3	
Trunk/Cargo load (lbs.)			0	
Overall height		H101	49.6	49.5
Cowl height		H114	35.3	
Deck height		H138	35.8	34.1
Rocker panel – front	To ground	H112	6.6	6.5
	From front wheel ℄		33.1	
Rocker panel – rear	To ground	H111	5.3	5.2
	From rear wheel ℄		20.0	
Windshield slope angle		H122	52.4	
GROUND CLEARANCE				
Bumper to ground – front		H102	16.7	16.8
Bumper to ground – rear		H104	13.9	13.7
Angle of approach		H106	23.4	23.2
Angle of departure		H107	23.6	23.5
Ramp breakover angle		H147	6.6	6.4
Min. running clearance (Specify)		H156	3.9	3.8

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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.	Firebird	
		22337	22367
FRONT COMPARTMENT			
Effective head room	H61	37.1	37.5
Max. eff. leg room – accelerator	L34	42.5	
H Point to heel point	H30	7.7	
H Point travel	L17	4.0	
Shoulder room	W 3	56.5	
Hip room	W 5	56.3	
Upper body opening to ground	H50	45.0	45.2
REAR COMPARTMENT			
H Point couple distance	L50	27.4	
Effective head room	H63	36.7	36.8
Min. effective leg room	L51	29.5	
H Point to Heel point	H31	9.4	
Min. knee room	L48	1.0	
Rear Compartment room	L 3	22.3	
Shoulder room	W 4	53.6	47.3
Hip room	W 6	54.6	47.5
Upper body opening to ground	H51	----	
LUGGAGE COMPARTMENT			
Usable luggage capacity	V 1	N.A.	
Liftover height	H195	26.4	26.2
Position of spare tire storage		Flat - Std. Space Saver, Opt. Spare is Inclined	
Method of holding lid open		Torsion Bar Counterbalance	
STATION WAGON – THIRD SEAT			
Shoulder Room	W85	Not Offered	
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

MODEL AVAILABILITY

(Indicate whether standard or optional)

FIREBIRD 223	ENGINE					TRANSMISSION	AXLE RATIO (Std. first) (Indicate A/C ratio)
	Displ. cu. in.	Carburetor	Compr. Ratio	BHP RPM	Torque RPM		
STANDARD ENGINE							
Firebird	250 (6)	1 bbl.	9.0:1	175 @ 4800	240 @ 2600	Manual (3-Sp.)(a) Automatic (c)	3.55:1, 3.08:1 (b)(f) 3.23:1, 2.56:1 (b)
OPTIONAL ENGINES							
Firebird Sprint	250 (6)	4 bbl.	10.5:1	230 @ 5400	260 @ 3600	Manual (3-Sp.)(a)	3.55:1 (d)
	250 (6)	4 bbl.	10.5:1	215 @ 5200	255 @ 3800	Turbo Hydra-Matic	3.23:1, 2.78:1, 3.55:1 (d)
Firebird 350	350 (8)	2 bbl.	9.2:1	265 @ 4600	355 @ 2800	Manual (3-Sp.)(a) Automatic (c)	3.23:1, 3.08:1 (b) 2.56:1, 2.93:1 (e)
Firebird H.O.	350 (8)	4 bbl.	10.5:1	325 @ 5100	380 @ 3200	Manual (3-Sp.)(a) Turbo Hydra-Matic	3.55:1 (g) 3.55:1 (g)
Firebird 400	400 (8)	4 bbl.	10.75:1	330 @ 4800	430 @ 3300	Manual (3-Sp.)(a) Turbo Hydra-Matic	3.36:1, 3.55:1 (b) 3.08:1, 3.23:1 (e)
Firebird 400 H.O.	400 (8)	4 bbl.	10.75:1	335 @ 5000	430 @ 3400	Manual (3-Sp.)(a) Turbo Hydra-Matic	3.36:1, 3.55:1 (b) 3.08:1, 3.55:1 (e)
Firebird 400 Ram Air IV	400 (8)	4 bbl.	10.75:1	345 @ 5400	430 @ 3700	Manual (4-Sp.) Turbo Hydra-Matic	3.90:1 (d) 3.90:1 (d)

(a) 4-Speed manual optional
(b) 3.23:1 with air conditioning
(c) 2-Speed automatic or 3-Speed Turbo Hydra-Matic optional
(d) Air conditioning not available
(e) 2.78:1 with air conditioning
(f) 3.08:1 not available with 4-Speed manual option
(g) 3.55:1 with air conditioning

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ENGINE – GENERAL

MODEL		FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400
Type, no. cyls., valve arr.		Line, 6, Overhead Cam		90°V, 8, In-Head		
Bore and stroke (nominal)		3.8750 x 3.525 3.8774 x 3.535		3.8750 x 3.746 3.8774 x 3.754		4.1200 x 3.746 4.1224 x 3.754
Piston displacement, cu. in.		250		350		400
Bore spacing (℄ to ℄)		4.4		4.62		
No. system (front to rear)	L. Bank	1-2-3-4-5-6 (In-Line)		1-3-5-7		
	R. Bank	---		2-4-6-8		
Firing order		1-5-3-6-2-4		1-8-4-3-6-5-7-2		
Compres. ratio (nominal)		9.0:1	10.5:1	9.2:1	10.5:1	10.75:1
Cylinder Head Material		Alloy Cast Iron				
Cylinder Block Material		Alloy Cast Iron				
Cyl. Sleeve-Wet, dry, none		None				
Number of mtg. points	Front	2				
	Rear	1				
Engine installation angle		3° 35'				
Taxable horsepower $\frac{Dia^2 \times No.\ Cyl.}{2.5}$		36.0		48.0		54.3
Publishing max. bhp* @ eng. RPM		175 @ 4800	230 @ (f) 5400	265 @ 4600	325 @ 5100	330 @ 4800
Publishing max. torque * (lb. ft. @ RPM)		240 @ 2600	260 @ (f) 3600	355 @ 2800	380 @ 3200	430 @ 3300
Recommended fuel regular – premium		Regular	Premium	Regular	Premium	

ENGINE – PISTONS

Material		Aluminum Alloy				
Description and finish		Cam Ground Slipper Type - Tin Plated				
Weight (piston only) oz.		19.740 - 19.920		21.010 - 21.190		22.070-22.250 (b)
Clearance (limits)	Top land	.024 - .029				.017 - .021 (d)
	Skirt Top	.0022 - .0028 (a)				.0025-.0031 (a) (c)
	Skirt Bottom	.0017 - .0033				.0020-.0036 (e)
Ring groove depth	No. 1 ring	3.427 - 3.437				3.667-3.677
	No. 2 ring	3.427 - 3.437				3.667-3.677
	No. 3 ring	3.446 - 3.456				3.670-3.680
	No. 4 ring	None				

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

(a) Pistons selected for clearance at 1.110 below top of piston.
(b) 18.00 - 18.20 on Ram Air IV Engine option.
(c) .0055 - .0061 on Ram Air IV Engine option.
(d) .033 - .042 on Ram Air IV Engine option.
(e) .004 - .0057 on Ram Air IV Engine option.
(f) Std. (man. trans. engine) - Turbo Hydra-matic trans. engine is rated 215 BHP @ 5200 RPM, torque 255 lb. ft. @ 3800.

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MODEL	FIREBIRD 250 cu.in. Engines	FIREBIRD 350 cu.in. Engines	FIREBIRD 400 cu.in. Engines

ENGINE – RINGS

Function (top to bottom)	No. 1, oil or comp.	Compression			
	No. 2, oil or comp.	Compression			
	No. 3, oil or comp.	Oil			
	No. 4, oil or comp.	None			
Compression	Description - material, coating, etc.	Cast Iron Reverse Twist With - (a)	(b)	(c)	Moly Channel - #1 Barrel Face, #2 Taper Face
	Width	.0778		No. 1 .0778, No. 2 .0775	
	Gap	.015		.019	
Oil	Description - material, coating, etc.	Multi-Piece (2 Rails & 1 Expander) Rails: Steel with Chrome Plated O. D. Expander: Stainless Steel			
	Width	.186			
	Gap	.035			
Expanders		In Oil Ring Assembly			

ENGINE – PISTON PINS

Material		SAE 5015	SAE 1016	
Length		3.00	3.25	
Diameter		.9272	.9802	
Type	Locked in rod, in piston, floating, etc.	Locked in Rod		
	Bushing – In rod or piston	None		
	Bushing – Material	None		
Clearance	In piston	.0003 - .0005	.0005 - .0007	
	In rod	Press Fit		
Direction & amount offset in piston		To Right - .063		

ENGINE – CONNECTING RODS

Material		SAE 1037, 1038 or 1141	Arma Steel	
Weight (oz.)		23.9	31.7	
Length (center to center)		5.70	6.625	
Bearing	Material & Type	Moraine 100-A (d)(e)(f)		Moraine 400-A (d)
	Overall length	.837	.88	
	Clearance (limits)	.0007 - .0027 (g)	.0005 - .0025	.0005 - .0026 (h)
	End play	.0085 - .0135	.006 - .011 (Total for Two) (i)	

(a) 250 1 bbl. Engine: #1 - Barrel Face Moly Channel
#2 - Taper Face Tin Plated

(b) 250 4 bbl. Engine: #1 - Barrel Face Moly Channel
#2 - Taper Face Moly Channel

(c) 350 2 bbl. Engine: #1 - Barrel Face Moly Channel
#2 - Taper Face Tin Plated

(d) Steel backed removable precision.
(e) Moraine 400-A on 4 bbl. 250 cu. in. engines.
(f) Moraine 400-A on 4 bbl. 350 cu. in. engines.
(g) .0007 - .0028 on 4 bbl. 250 cu. in. engines.
(h) .0015 - .0031 with Ram Air IV option.
(i) .016 - .021 with Ram Air IV option.

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ENGINE – CRANKSHAFT

MODEL			FIREBIRD 250 cu.in. Engines	FIREBIRD 350 cu.in. Engines	FIREBIRD 400 cu.in. Engines
Material			Nodular Iron (d)		
Vibration damper type			Rubber Floated Weight		
End thrust taken by bearing (No.)			7	4	
Crankshaft end play			.002 - .006	.0035 - .0085	
Main bearing	Material & type		Durex 100-A* Steel Backed, Removable, Precision (b)		
	Clearance		.0003 - .0019	.0002 - .0017 (c)	
	Journal dia. and bearing overall length	No. 1	2.30 x .80	3.00 x .94	
		No. 2	2.30 x .80	3.00 x .94	
		No. 3	2.30 x .80	3.00 x .94	
		No. 4	2.30 x .80	3.00 x 1.13	
		No. 5	2.30 x .80	3.00 x 1.59	
		No. 6	2.30 x .80	None	
		No. 7	2.30 x 1.01	None	
	Dir. & amt. cyl. offset		None		
Crankpin journal diameter			2.00	2.25	

ENGINE – CAMSHAFT

Location			Overhead	Between Cylinder Banks	
Material			Hardened Alloy Cast Iron		
Bearings	Material		Aluminum Alloy	High Lead Babbit on Steel	
	Number		7	5	
Type of Drive	Gear or chain		Belt (a)	Chain	
	Crankshaft gear or sprocket material		Hardened Cast Iron	Hardened Sintered Iron	
	Camshaft gear or sprocket material		Hardened Cast Iron	Aluminum Alloy with Nylon Covered Teeth	
	Timing chain	No. of links	98 Teeth	60	
		Width	1.031 - .954	.88 (Morse) - 1.00 (Link Belt)	
		Pitch	.500	.375	

ENGINE – VALVE SYSTEM

Hydraulic lifters (Std., opt., NA)		Standard (e)
Valve rotator, type (intake, exhaust)		None
Rocker ratio		1.5:1 (f)
Operating tappet clearance (indicate hot or cold)	Intake	0
	Exhaust	0

* M-400 in lower half of No. 1, 2, 3 & 4 locations of 4 bbl. 350 cu. in. and 400 cu. in. engines.

(a) Neoprene with fiberglass cord reinforcement.

(b) M-400 in all locations of option 6 cyl. 4 bbl. engine and all but #5 location of 400 cu. in. Ram Air IV engine.

(c) .0012 - .0028 on Ram Air IV engine option.

(d) Arma Steel on Ram Air IV engine option.

(e) Manual lash, limited travel hydraulic lifters standard on Ram Air IV engine.

(f) 1.65:1 on Ram Air IV engine.

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MODEL			FIREBIRD (6 Cyl. 1-Bbl.)	FIREBIRD SPRINT (6 Cyl. 4-Bbl.)	
ENGINE – VALVE SYSTEM (cont.)				Auto.	Man.
Timing (based on top of ramp points)	Intake	Opens (°BTC)	14	14	22
		Closes (°ABC)	46	50	58
		Duration - deg.	240	244	260
	Exhaust	Opens (°BBC)	46	52	60
		Closes (°ATC)	14	12	20
		Duration - deg.	240	244	260
	Valve opening overlap		28°	26°	42°
Intake	Material		GM-8440 w/Alum.Treatment on Face & Fl.Chrome Pl. Stem		
	Overall length		4.810	4.902	
	Actual overall head dia.		1.923 - 1.917		
	Angle of seat & face		Seat - 45°, Face - 44°		
	Seat insert material		Not Used		
	Stem diameter		.3419 - .3412		
	Stem to guide clearance		.0016 - .0033		
	Lift (@ zero lash)		.400 + .011	.438 + .011	
	Outer spring press. & length	Valve closed (lb. @ in.)	94.6 100.6 @ 1.6298	62.4 68.4 @ 1.6298	
		Valve open (lb. @ in.)	165.6 175.6 @ 1.2298	116.2 128.2 @ 1.1918	
	Inner spring press. & length	Valve closed (lb. @ in.)	---	30.5 36.5 @ 1.5898	
		Valve open (lb. @ in.)	---	59.4 65.4 @ 1.1518	
Exhaust	Material		21-2 St.w/Alum. Treat. on Face & Flash Chrome Pl. Stem		
	Overall length		4.799	4.891	
	Actual overall head dia.		1.603 - 1.597		
	Angle of seat & face		Seat - 45°, Face - 44°		
	Seat insert material		Not Used		
	Stem diameter		.3414 - .3407		
	Stem to guide clearance		.0021 - .0038		
	Lift (@ zero lash)		.400 + .011	.438 + .011	
	Outer spring press. & length	Valve closed (lb. @ in.)	94.6 100.6 @ 1.6298	62.4 68.4 @ 1.6298	
		Valve open (lb. @ in.)	165.6 175.6 @ 1.2298	116.2 128.2 @ 1.1918	
	Inner spring press. & length	Valve closed (lb. @ in.)	---	30.5 36.5 @ 1.5898	
		Valve open (lb. @ in.)	---	59.4 65.4 @ 1.1598	

ENGINE – LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Belt - Not Lubricated
	Cylinder walls	Metered Jet

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MODEL

ENGINE – VALVE SYSTEM (cont.)

			FIREBIRD 350	FIREBIRD H.O.	
				Manual	Turbo H-M
Timing (based on top of ramp points)	Intake	Opens (°BTC)	22	31	23
		Closes (°ABC)	67	77	70
		Duration - deg.	269	288	273
	Exhaust	Opens (°BBC)	72	90	78
		Closes (°ATC)	25	32	31
		Duration - deg.	277	302	289
	Valve opening overlap		47°	63°	54°
Intake	Material		GM-8440 With Aluminum Treatment on Face & Flash Chrome Plated Stem		
	Overall length		5.026	5.093	
	Actual overall head dia.		1.963 - 1.957	2.113 - 2.107	
	Angle of seat & face		45° Seat, 44° Face	30° Seat, 29° Face	
	Seat insert material		Not Used		
	Stem diameter		.3419 - .3412		
	Stem to guide clearance		.0016 - .0033		
	Lift (@ zero lash)		.376 ± .011	.414 ± .011	.410 ± .011
	Outer spring press. & length	Valve closed (lb. @ in.)	59.6 65.6 @ 1.5823	78 88 @ 1.591	78 88 @ 1.591
		Valve open (lb. @ in.)	122.5 132.5 @ 1.2063	192.72 206.72 @ 1.177	191.6 205.6 @ 1.181
	Inner spring press. & length	Valve closed (lb. @ in.)	31.7 37.7 @ 1.5423	42 48 @ 1.521	42 48 @ 1.521
		Valve open (lb. @ in.)	88.8 98.8 @ 1.1663	95.86 105.86 @ 1.107	95.33 105.33 @ 1.111
Exhaust	Material		21-2 Steel With Aluminum Treatment on Face & Flash Chrome Plated Stem		
	Overall length		5.015	5.082	
	Actual overall head dia.		1.663 - 1.657	1.773 - 1.767	
	Angle of seat & face		45° Seat, 44° Face		
	Seat insert material		Not Used		
	Stem diameter		.3414 - .3407		
	Stem to guide clearance		.0021 - .0038		
	Lift (@ zero lash)		.412 ± .011	.413 ± .011	
	Outer spring press. & length	Valve closed (lb. @ in.)	59.6 65.6 @ 1.5823	78 88 @ 1.591	
		Valve open (lb. @ in.)	128.7 138.7 @ 1.1703	192.44 206.44 @ 1.178	
	Inner spring press. & length	Valve closed (lb. @ in.)	31.7 @ 1.5423 37.7	42 @ 1.521 48	
		Valve open (lb. @ in.)	94.4 @ 1.1303 104.4	95.73 @ 1.108 105.73	

ENGINE – LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Metered Jet
	Cylinder walls	Metered Jet

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MODEL			FIREBIRD 400	FIREBIRD 400 H.O.	
ENGINE – VALVE SYSTEM (cont.)				Manual	Turbo H-M
Timing (based on top of ramp points)	Intake	Opens (°BTC)	23	31	23
		Closes (°ABC)	70	77	70
		Duration - deg.	273	288	273
	Exhaust	Opens (°BBC)	78	90	78
		Closes (°ATC)	31	32	31
		Duration - deg.	289	302	289
	Valve opening overlap		54°	63°	54°
Intake	Material		GM-8440 w/Alum. Treat.on Face & Flash Chrome Pl. Stem		
	Overall length		5.093		
	Actual overall head dia.		2.113 - 2.107		
	Angle of seat & face		30° Seat, 29° Face		
	Seat insert material		Not Used		
	Stem diameter		.3419 - .3412		
	Stem to guide clearance		.0016 - .0033		
	Lift (@ zero lash)		.410 ± .011	.414 ± .011	.410 ± .011
	Outer spring press. & length	Valve closed (lb.@in.)	63.3 69.3 @ 1.5613	78 88 @ 1.591	63.3 69.3 @ 1.561
		Valve open (lb.@in.)	132 142 @ 1.1513	192.72 206.72 @ 1.177	132 142 @ 1.151
	Inner spring press. & length	Valve closed (lb.@in.)	35 41 @ 1.5213	42 48 @ 1.521	35 41 @ 1.521
		Valve open (lb.@in.)	97.4 107.4 @ 1.1113	95.86 105.86 @ 1.107	97.4 107.4 @ 1.111
Exhaust	Material		21-2 Steel w/Alum.Treat. on Face & Flash Chrome Pl. Ste		
	Overall length		5.082		
	Actual overall head dia.		1.773 - 1.767		
	Angle of seat & face		45° Seat - 44° Face		
	Seat insert material		Not Used		
	Stem diameter		.3413 - .3407		
	Stem to guide clearance		.0021 - .0038		
	Lift (@ zero lash)		.413 ± .011	.413 ± .011	.413 ± .011
	Outer spring press. & length	Valve closed (lb.@in.)	63.3 69.3 @ 1.5613	78 88 @ 1.591	63.3 69.3 @ 1.561
		Valve open (lb.@in.)	132.5 142.5 @ 1.1483	192.44 206.44 @ 1.178	132.5 142.5 @ 1.148
	Inner spring press. & length	Valve closed (lb.@in.)	35 41 @ 1.5213	42 48 @ 1.521	35 41 @ 1.521
		Valve open (lb.@in.)	97.9 107.9 @ 1.1083	95.73 105.73 @ 1.108	97.9 107.9 @ 1.108

ENGINE – LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Metered Jet
	Cylinder walls	Metered Jet

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MODEL FIREBIRD RAM AIR IV ENGINE OPTION

ENGINE – VALVE SYSTEM (cont.)

Timing (based on top of ramp points)	Intake	Opens (°BTC)	42
		Closes (°ABC)	86
		Duration - deg.	308
	Exhaust	Opens (°BBC)	95
		Closes (ATC)	45
		Duration - deg.	320
	Valve opening overlap		87
Intake	Material		GM-8440 w/Alum. Treatment on Face & Chrome Plated Stem
	Overall length		5.198
	Actual overall head dia.		2.113 - 2.107
	Angle of seat & face		30° Seat - 29° Face
	Seat insert material		Not Used
	Stem diameter		.3419 - .3412
	Stem to guide clearance		.0016 - .0033
	Lift (@ zero lash)		.520 ± .011
	Outer spring press. & length	Valve closed (lb.@in.)	70 80 @ 1.820
		Valve open (lb.@in.)	214 228 @ 1.300
	Inner spring press. & length	Valve closed (lb.@in.)	37 43 @ 1.750
		Valve open (lb.@in.)	105 115 @ 1.230
Exhaust	Material		21-2 Steel w/Alum. Treat. on Face & Chrome Plated Stem
	Overall length		5.212
	Actual overall head dia.		1.773 - 1.767
	Angle of seat & face		45° Seat - 44° Face
	Seat insert material		Not Used
	Stem diameter		.3414 - .3407
	Stem to guide clearance		.0021 - .0038
	Lift (@ zero lash)		.520 ± .011
	Outer spring press. & length	Valve closed (lb.@in.)	70 80 @ 1.820
		Valve open (lb.@in.)	214 228 @ 1.300
	Inner spring press. & length	Valve closed (lb.@in.)	37 43 @ 1.750
		Valve open (lb.@in.)	105 115 @ 1.230

ENGINE – LUBRICATION SYSTEM

Type of lubrication (splash, pressure, nozzle)	Main bearings	Pressure
	Connecting rods	Pressure
	Piston pins	Splash
	Camshaft bearings	Pressure
	Tappets	Pressure
	Timing gear or chain	Metered Jet
	Cylinder walls	Metered Jet

(Continued)

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ENGINE – LUBRICATION SYSTEM (cont.)

MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.
Oil pump type	Spur Gear			
Normal oil pressure (lb. engine rpm)	26 - 36 @ 2800 RPM		30 - 40 above 2600 RPM*	
Oil press. sending unit (elect. or mech.)	Electric			
Type oil intake (floating, stationary)	Stationary Screen			
Oil filter system (full flow, part., other)	Full Flow			
Filter replacement (element, complete)	Complete			
Capacity of c case, less filter-refill (qt.)	4.5		5	
Oil grade recommended (SAE viscosity and temperature range)	Anticipated Lowest Temp.		Single Viscosity SAE Number	Acceptable Alternate
	Above Freezing (+32°F.)		20W	10W - 30
	Below Freezing (0°F. to +32°F.)		10W	10W - 30
	Below Zero		5W	5W - 20
Engine Service Reqmt. (MM, MS, etc.)	MS			

ENGINE -- EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)		Single (a)			
Muffler No. & type (reverse flow, straight thru, separate resonator)		One - Reverse Flow			(b)
Exhaust pipe dia. (O.D., wall thick.)	Branch	None (c)		2.00 x .060	None
	Main	2.00 x .060	2.25 x (d)	2.25 x .070	2.25 x .060
Tail pipe dia. (O.D. & wall thickness)		Muffler Outlet Spount (or Spouts) 2.00 x .060			

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	Induction System		
	Optional	None		
Control Unit	Make and model	AC Type CV-735C		AC Type CV-679C
	Location	Intake Manifold		Push Rod 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)	Intake Manifold		
	Air inlet (breather cap, carburetor air cleaner, other)	Through Filter in the Carburetor Air Cleaner		
	Flame arrestor (screen, check valve, other)	Check Valve		

(a) Dual system standard on H.O., "Y" pipe joins dual outlet manifold to single exhaust pipe on Sprint, Crossover pipe used on 350.
(b) One crossflow muffler with dual inlets and outlets, reverse flow resonator ahead of muffler in each pipe, on dual systems.
(c) Sprint "Y" pipe legs 2.00 x .060.
(d) .076 - front section, .070 - rear section.
(e) Front section, 2.25 x .070 rear section.
* Except 350 HO engine which is 55 to 60 above 2600 RPM.

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MODEL FIREBIRD 400

ENGINE – LUBRICATION SYSTEM (cont.)

Oil pump type	Spur Gear
Normal oil pressure (lb. engine rpm)	55-60 Above 2600 RPM
Oil press. sending unit (elect. or mech.)	Electric
Type oil intake (floating, stationary)	Stationary Screen
Oil filter system (full flow, part., other)	Full Flow
Filter replacement (element, complete)	Complete
Capacity of c case, less filter-refill (qt.)	5

Oil grade recommended (SAE viscosity and temperature range)

Anticipated Lowest Temp.	Single Viscosity SAE Number	Acceptable Alternate
Above Freezing (+32°F.)	20W (c)	10W - 30(d)
Below Freezing (0°F. to +32°F.)	10W	10W - 30(d)
	5W	5W - 20

Engine Service Reqmt. (MM, MS, etc.)	MS

ENGINE – EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)		Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)		One - Reverse Crossflow with Dual Inlets & Outlets (a)
Exhaust pipe dia. (O.D., wall thick.)	Branch	Not Used
	Main	Front: 2.00 x .060 (b) Rear 2.25 x .070
Tail pipe dia. (O.D. & wall thickness)		2.00 x .060 Muffler Outlet Spouts

ENGINE – CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	Induction System
	Optional	None
Control Unit	Make and model	AC Type CV-679C
	Location	Push Rod 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)	Intake Manifold
	Air inlet (breather cap, carburetor air cleaner, other)	Through Filter in Carburetor Air Cleaner
	Flame arrestor (screen, check valve, other)	Check Valve

(a) Reverse flow resonator ahead of muffler in each pipe.
(b) 2.25 x .076 with 400 H.O. and Ram Air IV options.
(c) 30W with Ram Air IV option.
(d) 10W-40 with Ram Air IV option.

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ENGINE – EXHAUST EMISSION CONTROL

MODEL			FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400
Type (Air injection, engine modifications, other)			STANDARD ENGINE PROVIDES EXHAUST EMISSION CONTROL				
Air Injection Pump	Type						
	Displacement						
	Drive ratio						
	Drive type						
	Relief valve (type)						
	Filter (describe)						
Air Injection System	Air distribution (head, manifold, etc.)						
	Point of entry						
	Injection tube I.D.						
	Check valve type						
	Backfire protection (type)						
Carburetor	Make						
	Model						
	Barrel size						
	Idle speed	Drive					
		Neutral					
	Idle A/F mixture						
Distributor	Aux. Adv. Systems (type)						
	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							
Exhaust System							

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

ENGINE – FUEL SYSTEM

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

Induction type: Carburetor, fuel injection, supercharger.			Carburetor				
Fuel Tank	Refill capacity (U.S. gals.)		18.5				
	Filler location		Center Rear				
Fuel Pump	Type (elec. or mech.)		Mechanical				
	Locations		Right Front of Engine	Left Front of Engine			
	Pressure range		4.0 - 5.5	5.0 - 6.5			
Vacuum booster (std., optional, none)			None				
Fuel Filter	Type and Locations		Plastic Fabric in Fuel Tank and Sintered Bronze in Carb. Inlet (a)				
Carburetor	Choke type		Automatic				
	Intake manifold heat control (exhaust or water)		Exhaust				
	Air cleaner type (c)	Standard	Oil Wetted Paper				
		Optional	Two Stage - Wetted Plastic Foam Over Paper Element				
	Idle speed (spec. neutral or drive) N. / D.	Manual N	500 (6-1 Bbl)	600 (6-4 Bbl)	850 (350-2 Bbl)	1000 (350&400-4Bbl)	
		Automatic D	500	500	650	650	(750 Ram Air)
		Idle A-F mix.	---				

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors Make	Carburetors Model	No. Used and Type	Barrel Size
Firebird	250	Manual	Rochester	7029165 (b)	1,1-Bbl.	1.69
		Automatic	Rochester	7029166 (b)	1,1-Bbl.	1.69
Firebird Sprint	250	Manual	Rochester	7029261	1,4-Bbl.	P.-1.38
		Automatic	Rochester	7029260	1,4-Bbl.	S.-2.25
Firebird 350	350	Manual	Rochester	7028071	1,2-Bbl.	1.69
		Automatic	Rochester	7029062	1,2-Bbl.	1.69
Firebird H.O.	350	Manual	Rochester	7029263	1,4-Bbl.	P.-1.38
		Turbo H-M	Rochester	7029268	1,4-Bbl.	S.-2.25
Firebird 400 & 400 H.O. Opt.(d)	400	Manual	Rochester	7029263	1,4-Bbl.	P.-1.38
		Turbo H-M	Rochester	7029268	1,4-Bbl.	S.-2.25
Firebird 400 Ram Air IV	400	Manual	Rochester	7029273	1,4-Bbl.	P.-1.38
		Turbo H-M	Rochester	7029270	1,4-Bbl.	S.-2.25

(a) Pleated paper instead of sintered bronze in all 1 & 4 bbl. carburetors.
(b) 7029167 with man. trans. & A/C, 7029168 with A.T. & A/C.
(c) Includes provisions for thermostatic control of carb. inlet air temp.
(d) When T-42 Ram Air Option is installed, the MT 7028273 or the 7028270 A.T. carburetor is used.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400
ENGINE – COOLING SYSTEM	6 Cyl. Engines		V-8 Engines		
Type system (pressure, pressure vented, atmospheric, other)	Pressure Vented				
Radiator cap relief valve pressure	14-17 P.S.I.				
Circulation thermostat – Type (choke, bypass)	Choke				
Circulation thermostat – Starts to open at (°F)	190°				
Water pump – Type (centrifugal, other)	Centrifugal				
Water pump – GPM ÷ 1000 pump rpm	16				
Water pump – Number of pumps	One				
Water pump – Drive (V-belt, other)	V-Belt				
Water pump – Bearing type	Sealed Ball Bearing				
By-pass recirculation type (inter., ext.)	Internal				
Radiator core type (cellular, tube and fin, other)	Tube and Center				
Cooling system capacity – With heater (qt.)	11.8		19.4(350)		18.6 (400)
Cooling system capacity – Without heater (qt.)	Heater Standard Equipment				
Cooling system capacity – Opt. equipment-specify (qt.)	12.3 w/Air Cond.		20.3 (350), 18.7 (400) with A/C		
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				
Radiator hose – Lower – Inside diameter	1.50				
Radiator hose – Upper – Number and type (molded, straight)	One, Molded				
Radiator hose – Upper – Inside diameter	1.50				
Radiator hose – By-pass – Number and type (molded, straight)	Hose Not Used				
Radiator hose – By-pass – Inside diameter	-				
Fan – Number of blades & spacing	4, 76° & 104° (a) (b)				
Fan – Diameter	17.62		19.0		
Fan – Ratio-fan to crankshaft rev.	.95:1 (1.08:1 with A/C)		.91:1(1.25:1 with A/C & AT, 1.12:1 with MT)		
Fan – Fan cutout type	Fluid Clutch-Thermostatically Controlled V-8 (A/C Only)				
Fan – Bearing type	See Water Pump				
*Drive belts (indicate belt used by letter) – Fan	A	A,B	A,C	B,C	E F,G E F,I
*Drive belts (indicate belt used by letter) – Generator or alternator	A	A,B	A	B,D	E F E F
*Drive belts (indicate belt used by letter) – Water Pump	A	A,B	A,C	B,C	E F,G E F,I
*Drive belts (indicate belt used by letter) – Power Steering		B		B,D	G I
*Drive belts (indicate belt used by letter) – Air Conditioning			C	C	H H

* Drive Belt Dimensions	A	B	C	D	E	F	G	H	I	J	K
Angle of V	36°	36°	36°	36°	36°	36°	36°	36°	36°		
Nominal Length (SAE)	39.0	51.5	58.0	27.6	54.0	50.0	52.0	59.0	53.5		
Width	.38	.47	.47	.38	.38	.38	.47	.47	.47		

(a) 7 blade 18 dia. Power-Flex fan on 6 cyl. with A/C.
(b) 7 blade 19.5 dia. fan on all V-8 with A/C - 5 blade 19 dia. Power-Flex std. on 400 V-8.except std. 4 blade fan used with Ram Air Option.

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ELECTRICAL – SUPPLY SYSTEM

MODEL			FIREBIRD 250 cu. in. Engines	FIREBIRD 350 cu. in. Engines	FIREBIRD 400 cu. in. Engines
Battery	Make and Model		Delco Y-55 (a)	Delco Y-59 (b)	Delco R-59
	Voltage Rtg. & Total Plates		12-54	12-54	12-66
	SAE Designation & Amp. Hr. Rtg.		17 MI - 44 Amp.Hr.	2 SM - 53 Amp.Hr.	2 SM - 61 Amp.Hr.
	Location		Under Hood - R.H. Side	Under Hood - L.H. Side	
	Terminal grounded		Negative		
Generator or Alternator	Make		Delco Remy		
	Model		1100761(c)	1100704 (d)	1100832 (f)
	Type and rating		37 Amp. (e)	37 Amp. (e)	37 Amp. (e)
	Output at engine idle (neutral)		5-10 Amps.		
	Ratio-Gen. to Cr/s rev.		2.74:1 (3.02:1 With A/C)		
Regulator	Make		Delco Remy		
	Model		1119515		
	Type		Regulating Contacts in Standard Type		
	Cutout relay	Closing voltage generator rpm	Cutout Relay Not Required		
		Reverse current to open	Cutout Relay Not Required		
	Regulated	Voltage	13.8		
		Current	Alternator Self Regulating		
	Voltage test conditions	Temperature	125° F.		
		Load	10 Amps.		
		Other	Cycle Regulator Before Final Setting		

ELECTRICAL – STARTING SYSTEM

Starting Motor	Make		Delco Remy		
	Model		1107499	1107293	1107355
	Rotation (drive end view)		Clockwise		
Motor control	Switch (solenoid, manual)		Solenoid		
	Starting procedure		Place gearshift lever in neutral and depress clutch. *With cold engine, depress accelerator pedal to floor and release. With warm engine, hold accelerator pedal about halfway down, turn ignition key clockwise to engage starter, release key as soon as engine starts. *Use neutral or park with automatic transmission. (No clutch)		
Motor Drive	Engagement type		Sliding Gear - Overrunning Clutch		
	Pinion meshes (front, rear)		Front		
	Number of teeth	Pinion	9		
		Flywheel - Manual	155	166	
		Flywheel - Auto.	155	166	
	Flywheel tooth face width	Manual	.41		.40
		Auto.	.41		.40

(a) Delco R-59 used with A/C or H.D. battery option.
(b) With regular fuel engine - Delco R-59 with premium fuel engine or H.D. battery option.
(c) 1100760 (55 amp.) with A/C.
(d) 1100700 (55 amp.) with A/C.
(e) Diode rectified, 3-phase alternating current.
(f) 1100830 (55 amp.) with A/C.

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MODEL FIREBIRD

ELECTRICAL – IGNITION SYSTEM

			250 L-6 Engines		350 V-8 2-Bbl. Engines	
Type	Conventional – Std., Opt., N.A.		Standard			
	Transistorized – Std., Opt., N.A.		Not Offered			
	Other (specify)		---			
Coil	Make		Delco Remy			
	Model		1115414		1115410	
	Amps	Engine stopped	3.4			
		Engine idling	2.1			
Distributor	Make		Delco Remy			
	Model		1110475 (a)	1110474 (b)	1111942 (c)	1111960 (d)
	Cent'fgal adv. in c/shaft degrees @ engine rpm (nominal)	Start (rpm)	900	1000	800	1100
		Intermediate points deg. @ rpm	15-19 @ 1250	12-16 @ 1750	13-17 @ 1950	12-16 @ 2000
		Max. deg. @ rpm	26-30@4400	24-28@5100	22-26@4800	20-24@4600
	Vacuum adv. in c/shaft degrees @ in. Hg. (nominal)	Start (in. Hg.)	5-7	5-7	6-8	8-10
		Intermediate points, deg. @ in. Hg.	None			
		Max. deg. in. Hg.	15° @ 10.5 - 11.5		20° @ 13-15	20° @ 15-17
	Breaker gap (in.)		.016			
	Cam angle (deg.)		31 - 34		28 - 32	
	Breaker arm tension (oz.)		19-23			
Timing	Crankshaft deg. @ rpm		TDC	5° BTDC	9° BTDC	
	Mark location		On Balancer		On Crankshaft Pulley Hub	
Spark Plug	Make		AC			
	Model		AC R-44NS		AC R-45S	
	Thread (mm)		14 MM			
	Tightening torque (lb. ft.)		15-25			
	Gap		.033 - .038			
Cable	Conductor type		Distributed Resistance			
	Insulation type		Neoprene			
	Spark plug protector		Hypalon Boot			

ELECTRICAL – SUPPRESSION

Locations & type	(e)

(a) Used on 1 Bbl. L-6 engines - man. and auto. trans.
(b) Used on 4 Bbl. L-6 engines - man. and auto. trans.
(c) Used on 2 Bbl. 350 V-8 engines with auto trans.
(d) Used on 2 Bbl. 350 V-8 engines with man. trans.
(e) Wide gap distributor rotor, distributed resistance secondary cables, resistor spark plugs (5000 OHMS), engine to dash ground strap and fender skirt to frame ground strap.

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MODEL FIREBIRD

ELECTRICAL – IGNITION SYSTEM

350 V-8 4-Bbl. Engines and All 400 V-8 Engines

Type	Conventional – Std., Opt., N.A.		Standard				
	Transistorized – Std., Opt., N.A.		Not Offered				
	Other (specify)		---				
Coil	Make		Delco Remy				
	Model		1115410				
	Amps	Engine stopped	3.4				
		Engine idling	2.1				
Distributor	Make		Delco Remy				
	Model		1111946 (a)	1111952(b)	1111941(c)	1111965(d)	1111966(e)
	Centrifgal adv. in c. shaft degrees@ engine rpm (nominal)	Start (rpm)	800	1100	1200	850	1100
		Intermediate points deg.@rpm	10 - 14 @ 2000	10 - 14 @ 2000	10 - 14 @ 2100	3 - 7 @ 1400	3 - 7 @ 1600
		Max. deg.@rpm	18-22 @ 4600	18-22 @ 4600	26-30 @ 6100	16-20 @ 5100	16-20 @ 5000
	Vacuum adv. in c. shaft degrees@ in. Hg. (nominal)	Start (in. Hg.)	8 - 10	8 - 10	8 - 10	8 - 10	8 - 10
		Intermediate points, deg.@in. Hg.					
		Max. deg. in. Hg.	20° @ 15-17	20° @ 15-17	20° @ 15-17	20° @ 15-17	20° @ 15-17
	Breaker gap (in.)		.016				
	Cam angle (deg.)		28 - 32				
	Breaker arm tension (oz.)		28 - 31				
Timing	Crankshaft deg.@rpm		9° BTDC (f)				
	Mark location		Crankshaft Pulley Hub				
Spark Plug	Make		AC				
	Model		AC R-45S (AC R-44S on All 400 Engines)				
	Thread (mm)		14mm				
	Tightening torque (lb. ft.)		15 - 25				
	Gap		.033 - .038				
Cable	Conductor type		Distributed Resistance				
	Insulation type		Neoprene				
	Spark plug protector		Hypalon Boot				

ELECTRICAL – SUPPRESSION

Locations & type	See Page 13

(a) Used on 4-Bbl. 400 cu. in. V-8 engines with Turbo Hydra-Matic.
(b) Used on 4-Bbl. 400 cu. in. V-8 engines with Manual Transmission.
(c) Used on 4-Bbl. 400 cu. in. Ram Air IV engines Manual and Automatic Transmissions.
(d) Used on 4-Bbl. 350 cu. in. V-8 engine with Turbo Hydra-Matic.
(e) Used on 4-Bbl. 350 cu. in. V-8 engine with Manual Transmission.
(f) 15° BTDC on Ram Air IV engine.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

ELECTRICAL – INSTRUMENTS AND EQUIPMENT

Speedometer	Type	Mechanical
	Trip odometer (yes,no)	No
Charge indicator – type		Telltale Lamp
Temperature indicator – type		Telltale Lamp
Oil pressure indicator – type		Telltale Lamp
Fuel indicator – type		Electric Gage
Other		Optional instrument cluster with temperature, and oil pressure telltales replaced with gages plus a tach.
Windshield wiper	Type – Standard	Two-Speed Electric
	Type – Optional	None
Windshield washer	Type – Standard	Electric - Pump Integral with Wiper Motor
	Type – Optional	None
Horn	Type	Solenoid
	Number used	1 Std. (a)
	Amp draw (each)	4.3 to 5.9 @ 12.5 V.

DRIVE UNITS – CLUTCH (Manual Transmission)

		6-Cyl. Engines	V-8 Engines
Make & type		Own-Dry	
Type pressure plate springs		Disc Spring	
Total spring load (lb.)		2050 (b)	
No. of clutch driven discs		One	
Clutch facing	Material	Woven Molded Asbestos	
	Outside & inside dia.	10.0 x 6.0 (c)	10.4 x 6.5
	Total eff. area (sq.in.)	82.93 (c)	85.56
	Thickness	.135 (c)	.140
	Engagement cushioning method	Driven Plate Waved Spoke Springs	
Release bearing	Type & method of lubrication	Ball Thrust - Prepacked & Sealed	
Torsional damping	Methods: springs, friction material	Coil Springs and Metal to Metal Friction	

(a) Second horn optional.
(b) 2350# pressure on Firebird Sprint and Firebird 400.
(c) Firebird Sprint uses 10.4 x 6.5 driven plate with 80.56 effective area and .140 facing thickness.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

DRIVE UNITS – TRANSMISSIONS

Manual 3-speed (std. or opt.)	Standard
Manual 4-speed (std. or opt.)	Optional
Manual with overdrive (std. or opt.)	Not Offered
Automatic (std. or opt.)	Optional

DRIVE UNITS – MANUAL TRANS.

			3-SPEED			4-SPEED	
Number of forward speeds			6 Cyl. (a)	350 V-8 (b)	All V-8 (c)	6-Cyl.	All V-8 (d)
Transmission ratios	In first		2.85:1	2.54:1	2.42:1	2.85:1	2.52:1
	In second		1.68:1	1.50:1	1.61:1	2.02:1	1.88:1
	In third		1.00:1	1.00:1	1.00:1	1.35:1	1.46:1
	In fourth		---	---	---	1.00:1	1.00:1
	In reverse		2.95:1	2.63:1	2.33:1	2.85:1	2.59:1
Synchronous meshing, specify gears			All Forward				
Shift lever location			(a)	(b)	Floor Shift		
Lubricant	Capacity (pt.)		3.5		2.8	3.5	3.5
	Type recommended		Type A - Extreme Pressure				
	SAE viscosity number	Summer	80 or 90				
		Winter	80 or 90				
		Extreme cold	80 or 90				

DRIVE UNITS – MANUAL TRANS. W/OVERDRIVE

(For transmission data see manual transmission section)

Type (planetary or other)			Not Offered
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) Column shift standard - floor shift optional (standard on Firebird Sprint.)
(b) Available with standard column shift only.
(c) Standard on 400 cu. in. V-8 includes floor shift - optional on 350 cu. in. V-8 .
(d) Special order close ratio transmission (2.20:1, 1.64:1, 1.28:1, 1.00:1 and 2.27:1 R) standard and only available with 3.9:1 and 4.33:1 rear axle ratio on Firebird 350 H.O. and Firebird 400.

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MODEL	FIREBIRD AND FIREBIRD 350	FIREBIRD FIREBIRD SPRINT FIREBIRD 350 2-BBL.	FIREBIRD 350 FIREBIRD 400

DRIVE UNITS – AUTOMATIC TRANSMISSION

Trade name	Automatic	Turbo Hydra-Matic						
Type describe	Torque Converter							
Selector location	Steering Column (a)							
List gear ratios Selector Pattern and indicate which are used in each selector position	P R N D L 1.76 1.76 1.76(b) 1.00	P R N D S L 1.92 2.52 2.52 2.52(c) 1.52 1.52 1.00				P R N D S L 2.08 2.48 2.48 2.48(d) 1.48 1.48 1.00		
	6 Cyl.Engine	V-8 Eng.	L-6 1-Bbl.	L-6 4-Bbl.	V-8 2-Bbl.	350 2-Bbl.	350 4-Bbl.	400 4-Bbl.
Max. upshift speed–drive range (j)	80	73	(e)40, (f)67	(e)63, (f)70	(e)50, (f)85	(e)45, (f)79	(e)41, (f)72	(c)43, (f)79
Max. kickdown speed–drive range (j)	75	68	(g)62, (h)37	(g)65, (h)60	(g)80, (h)47	(g)72, (h)26	(g)66, (h)27	(g)74, (h)36
Torque converter: Number of elements	Three							
Torque converter: Max. ratio at stall	2.8:1	2.5:1	2.5:1		2.0:1	2.0:1	2.3:1	2.3:1
Torque converter: Type of cooling (air, liquid)	Water							
Torque converter: Nominal diameter	11.75					12.5		
Lubricant: Capacity–refill (pt.)	15 (approx.)		16 (Approx.)			19 (Approx.)		
Lubricant: Type recommended	GM Dexron Automatic Transmission Fluid							
Special transmission features	Shift lever must be lifted over stop to enter "Park", "Reverse", and "Low" ("S" on 400) positions. Engine starting on "Neutral" and "Park" positions provided for. (i)							

DRIVE UNITS – PROPELLER SHAFT

Number used	One		
Type (straight tube, tube-in-tube, internal-external damper, etc.)	Straight Tube		
Outer diam. x length* x wall thickness: Manual 3-speed trans.	2.75 x 49.96 x .065		
Outer diam. x length* x wall thickness: Manual 4-speed trans.	2.75 x 49.96 x .065		
Outer diam. x length* x wall thickness: Overdrive transmission	Not Available		
Outer diam. x length* x wall thickness: Automatic transmission	2.75 x 49.96 x .065	2.75 x 49.30 x .065	

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

(Continued)

(a) Floor with optional console
(b) Total torque multiplication in 1st gear is 4.93:1 with 6 cyl., 4.4:1 with V-8 engine
(c) Total torque multiplication in 1st gear is 6.30:1 with 6 cyl., 5.04:1 with V-8 engine
(d) Total torque multiplication in 1st gear is 5.70:1
(e) 1-2 Upshift @
(f) 2-3 Upshift @
(g) 3-2 Kickdown @
(h) 3-1 Kickdown @
(i) Rally shifter available with console option provides manual speed shift stops to locate second and third gear positions when the lever is deflected to the right hand path.
(j) Based on non-A/C car with standard axle for the engine indicated.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

DRIVE UNITS – PROPELLER SHAFT (cont.)

Intermediate bearing	Type (plain, anti-friction)		Not Used
	Lubrication (fitting, prepack)		Not Used
Slip Yoke	Type		Splined
	Number of teeth		27
	Spline O.D.		1.175
Universal joints	Make and Mfg. No.		Saginaw - Size 44 (Regular)
	Number used		Two
	Type (ball and trunnion, cross)		Cross
	Rear attach. (u-bolt, clamp, etc.)		U-Bolt
	Bearing	Type (plain, anti-friction)	Anti-Friction
		Lubric. (fitting, prepack)	Prepacked
Drive taken through (torque tube or arms, springs)			Springs
Torque taken through (torque tube or arms, springs)			Springs

DRIVE UNITS – AXLE

Type (front, rear)			Rear
Description			Semi-Floating Hypoid
Limited Slip differential, type			Spring Loaded Clutch (Opt.)
Drive Pinion Offset			1.50
No. of differential pinions			2
Pinion adjustment (shim, other)			Shim
Pinion bearing adj. (shim, other)			Collapsible Spacer
Wheel bearing type			Single Row Ball Bearing
Lubricant	Capacity (pt.)		3
	Type recommended		A-9 Hypoid (a)
	SAE viscosity number	Summer	80-90
		Winter	80-90
		Extreme cold	80-90

AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio		2.41:1	2.56:1	2.78:1	2.93:1	3.08:1	3.23:1	3.36:1	3.55:1	3.90:1	4.33:1
No. of teeth	Pinion	17	16	14	14	13	13	11	11	10	9
	Ring gear	41	41	39	41	40	42	37	39	39	39
Ring Gear O.D.		8.125									

(a) Special lubricant required with limited slip differential.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

DRIVE UNITS – WHEELS

Type & material			Disc - Steel			
Rim (size & flange type)	Std.	14 x 6 (a)			14 x 7 (a)	
	Opt.	None				
Attachment	Type (bolt or stud)	Bolt				
	Circle diameter	4.75				
	Number and size	5, 7/16 - 20				

MODEL

DRIVE UNITS – TIRES

Standard	Size, ply rating, & ply	E70 - 14 (b)			F70 - 14 (b)	
	Type (bias, radial, etc.)	Bias				
	Full rated Inflation Press. Front	24 (Full Load) - 24 (Reduced Load)				
	Full rated Inflation Press. Rear	28 (Full Load) - 24 (Reduced Load)				
	Rev./Mile at 50 MPH	807			790	
Optional	Size, ply rating, & ply	F70 - 14 (b) F70 - 14 Polyglas - 2 Ply carcass with 2 Fiberglass Tread Plys - 4 Ply Rated				

BRAKES – PARKING

Type of control		Foot Lever Application - Hand Pull Release				
Location of control		Below Instrument Panel at Left				
Operates on		Rear Service Brakes				
If separate from service brakes	Type (internal or external)	Not Separate				
	Drum diameter	Not Separate				
	Lining size (length x width x thickness)	Not Separate				

(a) On four road wheels - std. Space Saver Spare tire is on 14 x 5 rim wheel.
(b) 2 Ply - 4 Ply rated. Std. spare tire size is 7.35 - 14 - space saver type. Size increases to 7.75-14 for V-8 cars with A/C and V-8 convertible without A/C.

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BRAKES – SERVICE

MODEL				FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD HO	FIREBIRD 400
Type (drum) or (disc & no. of pistons)				Drum - Std.			Front Disc-Single, Opt. (a)	
Self adjusting (std., opt., N.A.)				Standard				
Special Valving	Type (proportion, delay, metering, other)			-			Metering Type - Delay	
Power brake make & type (remote, int., etc.)		Std.		---				
		Opt.		Delco Moraine, Integral Type, Vacuum Suspended (b)				
Effective area (sq. in.) *				149.4			103.6	
Gross lining area (sq. in.) **				155.5			110.6	
Swept area (sq. in.) ***				269.2			350.9	
Front to Rear Effectiveness Relationship				62.6			62.6	
Drum	Diameter (nominal)	Front		9.5			--	
		Rear		9.5				
	Type and material			Cast Alloy Iron (c)			--	
Rotor	Outer working diameter			--			10.94	
	Inner working diameter			--			6.88	
	Working width			--			1.00	
	Material & type (vented/solid)			--			Cast Alloy Iron - Vented	
Wheel cylinder bore	Front			1.125			2.9375	
	Rear			.875				
Master Cylinder	Bore			1.00			1.125	
	displacement distribution	Front	%	59			69	
		Rear	%	41			31	
Pedal arc ratio				6.2:1 (d)			3.5:1 (d)	
Line pressure at 100 lb. pedal load				700			800	
Shoe Clearance	Front			(e)			None	
	Rear			(e)				
Brake lining	Bonded or riveted			Riveted				
	Front Wheel	Material		Molded Asbestos				
		Size (length x width x thickness)	Prim. or outboard	7.6 x 2.5 x .196			5.40 x 1.93 x .41	
			Second. or inboard	9.85 x 2.5 x .265			5.40 x 1.93 x .44	
		Segments per shoe		One				
	Rear Wheel	Material		Molded Asbestos				
		Size (length x width x thickness)	Prim. or outboard	7.6 x 2.0 x .196				
			Second. or inboard	9.85 x 2.0 x .265				
		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) Included with power brake option.
(b) Included with front disc brake option.
(c) Front: Finned 1 pc. casting. Rear: Finned composite.
(d) Ratio at 0.5 in. push rod travel.
(e) Tighten drum brakes to heavy drag then back off 26 notches.

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MODEL FIREBIRD

STEERING

Manual (std., opt., NA)					Standard
Power (std., opt., NA)					Optional
Adjustable steering wheel (tilt, swing, other)		Type and description			Tilting Wheel, Adjusts Vertically - Seven Positions
		(std., opt., NA)			Optional
Wheel diameter		Manual			14.75 x 15.25
		Power			14.75 x 15.25
Turning diameter (feet)	Outside front	Wall to wall (l. & r.)			41.1
		Curb to curb (l. & r.)			38.5
	Inside rear	Wall to wall (l. & r.)			22.5
		Curb to curb (l. & r.)			23.0
Manual	Gear	Type			Recirculating Ball Bearing
		Make			Saginaw
		Ratios	Gear		24:1 (a)
			Overall		26.2:1 (b)
	No. wheel turns (stop to stop)				4.7 (c)
Power	Type (coaxial, linkage, etc.)				Coaxial
	Make				Saginaw
	Gear	Type			Recirculating Ball Bearing
		Ratios	Gear		16.1 - 12.4:1
			Overall		16.1 - 12.4:1
	Pump driven by				Belt from Crankshaft
	No. wheel turns (stop to stop)				2.5 - Lock to Lock
Linkage	Type				Link Parallelogram
	Location (front or rear of wheels, other)				Rear of Wheels
	Drag link (trans. or longit.)				Trans.Strg.Rod Connects Tie Rods,Pitman & Idler Arms
	Tie rods (one or two)				Two
Steering Axis	Inclination at camber (deg.)				8 1/4 to 9 1/4 @ .5° Camber
	Bearings (type)	Upper			Ball Joint
		Lower			Ball Joint
		Thrust			Sprint Load Taken By Lower Ball Joint
Whl. Align. (range at curb wt. & preferred)	Caster (deg.)				0 to 1° Pos.
	Camber (deg.)				1/4° Neg. to 3/4° Pos.
	Toe-in (outside track inches)				1/8 to 1/4
Steering spindle & joint type					Reverse Elliott - Ball Joint
Wheel Spindle	Diameter	Inner bearing			1.249
		Outer bearing			.749
	Thread size				3/4 - 20
	Bearing type				Taper Roller

(a) 28:1 with combination of V-8 engine and air conditioning.
(b) 31.1:1 with combination of V-8 engine and air conditioning.
(c) 5.4 with combination of V-8 engine and air conditioning.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

SUSPENSION – GENERAL

(See Supplement page for details on Air Suspension)

Provision for car leveling		None
Provision for brake dip control		Front Suspension Geometry
Provision for acc. squat control		Rear Suspension Geometry
Special provisions for car jacking		Jack Locating Provisions on Front and Rear Bumpers
Shock absorber front & rear	Type	Direct Acting - Two Way
	Make	Delco
	Piston dia.	1.00
Other special features		Firm Control Shock Absorbers Included in Firm Ride and Handling Option

SUSPENSION – FRONT

Type and description		Ball joint independent front suspension with upper and lower control arms mounted on rubber bushings.
Spring	Type	Coil
	Material	Alloy Steel
	Size (coil design height & I.D. bar length x dia.)	11.40 x 3.60
	Spring rate (lb. per in.)	275 Std. 22337 - 320 & 345 (a)
	Rate at wheel (lb. per in.)	73 Std. 22337 - 85 & 92 (a)
Stabilizer	Type (link, linkless, frameless)	Link
	Material & bar diameter	Alloy Steel, .6875

SUSPENSION – REAR

Type and description			Hotchkiss Drive
Drive and torque taken through			Rear Springs
Spring	Type		Multi-Leaf
	Material		Alloy Steel
	Size (length x width, coil design height & I.D., bar length & dia.)		56.0 x 2.50
	Spring rate (lb. per in.)		82 Std. 22337 - 79, 89, 99, 118 & 122 (a)
	Rate at wheel (lb. per in.)		83 Std. 22337 - 80, 90, 100, 119 & 123 (a)
	Mounting insulation type		Rubber Bushings
	If leaf	No. of leaves	4 & 5
		Shackle (comp. or tens.)	Compression
Stabilizer	Type (link, linkless, frameless)		Not Used
	Material		None
Track bar type			Not Used

(a) Alternate springs used as required for body styles and optional equipment.

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MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400

FRAME

Type and description (Separate frame, unitized frame, partially - unitized frame)	Integral Body - Frame Combination with Separate Ladder Type Front Frame Section

BODY – MISCELLANEOUS INFORMATION

Drs. hinged (front - rear)	Front doors	Front
	Rear doors	--
Type of finish (lacquer, enamel, other)		Acrylic Lacquer
Hood counterbalanced (yes, no)		Yes
Hood release control (internal, external)		External
Vehicle Indent. No. location		Left Front Edge of Instrument Panel Visible through Windshield
Engine No. location		Top of Cyl. Block on R.H. Side Near Oil Filler (a)
Theft protection - type		*
Vent window control method (crank, friction pivot)	Front	No Vent Window
	Rear	No Vent Window
Seat cushion type	Front	Zig-Zag Spring with Foam Pad
	Rear	Zig-Zag Spring with Cotton Pad
	3rd seat	--
Seat back type	Front	Zig-Zag Spring with Foam Pad
	Rear	Zig-Zag Spring with Cotton Pad
	3rd seat	--
Windshield glass type (i.e., single curved - laminated plate)		Single Curved Laminated Safety Plate
Side glass type (i.e., curved - tempered plate)		Single Curved Tempered Safety Plate
Backlight glass type (i.e., compound curved - tempered plate, three piece)		Single Curved Tempered Safety Plate (b)

BODY STYLE	22337	22367
Windshield glass exposed surface area	1032.6	990.5
Side glass exposed surface area	1128.6	1199.0
Backlight glass exposed surface area	819.2	834.0
Total glass exposed surface area	2980.4	3023.5

*Ignition lock on steering column also locks steering gear and gearshift (in Reverse with manual - Park with automatic transmission), key removable in locked position only and opening driver's door operates "key in lock" buzzer. Interior front door locking knobs moved forward to deter theft.

(a)Front of R.H. cylinder bank on V-8 engines.

(b)Flexible plastic on convertible.

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CONVENIENCE EQUIPMENT

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

MODEL	FIREBIRD	FIREBIRD SPRINT	FIREBIRD 350	FIREBIRD H.O.	FIREBIRD 400
Power windows — Side windows	Optional				
Power windows — Vent windows	No Vent Windows				
Power windows — Backlight or tailgate	Not Offered				
Power seats (specify type as well as availability)	Power Tilt Seat (Fore and Aft Plus Elevation At Rear Edge) on L.H. Bucket Seat - Optional				
Reclining front seat back (R-L or both)	Not Offered				
Front seat head restrainer (R-L or both)	Standard				
Radios (specify type as well as availability)	Optional: AM, AM-FM, AM-FM Stereo - All Push Button Type				
Rear seat speaker	Optional				
Power antenna	Rear Mounted - Optional				
Clock	Optional				
Air conditioner (specify type and availability)	Optional: Reheat Cycle With Bi-Level Air Distribution System				
Speed warning device	Safeguard Speedometer - Optional				
Speed control device	Optional on Cars With V-8 Engine and Automatic Transmission Combination				
Ignition lock lamp	Not Offered				
Dome lamp	Standard on Hardtop Coupe - Not Offered on Convertible				
Glove compartment lamp	Standard				
Luggage compartment lamp	Optional				
Underhood lamp	Optional				
Courtesy lamp	Standard				
Map lamp	Not Offered				
Auto. trans. quad. lamp	Standard				
Cornering light lamp	Not Offered				
Stereo Tape Player	Available with All Radio Installations				
Manual Antenna	Front Mounted - Included With Radio				
Power Operated Top	Optional on Convertible				
Rear Window Defogger	Optional - Not Available on Convertible				
Tachometer	Hood Mounted or Instrument Panel Mounted (a)				
Elec. Luggage Compt. Lid Release	Optional				

LAMP HEIGHT AND SPACING

Height above ground to center of bulb or marker	Headlamp	Highest *	24.4
		Lowest	24.4
	Tail	Highest	24.6
		Lowest	24.6
	Sidemarker	Front	16.5
		Rear	21.8
Distance from C/L of car to center of bulb	Headlamp	Inside	21.4
		Outside *	28.7
	Tail	Inside	16.0
		Outside	25.2
	Directional	Front	25.0
		Rear	Same as Tail Lamp

* If single headlamps are used enter here.

(a) Panel mounted type not available at start of production - optional clock not available with this tachometer option.

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WEIGHTS

MODEL	Style No.	CURB WEIGHT * POUNDS			% PASS. WEIGHT DISTRIBUTION				LIQUID WEIGHT	
					Pass. In Front		Pass. In Rear			
Model		Fron.	Rear	Total	Front	Rear	Front	Rear	Fuel	Coolan
FIREBIRD										
Hardtop Coupe	22337	1803	1415	3218	43.3	56.7	17.3	82.7	113	25
Convertible	22367	1887	1581	3468	43.3	56.7	17.3	82.7	113	25
FIREBIRD SPRINT										
Hardtop Coupe	22337	1841	1430	3271	43.3	56.7	17.3	82.7	113	25
Convertible	22367	1925	1596	3521	43.3	56.7	17.3	82.7	113	25
FIREBIRD 350										
Hardtop Coupe	22337	1962	1439	3401	43.3	56.7	17.3	82.7	113	40
Convertible	22367	2046	1605	3651	43.3	56.7	17.3	82.7	113	40
FIREBIRD H.O.										
Hardtop Coupe	22337	1984	1458	3442	43.3	56.7	17.3	82.7	113	40
Convertible	22367	2068	1624	3692	43.3	56.7	17.3	82.7	113	40
FIREBIRD 400										
Hardtop Coupe	22337	2008	1463	3471	43.3	56.7	17.3	82.7	113	39
Convertible	22367	2092	1629	3721	43.3	56.7	17.3	82.7	113	39

Accessories & Equipment Differential Weights				Remarks
Automatic Trans.			0	Firebird and Firebird 350 only
Turbo Hydra-Matic	+ 18	+ 10	+ 28	All models
Power Steering	+ 31	- 2	+ 29	
Power Brakes (DiscFrt)	+ 26	+ 2	+ 28	All models
Power Brakes (DrumFrt)	+ 9	+ 1	+ 10	All except Firebird 400
Air Conditioning	+108	+ 4	+112	Firebird
Air Conditioning	+104	+ 4	+108	Firebird 350
Air Conditioning	+ 96	+ 2	+ 98	Firebird 400
Radio & Man. Antenna	+ 6	+ 2	+ 8	
400 H.O. Engine Opt.			0	Firebird 400
400 Ram Air IV Eng.Opt	- 10	- 2	- 12	Firebird 400

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

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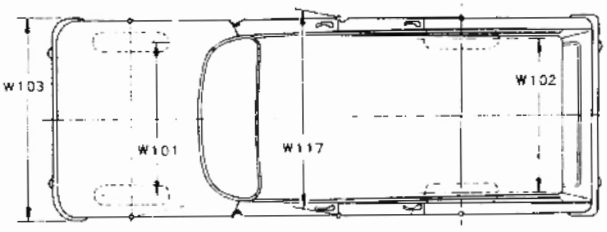
CAR AND BODY DIMENSIONS

KEY SHEET

EXTERIOR CAR AND BODY DIMENSIONS



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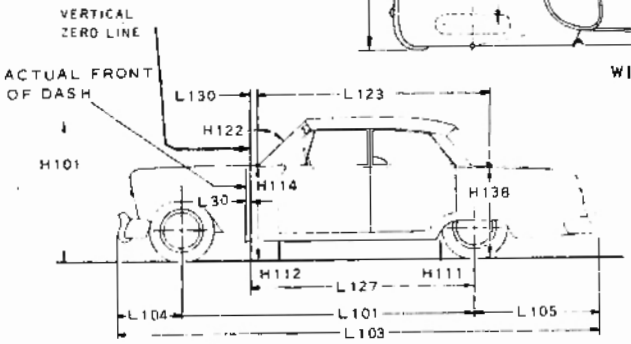

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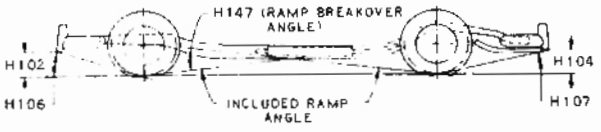
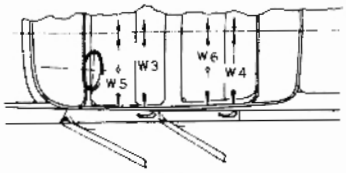


GROUND CLEARANCE

INTERIOR CAR AND BODY DIMENSIONS



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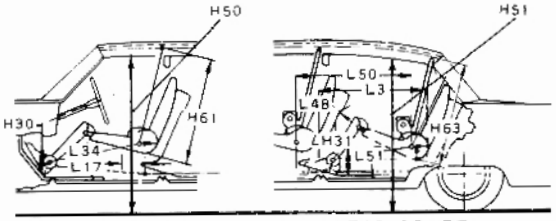
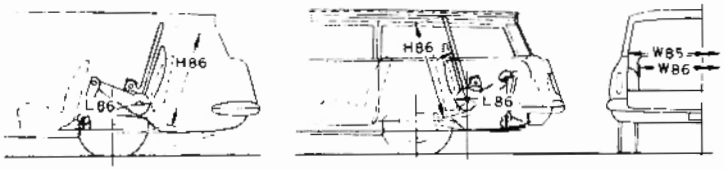
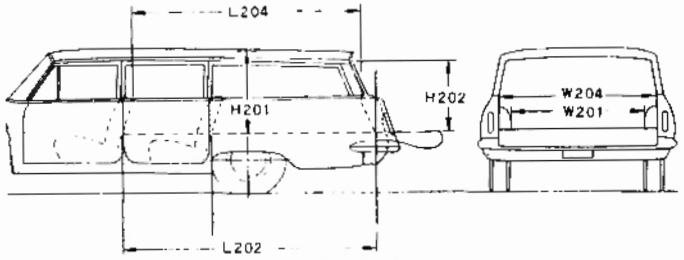


FRONT COMPT. REAR COMPT.



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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