

**To: All Recipients of 1964 Pontiac
AMA Specifications**

**Subject: Revisions for Specifications Date: September 17, 1963
Issued 9-6-63**

Attached are revised pages 28 and 28a furnishing correct rear seat shoulder room and hip room dimensions.

In addition to insertion of the revision pages, the following corrections should be entered as follows:

<u>Page Number</u>	<u>Printed in Error</u>	<u>Change to</u>
Front Cover	6-Door Sedan	2-Door Sedan
4	SAE 1117 Modified Steel	SAE 1117 Steel
5	.0005 - .0020	.0002 - .0017

PONTIAC MOTOR DIVISION
General Motors Corporation

AMA Specifications – Passenger Car

The information contained herein is prepared, distributed by, and is solely the responsibility of the automobile manufacturing company to whose products it relates. Questions concerning these specifications should be directed to the manufacturer whose address is shown below. This uniform specification form was developed by the automobile manufacturing companies under the auspices of the Automobile Manufacturers Association.

MANUFACTURER Pontiac Motor Division General Motors Corporation	CAR NAME PONTIAC	
MAILING ADDRESS Pontiac 11, Michigan	MODEL YEAR 1964	ISSUED: 9-6-63 REVISED (a) 9-17-63

NOTES:

1. The 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.

TABLE OF CONTENTS

General Specifications 1	Drive Units 15	Rear Suspension 21	Body & Car - General 22
Engine - Mechanical 2	Brakes 18	Body Dimensions 22	Weights 33
Electrical 10	Front Suspension & Steering . . 19	Station Wagon 31	Index 37

BODY—TYPES AND STYLE NAMES—		Body type, number of passenger & style names; use manufacturer's code for series & body style.			
	No. of Pass.	Model			
		Catalina	Star Chief	Bonneville	Grand Prix
4-Door Sedan	6	2369	2669		
* 2-Door Sedan	6	2311			
4-Door Hardtop Sedan	6	2339	2639	2839	
2-Door Hardtop Coupe	6	2347		2847	2957**
2-Door Convertible Coupe	5	2367		2867*	
4-Dr. Station Wagon - 2-Seat	6	2335		2835	
4-Dr. Station Wagon - 3-Seat	9	2345			

* Passenger capacity is reduced to 4 with optional bucket front seats.

** Passenger capacity is 5 - bucket front seats are standard equipment.

AMA Specifications — Passenger Car

Page 1

MAKE OF CAR Pontiac MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*)

GENERAL SPECIFICATIONS

(All dimensions in inches unless otherwise indicated)

MODEL	Additional Information Page No.	CATALINA	STAR CHIEF	BONNEVILLE	GRAND PRIX
Wheelbase (L101)	23	120	123		120
Tread	Front (W101)	63			
	Rear (W102)	64			
Maximum Overall Dimensions	Length (L103)	213	220		213
	Width (W103)	79.2			
	Height (H101)	55.8		55.2	54.6
Transmission— (Specify trade name - opt., not available)	Manual Standard	Synchronesh			
	Overdrive	Not Available			
	Automatic Optional	Hydramatic			
Axle ratio	Manual	3.23:1			
	Overdrive	None			
	Automatic	2.56:1	2.69:1		3.08:1
Tire size	18	8.00 x 14			
Engine	Type, no. cyl., valve arr.	90°V, 8, In-Head			
	Fuel system (Carb., other)	Carburetor			
	Bore and stroke	4.0625 x 3.746 4.097 x 3.754			
	Piston displ., cu.in.	389			
	Std. compression ratio	8.6:1		10.5:1	
	Max. bhp at engine rpm	235 @ 4000		306 @ 4800	
	Max. torque at rpm	386 @ 2000		420 @ 2800	

AMA Specifications—Passenger Car

Page 2

MAKE OF CAR PONTIAC **MODEL YEAR** 1964 **DATE ISSUED** 9-6-63 **REVISED** ^(a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ENGINE—GENERAL

Type, no. cyls., valve arr.		90°V, 8, In-Head	
Bore and stroke (nominal)		4.0625 X 3.746	
		4.097 X 3.754 (a)	
Piston displacement, cu. in.		389 (b)	
Bore spacing (C/L to C/L)		4.62	
No. system (front to rear)	L. Bank	1 - 3 - 5 - 7	
	R. Bank	2 - 4 - 6 - 8	
Firing order		1 - 8 - 4 - 3 - 6 - 5 - 7 - 2	
Compress. ratio (nominal)		8.6:1 (d)	10.5:1 (d)
Cylinder Head Material		Alloy Cast Iron	
Cylinder Block Material		Alloy Cast Iron	
Cylinder Sleeve—Wet, dry, none		None	
Number of mounting points	Front	Two	
	Rear	One	
Engine installation angle		5°	
Taxable ^(b) horsepower _{2.5}		52.8 (c)	
Published max. bhp* @ eng. RPM		235 @ 4000 (d)	306 @ 4800
Published max. torque* (lb. ft. @ RPM)		386 @ 2000 (d)	420 @ 2800
Recommended fuel regular - premium		Regular	Premium
Idle speed (spec. neutral or drive)	Manual	480 - 500 RPM (Neutral)	
	Automatic	480 - 500 RPM (Drive)	

ENGINE—PISTONS

Material		Aluminum Alloy	
Description and finish		Cam Ground Slipper Type with Steel Struts - Piston Tin Plated (f)	
Weight (piston only) oz.		23.875 to 24.062	19.54 to 19.68 (e)
Clearance (limits)	Top land	.024 - .033	.038 - .044 (e)
	Skirt	Top	.0005 - .0021**
		Bottom	.0000 - .0018**
Ring groove depth	No. 1 ring	.207 - .215	.206 - .213 (e)
	No. 2 ring	.197 - .205	.206 - .213 (e)
	No. 3 ring	.179 - .188	.198 - .205 (e)
	No. 4 ring	None	None

* Max. bhp (brake horsepower) and max. torque corrected as defined by SAE Engine Test Code.

(a) 4.0937 X 3.996 On all optional 421 cu. in. engines
4.0961 4.004

(b) Except optional 421 cu. in. engines

(c) Taxable horsepower of optional 421 Cu. In.

Engines: 53.6 - see page 3 for BHP and Torque.

(d) Standard - see page 3 for optional engines.

(e) 421 cu. in. optional engines only.

(f) Struts not used in pistons for 421 cu. in. engines.

** Pistons selected for .0007 to .0013 clearance at 1.18 below top of skirt.

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC **MODEL YEAR** 1964 **DATE ISSUED** 9-6-63 **REVISED (a)** _____

POWER TEAMS (Indicate whether standard or optional)

MODEL AVAILABILITY Catalina 23 Star Chief 26 Bonneville 28 Grand Prix 29	ENGINE					TRANSMISSION	AXLE RATIO (Std. Inv.)
	Displ., cu. in.	Carburetor	Comp. Ratio	HP @ RPM	Torque @ RPM		
STANDARD ENGINE							
23 & 26	369	2-Bbl.	8.6:1	235 @ 4000	385 @ 2000	Synchromesh (a)	3.23:1, 3.08:1
28	389	4-Bbl.	10.5:1	305 @ 4800	420 @ 2800	H. D. Synchromesh (b)(g)	3.23:1, 3.08:1 (b)
29	389	4-Bbl.	10.5:1	305 @ 4800	420 @ 2800	H. D. Synchromesh (b)(g)	3.23:1, 3.42:1 (b)
OPTIONAL ENGINES							
ECONOMY HYDRAMATIC							
23	369	2-Bbl.	8.6:1	230 @	385 @	Hydrumatic 375	2.56:1
26 & 28	389	2-Bbl.	8.6:1	4000	2000	Hydrumatic 315	2.56:1 (c)
29	389	2-Bbl.	8.6:1			Hydrumatic 375	2.69:1
STANDARD HYDRAMATIC							
23	369	2-Bbl.	10.5:1	267 @ 4200	410 @ 2400	Hydrumatic 375	2.56:1, 3.08:1 (d)
26	389	2-Bbl.	10.5:1	283 @ 4400	418 @ 2800	Hydrumatic 315	2.69:1, 2.56:1, 3.08:1
28	389	4-Bbl.	10.5:1	303 @ 4600	430 @ 2800	Hydrumatic 315	2.69:1, 2.56:1, 3.08:1 (e)
29	389	4-Bbl.	10.5:1	303 @ 4600	430 @ 2800	Hydrumatic 375	3.08:1, 2.69:1, 3.23:1
PREMIUM FUEL SYNCHROMESH OPTION							
23 & 26	369	2-Bbl.	10.5:1	283 @ 4600	418 @ 2800	Synchromesh (e)	3.23:1, 3.08:1
4-SPEED SYNCHROMESH OPTION							
23 & 26	369	2-Bbl.	10.5:1	283 @ 4600	418 @ 2800	4-Speed Synchromesh	3.42:1
"2 + 2" OPTION							
23 (f)	369	2-Bbl.	10.5:1	283 @ 4600	418 @ 2800	4-Speed Synchromesh	3.42:1
23 (f)	369	2-Bbl.	10.5:1	267 @ 4200	410 @ 2400	Hydrumatic 375	3.08:1
4-BARREL CARBURETOR OPTION							
23 & 26	369	4-Bbl.	10.5:1	305 @ 4800	420 @ 2800	H. D. Synchromesh (b)(g)	3.23:1, 3.08:1 (b)
23	389	4-Bbl.	10.5:1	303 @ 4600	430 @ 2800	Hydrumatic 375	2.56:1, 3.08:1 (d)
26	389	4-Bbl.	10.5:1	303 @ 4600	430 @ 2800	Hydrumatic 315	2.69:1, 2.56:1, 3.08:1
389 3-2 BARREL CARBURETOR OPTION							
23, 26, 28 & 29	389	3-2 Bbl.	10.75:1	330 @	430 @	H. D. Synchromesh (b)(g)	3.23:1 (b)
23 & 29	389	3-2 Bbl.	10.75:1	4600	3200	Hydrumatic 375	3.08:1
26 & 28	389	3-2 Bbl.	10.75:1			Hydrumatic 315	3.08:1
421 4-BARREL CARBURETOR OPTION							
23, 26, 28 & 29	421	4-Bbl.	10.5:1	320 @	455 @	H. D. Synchromesh (b)(g)	3.42:1 (b)
23 & 29	421	4-Bbl.	10.5:1	4600	2800	Hydrumatic 375	3.08:1
26 & 28	421	4-Bbl.	10.5:1			Hydrumatic 315	3.08:1
421 3-2 BARREL CARBURETOR OPTION							
23, 26, 28 & 29	421	3-2 Bbl.	10.75:1	350 @	454 @	H. D. Synchromesh (b)(g)	3.42:1 (b)
23 & 29	421	3-2 Bbl.	10.75:1	4600	3200	Hydrumatic 375	3.08:1
26 & 28	421	3-2 Bbl.	10.75:1			Hydrumatic 315	3.08:1
421 HO 3-2 BARREL CARBURETOR OPTION							
23, 26, 28 & 29	421	3-2 Bbl.	10.75:1	370 @	460 @	H. D. Synchromesh (b)(g)	3.42:1 (b)
23 & 29	421	3-2 Bbl.	10.75:1	5200	3400	Hydrumatic 375	3.42:1
26 & 28	421	3-2 Bbl.	10.75:1			Hydrumatic 315	3.42:1

(a) Heavy duty 3-speed synchromesh transmission with heavy duty clutch optional on 23 series. Heavy duty 3-speed synchromesh transmission is standard on 26 series - heavy duty clutch is separate option on 26 series.

(b) 4-Speed synchromesh optional - 3.42:1 axle ratio is used with 4-speed option.

(c) Except 2835 and 2847 models which use 2.69:1

(d) 2311, 2319 & 2369 models only - 2.69:1, 2.96:1, 3.08:1 ratios with 2335, 2345, 2347 and 2367 models.

(e) 2839 and 2847 models only - 3.08:1, 2.69:1, ratios with 2835 and 2847 models.

(f) 2347 and 2367 models only.

(g) Heavy duty clutch is standard equipment.

AMA Specifications - Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a) 9-17-63

MODEL CATALINA | STARCHIEF | BONNEVILLE | GRAND PRIX

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, type, coating, etc.	Cast Iron Taper Faced Rings No. 1 with Thick Chrome, No. 2 with Lubrite Finish
	Width	.078
	Gap	No. 1 .021, No. 2 .019
Oil	Description - material, type, coating, etc.	Multi-piece (2 rails & 1 expander) Rails - Steel with Chrome Plated O.D. - Spacer - Stainless Steel
	Width	.186
	Gap	.035
Expander		In Oil Ring Assembly

ENGINE-PISTON PINS

Material		• SAE 1117 Steel	
Length		3.25	
Diameter		.9802	
Type	Locked in rod, in piston, floating, etc.	Locked in Rod	
	Bushing	In rod or piston	None
		Material	None
Clearance	In piston	.0003 - .0005	
	In rod	Press Fit	
Direction & amount offset in piston		To right - .063	

ENGINE-CONNECTING RODS

Material		Arma Steel (a)
Weight (oz.)		30.7 (a)
Length (center to center)		6.625
Bearing	Material & Type	Durex 100-A Steel Backed - Removable, Precision
	Overall length	.88
	Clearance (limits)	.0005 - .0025
	End play	.006 - .011 (Total for Two)

(a) Optional 421 cu. in. engine uses forged 1139 or 1335 modified steel connecting rods weighing 30.4 oz.

AMA Specifications—Passenger Car

Page 5

MAKE OF CAR PONTIAC **MODEL YEAR** 1964 **DATE ISSUED** 9-6-63 **REVISED** (w)9-17-63

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ENGINE—CRANKSHAFT

Material		Cast Pearlitic Malleable Iron	
Vibration damper type		Rubber Floated Weight	
End thrust taken by bearing (No.)		4	
Crankshaft end play		.0035 - .0085	
Main bearing	Material & type	Durex 100-A* Steel Backed - Removable, Precision	
	Clearance	.0002 - .0017	
	Journal dia. and bearing overall length	No. 1	3.00 x .94 (a)
		No. 2	3.00 x .94 (a)
		No. 3	3.00 x .94 (a)
		No. 4	3.00 x 1.13 (b)
		No. 5	3.00 x 1.59 (a)
		No. 6	None
No. 7		None	
Dir. & amt. cyl. offset		None	
Crankpin journal diameter		2.25	

ENGINE—CAMSHAFT

Location		Between Cylinder Banks	
Material		Hardened Alloy Cast Iron	
Bearings	Material	High Lead Babbitt on Steel	
	Number	5	
Gear or chain		Chain	
Type of Drive	Crankshaft gear or sprocket material	Carburized and Hardened Steel	
	Camshaft gear or sprocket material	Cyanide Hardened Alloy Iron	
	Timing chain	No. of links	60
		Width	.88 (Morse) - 1.00 (Link Belt)
Pitch		.375	

ENGINE—VALVE SYSTEM

Hydraulic lifters (Std, opt, NA)		Standard
Valve rotator, type (intake, exhaust)		None
Rocker ratio		1.5:1
Operating tappet clearance (indicate hot or cold)	Intake	0
	Exhaust	0
Timing marks on flywheel, damper, other		On Crankshaft Pulley Hub

(Continued)

* M-400 in lower half of No. 4

- (a) 3.25 dia. on optional 421 cu. in. engine.
- (b) 3.25 x 1.19 on optional 421 cu. in. engine.

AMA Specifications—Passenger Car

MAKE OF CAR		PONTIAC		MODEL YEAR		1964		DATE ISSUED		9-6-63		REVISED ^(a)		
MODEL		Std. 23 & 26 SM		23 HM & All Econ. HM		389 Cu. In. Prem. Fuel Engines ^(b)		Std. 28 & 29 SM & 421 Cu In. Opt. With 4 & 3x2 Bbl.		421 H. O. Engine Option				
ENGINE—VALVE SYSTEM (cont)														
Timing	Intake	Opens (°BTC)	22	22	30	23	31							
		Closes (°ABC)	67	67	63	70	77							
		Duration - deg.	269	269	273	273	288							
	Exhaust	Opens (°BBC)	72	63	77	78	90							
		Closes (°ATC)	25	27	25	31	32							
		Duration - deg.	277	270	282	289	302							
	Valve opening overlap		47	49	55	54	63							
Material		SAE-1041 with Aluminum Treatment on Seat												
Overall length		4.74	4.74	4.87	4.87*	4.91								
Actual overall head dia.		1.878 - 1.884*										1.917-1.923		
Angle of seat & face		30° Seat - 29° Face												
Seat insert material		Not Used												
Stem diameter		.34												
Stem to guide clearance		.0021 - .0038												
Intake	Lift (@ zero lash)		.365-.373	.365-.373	.402-.409	.402-.409	.409-.415							
	Outer spring press. and length	Valve closed (lb. @ in.)	55 @ 1.53 61	55 @ 1.53 61	55 @ 1.53 61	55 @ 1.53* 61	56 @ 1.53 62							
		Valve open (lb. @ in.)	106 @ 1.15 112	106 @ 1.15 112	111 @ 1.12 117	111 @ 1.12* 117	123 @ 1.12 133							
	Inner spring press. and length	Valve closed (lb. @ in.)	24 @ 1.48 30	24 @ 1.48 30	23 @ 1.48 29	23 @ 1.48* 29	29 @ 1.48 35							
		Valve open (lb. @ in.)	59 @ 1.10 65	59 @ 1.10 65	61 @ 1.08 67	61 @ 1.08* 67	93 @ 1.08 99							
	Material		T-XCR (a)*										21-4-N (a)	
	Overall length		4.72	4.72	4.86	4.86*	4.89							
Actual overall head dia.		1.597 - 1.603*										1.657-1.663		
Angle of seat & face		45° Seat - 44° Face												
Seat insert material		Not Used												
Stem diameter		.34												
Stem to guide clearance		.0026 - .0043												
Exhaust	Lift (@ zero lash)		.364 - .370	.364-.370	.405-.412	.404 - .411	.405-.412							
	Outer spring press. and length	Valve closed (lb. @ in.)	55 @ 1.53 61	55 @ 1.53 61	55 @ 1.53 61	55 @ 1.53* 61	56 @ 1.53 62							
		Valve open (lb. @ in.)	106 @ 1.15 112	106 @ 1.15 112	111 @ 1.12 117	111 @ 1.12* 117	123 @ 1.12 133							
	Inner spring press. and length	Valve closed (lb. @ in.)	24 @ 1.48 30	24 @ 1.48 30	23 @ 1.48 29	23 @ 1.48* 29	29 @ 1.48 35							
		Valve open (lb. @ in.)	59 @ 1.10 65	59 @ 1.10 65	61 @ 1.08 67	61 @ 1.08* 67	93 @ 1.08 99							
	Material		T-XCR (a)*										21-4-N (a)	
	Overall length		4.72	4.72	4.86	4.86*	4.89							
Actual overall head dia.		1.597 - 1.603*										1.657-1.663		
Angle of seat & face		45° Seat - 44° Face												
Seat insert material		Not Used												
Stem diameter		.34												
Stem to guide clearance		.0026 - .0043												

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

* Except 421 3x2 Bbl. engine which is same as 421 H.O. Engine. (Continued)

(a) Aluminum treatment on seat.
 (b) Except 23 HM and 28 & 29 Std. SM Engines

AMA Specifications – Passenger Car

Page 7

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ENGINE—LUBRICATION SYSTEM (cont.)

Oil pump type	Spur Gear		
Normal oil pressure (lb. @ engine rpm)	30 to 40 Above 2600 RPM		
Oil pressure sending unit (elect. or mech.)	Electric		
Type oil intake (floating, stationary)	Stationary Screen		
Oil filter system (full flow, partial, other)	Full Flow		
Filter replacement (element, complete)	Complete		
Capacity of crankcase, less filter-refill (qt.)	4 Std. - 5 on Opt. 421 Engines		
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 Requirement (MM, MS, etc.)	MS		

ENGINE—EXHAUST SYSTEM

Type (single, single with cross-over, dual, other)	Single With Crossover	Dual
Muffler No. & type (reverse flow, straight thru, separate resonator)	One Reverse Flow	2-Reverse Flow
Exhaust pipe dia. (O.D. & wall thickness)	2.00 x .075	Not Used
	Main	2.25 x .075
Tail pipe diameter (O.D. & wall thickness)	2.00 x .055 (Aluminized)	

ENGINE—CRANKCASE VENTILATION SYSTEM

Type (ventilates to atmos., induction system, other)	Standard	Induction System
	Optional	None
Control unit	Make and model	AC Type CV 273
	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)	Breather Cap
	Flame arrester (screen, check valve, other)	Check Valve

AMA Specifications— Passenger Car

Page 8

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

MODEL CATALINA STAR CHIEF BONNEVILLE GRAND PRIX

ENGINE—FUEL SYSTEM

(See Supplement to Page 8 for Details of Fuel Injection, Supercharger, etc., if used)

Induction type: Carburetor, fuel injection, supercharger.		Carburetor
Fuel Tank	Capacity (gals.)	25 (a)
	Filler location	Left Rear Fender
Fuel Pump	Type (elec. or mech.)	Mechanical
	Locations	Left Front of Engine
	Pressure range	5.25 - 6.50
Vacuum booster (std., optional, none)		None
Fuel Filter	Type	Plastic Fabric in Fuel Tank and Sintered
	Locations	Bronze in Carburetor Inlet
Carburetor	Choke type	Automatic
	Intake manifold heat control (exhaust or water)	Exhaust
	Air chr. type	Oiled Metallic Element Oiled Plastic Foam Element

CARBURETOR SUPPLEMENTARY INFORMATION

Model Usage	Engine Displ.	Transmission	Carburetors		No. Used and Type (b)	Barrel Size	No. of Barrels
			Make	Model			
23 & 26	389	Synchromesh	Rochester	7023066	One	1.438	2
All with Econ. Opt.	389	Hydra-Matic	Rochester	7023063	One	1.438	2
23 & 26	389	Hydra-Matic	Rochester	7024060	One	1.688	2
28 & 29 Std., 23 & 26 Opt.	389	Synchromesh	Carter	AFB 3647S	One	(c)	4
29 Std. & 23 Opt.	389	Hydra-Matic	Carter	AFB 3648S	One	(c)	4
28 Std. & 26 Opt.	389	Hydra-Matic	Carter	AFB 3649S	One	(c)	4
All With 389 3-2 Bbl. Option	389	Synchromesh & Hydra-Matic	Rochester	7024178	1 - Front	1.69	2
		Synchromesh	Rochester	7024175	1 - Center	1.44	2
		Hydra-Matic	Rochester	7024173	1 - Center	1.44	2
		Synchromesh & Hydra-Matic	Rochester	7024179	1 - Rear	1.69	2
All With 421 4-Barrel Opt.	421	Synchromesh	Carter	AFB 3650S	One	(c)	4
		Hydra-Matic	Carter	AFB 3651S	One	(c)	4
All With 421 3-2 Barrel Opt.	421	Synchromesh & Hydra-Matic	Rochester	7023078	1 - Front	1.688	2
		Synchromesh	Rochester	7023161	1 - Center	1.438	2
		Hydra-Matic	Rochester	7023162	1 - Center	1.438	2
		Synchromesh & Hydra-Matic	Rochester	7023079	1 - Rear	1.688	2

(a) 19 on station wagons

(b) All downdraft type

(c) 1.438 primary, 1.688 secondary

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*)
 MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ENGINE-COOLING SYSTEM

Type system (pressure, pressure vented, atmospheric, other)		Pressure Vented			
Radiator cap relief valve pressure		14 to 17 PSI			
Circulation thermostat	Type (choke, bypass)	Choke			
	Starts to open at (°F)	180° F.			
Water pump	Type (centrifugal, other)	Centrifugal			
	GPM @ 1000 pump rpm	19			
	Number of pumps	One			
	Drive (V-belt, other)	V-Belt			
Bearing type		Sealed Ball Bearing			
By-pass recirculation type (internal, external)		Internal			
Radiator core type (cellular, tube and fin, other)		Tube and Center			
Cooling system capacity	With heater (qt.)	19.5			
	Without heater (qt.)	Heater Std. Equipment			
	Opt. equipment-specify (qt.)	-			
Water jackets full length of cylinder (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	1.75		
	By-pass	Number and type (molded, straight)	None - Integral		
		Inside diameter	Hose Not Used		
Fan	Number of blades & Spacing		Four - 76° and 104° (a)		
	Diameter		19.0		
	Ratio-fan to crankshaft rev.		91 (b)		
	Fan output type		Fluid Clutch - Thermostatically Controlled (a)		
Bearing type		See Water Pump			
*Drive belts (indicate belt used by letter)	Fan	A	B & B	C & D	D & E
	Generator	A	B & B	C	E
	Water Pump	A	B & B	C & D	D & E
	Power Steering		B & B		E
	Air Conditioning			D	D

* Drive Belt Dimensions	A	B	C	D	E
Angle of V	36°	36°	36°	36°	36°
Nominal length (SAE)	53.5	57.5	52.5	62.0	60.5
Width	.38	.38	.38	.47	.47

(a) Except Air Conditioning, Heavy Duty Cooling and 421 H.O. Optional Engine.

(b) Except Air Conditioning Which is 1, 12.

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED ^(a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ELECTRICAL—SUPPLY SYSTEM

Battery	Make and Model	Delco 458 (a) or 558 (b)	Delco 558	
	Voltage Rtg. & Total Plates	12 & 54 (a) or 12 & 66 (b)	12 & 66	
	SAE Designation & Amp Hr. Rtg	2 SMB-53 (a) or 2 SMD-61 (b)	2 SMD-61	
	Location	Under Hood - Left Side		
	Terminal grounded	Negative		
Generator	Make	Delco-Remy		
	Model	1100680 (1100681 with Air Cond.)		
	Type	3 Phase - 42 Amp. (52 Amp. with Air Cond.)		
	Ratio—Gen. to Cr/s rev.	2.49:1 (2.85:1 with Air Cond.)		
	Gen. cut-in (hot)—engine rpm	Charge at Idle		
Regulator	Make	Delco-Remy		
	Model	1119511		
	Type	Voltage Regulator		
	Circuit relay	Closing voltage @ generator rpm	None	
		Reverse current to open	None	
	Regu-lated	Voltage	13.8V	
		Current	Alternator Self-Regulated	
	Voltage test con-ditions	Temperature	125° Ambient Air at Regulator	
Load		10 Amps.		
Other				

ELECTRICAL—STARTING SYSTEM

Starting motor	Make	Delco-Remy		
	Model	1107791 (a) or 1107781 (b)		
	Rotation (drive end view)	Clockwise		
	Engine cranking speed	Not Available		
	Test conditions	Room Temperature		
	Lock test	Amps	Lock Test Not Recommended	
		Volts		
		Torque (lb. ft.)		
	No load test	Amps	65 - 100 with 1107791 80 - 120 with 1107781 (c)	
		Volts	10.6	
RPM (min.)		3600-5100 with 1107791. 4700-5400 with 1107781		
Motor control	Switch (solenoid, manual)	Solenoid		
	Starting procedure	Place gearshift lever in neutral and depress clutch. * Depress accelerator pedal to floor once and release (with cold engine)-hold accelerator pedal about half way down (with warm engine). Turn ignition key to right to engage starter, release as soon as engine starts.		

(Continued)

- (a) With Regular Fuel (8.6:1 C. R.) Engines
- (b) With Premium Fuel (10.5:1 or 10.75:1 C. R.) Engines
- (c) Without Solenoid
- * With Hydra-Matic use "Neutral" or "Park" (no Clutch).

AMA Specifications - Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED ^(a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ELECTRICAL—STARTING SYSTEM (cont.)

Motor Drive	Engagement type		Sliding Gear - Overrunning Clutch
	Pinion meshes (front, rear)		Front
	Number of teeth	Pinion	9
		Flywheel	166
Flywheel tooth face width		.40	

ELECTRICAL—IGNITION SYSTEM

Coil	Make		Delco Remy		
	Model		1115187		
	Amps	Engine stopped	3.4		
Engine idling		2.1			
Distributor	Make		Delco Remy		
	Model		1111053 (a)	or	1111054 (b)(c)
	Centrifugal adv. in crankshaft degrees @ engine rpm (nominal)	Start (rpm)	700		650
		Intermediate points deg. @ rpm	12-16 @ 2100		14-18 @ 2000 (c)
		Max. deg. @ rpm	18-22 @ 3600		20-24 @ 4600 (c)
	Vacuum adv. in crankshaft degrees @ in. Hg. (nominal)	Start (in Hg.)	6 to 8		8 to 10
		Intermediate points, deg @ in Hg.	None		None
		Max. deg. in. Hg.	20 @ 13 to 15		20 @ 15 to 17
	Breaker gap (in.)		.016		
	Cam angle (deg.)		30° ± 2°		
Breaker arm tension (oz.)		19 to 23			
Timing	Crankshaft deg. @ rpm.		6° at Hot Idle		
	Mark location		On Crankshaft Pulley Hub		
	Cylinder numbering system (see page 2)		L. Bank 1-3-5-7 R. Bank 2-4-6-8 (Front to Rear)		
	Firing order (see page 2)		1-8-4-3-6-5-7-2		
Spark Plug	Make and model		AC 45S		
	Thread (mm)		14 MM		
	Tightening torque (lb. ft.)		15-25		
	Gap		.033-.038		
Cable	Conductor type		Carbonized Thread		
	Insulation type		Neoprene		
	Spark plug protector		Butyl Rubber Boot		

ELECTRICAL—SUPPRESSION

Locations & type	Carbonized thread core secondary cables on all cars. Ground straps: 1-engine to dash, 2-engine to frame 1-frame to RH fender skirt hood ground clip and junction block condenser on all cars with radio.
------------------	--

(a) With Regular Fuel (8.6:1 C.R.) Engines

(b) With Premium Fuel (10.25:1 or 10.75:1 C.R.) Engines

(c) H.O. Engine with 1111052 distributor centrifugal advance is 17-21° @ 2000 rpm with a max. of 22-26° @ 4600 rpm.

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (e)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ELECTRICAL—INSTRUMENTS AND SWITCHES

Speedometer	Make	AC
	Trip odometer (yes, no)	No
Charge indicator—type		Ammeter
Temperature indicator—type		Telltale Lights (Hot & Cold) Std. - Gage Optional
Oil pressure indicator—type		Telltale Light Std. - Gage Optional
Fuel indicator—type		Electric Gage
Other	Tachometer	Standard Equipment on Grand Prix with SM Trans. Separate Option on all other models.
Ignition switch	Identify positions in order and circuits controlled	Counterclockwise to Stop - Accessory Circuits on. Vertical - "Off" Position - Key removable in this position only. Clockwise - 40° from vertical - Ignition and Accessory Circuits on. Clockwise - 70° from vertical - Ignition and Starter Circuits only.
	Provision for illumination	Yes
	Location	Left Center of Instrument Panel
Main lighting switch	Identify positions and lamps controlled	Forward position - off 1st position - Instrument, Parking, Tail and License Lights 2nd position - Instrument, Head, Tail and License Lights Clockwise rotation turns off Dome Light and dims Instrument Lights to "off"
Other light switches	Locations and lamps controlled (Std. Car) - For Accessory Switches - See Supplement Page 12-A	Dimmer Switch - on floor left of Steering Column Dome Light Switch - on main light switch & Front Door Frames of all exc. Bonneville model where front & rear switches are used. Direction Indicator Switch - on Steering Column below wheel. Stop Light Switch - on Brake Pedal Support. Courtesy Light - Bonneville & GP Models - same as Accessory install
Other switches	Locations and devices controlled	(See Supplement Page 12-A)
Windshield wiper	Make	Delco Appliance
	Type	Electric
	Vacuum booster provision	None
	Washer provision	Yes
Horn	Type	Solenoid
	Number used	Two
	Amp draw (each)	4.3 to 5.9 Amps. @ 12.5 V

AMA Specifications - Passenger Car

Page 12-a

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

SUPPLEMENTARY INFORMATION

MODEL CATALINA, STAR CHIEF, BONNEVILLE AND GRAND PRIX

SWITCH LOCATIONS

ACCESSORY LIGHT SWITCHES:

- Back-Up Light - on lower end of steering column - combined with neutral safety switch on Hydra-Matic cars (at transmission on cars with 4-speed SM trans.)
- Luggage Compartment and Utility Lamp - on lamp mounting bracket.
- Glove Compartment Light - on instrument panel behind compartment door.
- Parking Brake Signal - on parking brake pedal arm.
- Ash Tray Light - controlled by main light switch.
- Courtesy Light - manual at center of instrument panel - automatic on front door frames.
- Spot Light - on L. H. or R. H. end of instrument panel.

OTHER SWITCHES:

- Radio - at center of instrument panel.
- Power Antenna Motor - right center of instrument panel.
- Rear Seat Speaker - left center of instrument panel.
- Heater Blower Motor - control panel on right of steering column.
- Air Conditioning Blower Motor - control panel on right of steering column.
- Windshield Wiper Motor - on instrument panel left of steering column.
- Windshield Washer - on wiper switch knob.
- Electro-Cruise - on instrument cluster.
- Power Seat Position Selector - L. H. end of seat.
- Neutral Safety Switch - on lower end of steering column except car with floor mounted shift lever (Hydra-Matic only).
- Underhood Light - in engine compartment on L. H. side of dash.
- Power Window Regulators - on each door trim pad - master switches on left front door.
- Reverberation Speaker - left center of instrument panel.

AMA Specifications - Passenger Car

MAKE OF CAR	PONTIAC	MODEL YEAR	1964	DATE ISSUED	9-6-63	REVISED (a)
MODEL	CATALINA	STAR CHIEF	BONNEVILLE	GRAND PRIX		

ELECTRICAL-LAMP BULBS

Give quantity used and trade number, e.g., Headlamp 2-5400 S, dual headlight 2-4001, 2-4002.
Indicate accessories which are not standard equipment by an asterisk following the numbers.

Headlamps & arrangement	2 #4001, 2 #4002 Vertical			
Headlamp beam indicator	1 #1895	Hydra-Matic Shift Ind.	1 #1895*	
Parking	2 #1157	Ash Tray & Lighter Light	3 #1445*	
Tail	4 #1157 (1)	Parking Brake Signal Light	1 #1895*	
Stop	Same as #1157 Tail Lamp Bulbs		Electro-Cruise with	1 #1895*
Direction signal	Front	Same as Parking Light	Low Fuel Warning Light	1 #1881*
	Rear	Same as Stop Light	Underhood & Utility Light	1 #93*
	Indicator	2 #1895	Luggage Compartment	1 #1003*
License plate	1 #67	Tachometer Light	1 #1895(4)	
Instrument	6 #1895			
Ignition lock	1 #1445			
Back up	2 #1156* (6)			
Phone	1 #1004 (3)			
Clock	2 #1895 (2)			
Radio	1 #1895*			
Glove compartment	1 #1895*			
Oil Press. Tell-Tale	1 #1895			
Eng. Temp. Tell-Tale	2 #1895			
Courtesy Light	1 #89 (Std. on 2367. All Bonneville & Grand Prix - Opt. on others)			
Compass Light	1 #1445*			
Heater Panel	1 #1895 (5)			
Underhood Light	1 #93*			
Spot Light	1 #4404*			
Oil Press. Gage	1 #1895*			
Eng. Temp. Gage	1 #1895*			

- (1) Plus 2#1155 on 28 & 29 Series
- (2) Accessory on 23 Series - Standard on 26, 28 and 29 Series
- (3) 2 #90 on Star Chief, Bonneville and Grand Prix Hardtops
- (4) Tachometer Standard on Grand Prix with SM Transmission - Optional on all other models
- (5) Same bulb used in combined heater and air conditioning control panel on cars with optional air conditioning system
- (6) Standard Equipment on 29 Series

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED 0

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

ELECTRICAL—FUSE & CIRCUIT BREAKER DATA

Use trade number of fuse, e.g., SFE-10. Indicate circuit breaker by ampere capacity suffixed by letters "C.B.", e.g., 30 C.B. Where fuse or circuit breaker protects multiple circuits indicate first use by a letter and repeat the same letter for all units protected by the same fuse or circuit breaker, e.g., Parking lamp SFE-10 (a), Direction indicator same as (a).

Headlamp	22 C. B.	(a)	Luggage Compartment	Same as	(f)
Headlamp beam indicator	Same as	(a)	Parking Brake Signal Light	20 Fuse	(j)
Parking lamp	Same as	(a)	Ash Tray & Lighter Light	Same as	(b)
Tail lamp	(a) Plus 14 Fuse	(b)	Custom Air Cond. Panel Light	Same as	(d)
Stop lamp	14 Fuse	(c)	Hydra-Matic Shift Indicator	Same as	(d)
Direction indicator	Same as	(c)	Underhood & Utility Light	Same as	(k)
License plate lamp	Same as	(b)	Low Fuel Warning Light	Same as	(j)
Instrument lamp	4 Fuse	(d)	Power Antenna	Same as	(k)
Ignition lamp	Same as	(d)	Cigar Lighter	See Note	(#)
Back up lamp	25 Fuse	(e)	Windshield Washer	Same as	(e)
Dome lamp	14 Fuse	(f)	Custom A/C Power & Blower Motor	30 Fuse AGC	(o)
Clock	14 Fuse	(g)	Power Window Regulator	40 C. B.	(q)
Clock lamp	Same as	(d)	Power Seat Motor	Same as	(q)
Radio	2.5 Fuse	(h)	Tachometer Light	Same as	(d)
Glove compartment lamp	Same as	(g)	Compass Light	Same as	(d)
Radio Dial Light	Same as	(d)	Tachometer	1 Fuse	(m)
Windshield Wiper	Same as	(e)	Electro-Cruise	2 Fuse	(n)
Courtesy Light	Same as	(f)			
Heater Panel	Same as	(d)			
Heater Blower	20 Fuse	(j)			
Spot Light	14 Fuse	(k)			
Underhood Light	Same as	(k)			

ELECTRICAL—LOCATION OF OUTSIDE LAMPS

		2311, 39, 47, 67 & 69	2335 & 45	2639	2839	2669	2847	2867	2835	2957	
Height above ground to center of bulb (at curb load)	Tail	Lowest	23.6	24.2	23.7	22.6	22.6	24.6	24.3		
		Highest	29.0	30.6	29.1	30.5	30.5	31.0	24.3		
	Stop	Same as Tail									
	Backup	17.4	18.7		17.5		19.4	24.8			
	License, rear	21.3	21.4		21.4		22.0	20.2			
	Directional	Front	18.3	18.6		18.2		18.4	27.0		
		Rear	Same as Tail								
	Headlamp	Lowest	25.0	25.3		24.9		25.1	24.4		
		Highest	31.3	31.6		31.2		31.4	30.7		
	Tail	Inside	34.4	34.8		34.4		34.8	17.8		
Outside		34.4	34.8		34.4		34.8	27.2			
Stop	Same as Tail										
Backup	29.0									35.1	
License, rear	0										
Directional	Front	26.7									25.0
	Rear	Same as Tail									
Headlamp	Inside	34.1									
	Outside*	34.1									

* If single headlamps are used enter here.

(#) Optional Lighters - one uses attached fuse, other has integral C. B.

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

DRIVE UNITS—CLUTCH (Manual Transmission)

Make & type		Own - Dry	Borg & Beck Semi-Centrifugal - Dry
Type pressure plate springs		Disc	Coil
Effective plate pressure (lb.)		2150	2550
No. of clutch driven discs		One	
Clutch facing	Material	Woven Molded Asbestos	
	Outside & inside dia.	10.4 - 6.5	10.5 - 6.5
	Total eff. area (sq.in.)	85.56	88.62
	Thickness	.140	.130
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 - Metal-to-Metal Friction	Coil Springs - Metal-to-Plastic Friction

DRIVE UNITS—TRANSMISSIONS

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

DRIVE UNITS—MANUAL TRANSMISSION

Number of forward speeds		3-Standard*(a)	3-Standard	
Transmission ratios	In first	2.58:1*	2.49:1	
	In second	1.48:1*	1.59:1	
	In third	1.00:1*	1.00:1	
	In fourth	None*	None	
	In reverse	2.58:1*	3.15:1	
Synchronous meshing, specify gears		Second & Third		
Shift lever location		On Steering Column		
Lubricant	Capacity (pt.)	1.8 Refill	2.8 Refill	
	Type recommended	Type A - Extreme Pressure		
	SAE viscosity number	Summer	80 or 90	
		Winter	80 or 90	
Extreme cold		80 or 90		

* Optional heavy duty 3-speed transmission available on Catalina model conforms to specifications shown for Star Chief, Bonneville and Grand Prix models.

(a) Four-Speed Transmission (with all forward gears synchronized and floor mounted shift lever) optional on all cars. Gear Ratios; 1st. 2.54:1, 2nd. 1.92:1, 3rd. 1.51:1, 4th. 1.00:1, Rev. 2.61:1 used with 389 cu. in. engines: Gear ratios; 1st. 2.20:1, 2nd. 1.64:1, 3rd. 1.31:1, 4th 1.00:1, Rev. 2.26:1 used with 421 H.O. engine options.

Lubricant capacity 2.5 pts. EP 80 or 90 all seasons.

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (e)

MODEL CATALINA | GRAND PRIX | STAR CHIEF | BONNEVILLE

DRIVE UNITS—MANUAL TRANSMISSION WITH OVERDRIVE

For transmission data see manual transmission section

Overdrive	Type (planetary or other)	None		
	Manual lockout (yes, no)	None		
	Downshift accelerator control (yes, no)	None		
	Minimum cut-in speed	None		
	Gear ratio	None		
	Lubricant	Capacity (qt.) (Overdrive only)	None	
		Separate filler (yes, no)	None	
		Type recommended	None	
		SAE viscosity number	Summer	None
			Winter	None
Ext. cold	None			

DRIVE UNITS—AUTOMATIC TRANSMISSION

Trade name	Hydra-Matic								
Type describe	Fluid Coupling with Planetary Gears								
Method of Selection (Lever, Push Button or other)	Lever								
Selector Pattern	P - N - D - S - L - R								
List gear ratios Selector Pattern and indicate which are used in each selector position	(a)	D	S	L	R	D	S	L	R
		2.93:1	2.93:1	2.93:1	2.49:1	3.97:1	3.97:1	3.97:1	3.74:1
*Forced Upshift @ 48 MPH		1.56:1	1.56:1			2.55:1	2.55:1	2.55:1	
**Forced Upshift @ 78 MPH		1.00:1				1.55:1	1.55:1	1.55:1*	
						1.00:1	1.00:1**	1.00:1**	
Max. upshift speeds—drive range	75 - Full Throttle								
Max. kickdown speeds—drive range	40 - Part Throttle, 70 - Full Throttle								
Torque converter	Number of elements	3			Converter Not Used				
	Max. ratio at stall	1.2			Converter Not Used				
	Type of cooling (air, water)	Water							
Lubricant	Capacity—refill (pt.)	12			18				
	Type recommended	GM Hydra-Matic Drive Fluid - Type A							
Special transmission features	Safety device prevents shifting into reverse at forward speeds that would damage transmission. Shift lever must be lifted over stop to enter "Park" position. Engine starting in "Park" position provided for.								

DRIVE UNITS—PROPELLER SHAFT

Number used	One			
Type (exposed, torque tube)	Exposed			
Outer diameter x length* x wall thickness	Manual transmission	3.25 x 61.40 x .065(b)(c)	3.00 x 55.76 x .065	3.25 x 58.96 x .065 (c) (d)
	Overdrive transmission	None		
	Automatic transmission	Frt. Tube	3.00 x 58.20 x .065 (c)	3.38 x 61.40 x .065 (c)
	Rear Tube	2.25 x .095	2.75 x .083	

(Continued)

Form Rev. 3-62

- (a) Total transmission torque multiplication - 3.56:1
- (b) Optional Heavy Duty 3-speed transmission uses 3.00 x 55.76 x .065 shaft.
- (c) Except station wagon which is not shown.
- (d) Optional 4-speed transmission uses 3.25 x 61.40 x .065 shaft.

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC **MODEL YEAR** 1964 **DATE ISSUED** 9-6-63 **REVISED** ^(a)

MODEL CATALINA STAR CHIEF BONNEVILLE GRAND PRIX

DRIVE UNITS—PROPELLER SHAFT (cont.)

Inner- mediate bearing	Type (plain, anti-friction)	None
	Lubrication (fitting, prepack)	None
Universal joints	Make	Saginaw
	Number used	Two
	Type (ball and trunnion, cross, other)	Cross
	Bearing	Type (plain, anti-friction)
Lubric. (fitting, prepack)		Prepacked
Drive taken through (torque tube or arms, springs)		Control Arms
Torque taken through (torque tube or arms, springs)		Control Arms

DRIVE UNITS—REAR AXLE

Description (see instructions)		Semi-Floating Hypoid Rear Axle			
Limited Slip differential, type		Cam & Clutch (Opt.)			
Drive Pinion Offset		1.75			
No. of differential pinions		2-Std. - 4 with Optional Safe-T-Track Unit			
Gear ratios (Std. equip.)	Manual transmission	3.23:1			
	Overdrive transmission	None			
	Automatic transmission	2.69:1 (a)	3.08:1		
Ring gear O.D. (std. ratio)		9.25 P.D. - 9.27 O.D.			
Pinion adjustment (shim, other)		Shim			
Pinion bearing adj. (shim, other)		Collapsible Spacer			
Wheel bearing type		Single Row Ball Bearing			
Lubricant	Capacity (qt.)	5.75			
	Type recommended	A-9 Hypoid			
	SAE vis- cosity number	Summer	90		
		Winter	90		
		Extreme cold	90		

REAR AXLE RATIO TOOTH COMBINATIONS

(See page 3 for axle ratio usage)

Axle ratio	2.56:1	2.69:1	2.87:1	3.08:1	3.23:1	3.42:1	3.64:1	3.90:1	4.30:1
No. of teeth	Pinion	16	16	15	13	13	12	11	10
	Ring gear	41	43	43	40	42	41	40	39

(a) Except 2311, 2339 & 2369 models on which 2.56:1 ratio is standard

AMA Specifications - Passenger Car

MAKE OF CAR PONTIAC **MODEL YEAR** 1964 **DATE ISSUED** 9-6-63 **REVISED** (*)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

DRIVE UNITS—WHEELS

Type & material		Disc Steel	
Rim (size and flange type)	Std.	14 x 6K	
	Opr.	None	
Attachment	Type (bolt or stud)	Bolt	
	Circle diameter	5.0	
	Number and size	5 - 1/2-20	

DRIVE UNITS—TIRES

Standard (List option below)	Size & ply	8.00 x 14 (b)		
	Type - Nylon, etc.	Rayon		
Rev./mile at 50 mph.		759 Std.	745 Opt. A	N. A. Opt. B
Inflation press. (cold)	Front	22 Std.	20 Opt. A	28 Opt. B
	Rear	22 Std.	20 Opt. A	28 Opt. B
Optional tires - size and ply		<u>Opt. A - Oversize</u> 8.50 x 14		<u>Opt. B - Heavy Duty</u> 8.00 x 14 (6 ply rating)

BRAKES—SERVICE

Type (dual-service, disc, balanced, etc.)		Hydraulic, Internal Expanding, Single Anchor		
Self adjusting (std., opt., N.A.)		Standard		
Hydraulic system type (single, dual, etc.)		Single		
Power brake make & type (remote, integral, etc.)		Moraine or Bendix Products - Integral Type, Vacuum Suspended		
Effective area (sq. in.)*		173.7		
Gross lining area (sq. in.)**		191		
Swept drum area (sq. in.)***		312.2		
Percent brake effectiveness—front		58.5		
Drum	Diameter	Front	11.0	
		Rear	11.0	
Type and material		Finned Composite, Cast Alloy Iron (a)		
Wheel cylinder bore	Front	1.188		
	Rear	1.00		
Master cylinder bore		1.00		
Available pedal travel		6.25 Std. - 3.40 with Power Brake Option		
Line pressure at 100 lb. pedal load		800		
Shoe clearance adjustment		Tighten to heavy drag then back off 24 notches		

(Continued)

* Excludes rivet holes, grooves, chamfers, etc.

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

*** Total swept areas for four brakes.

Widest lining contact width for each brake x its drum circumference.

(a) Integral aluminum hub and drum with metallurgically bonded alloy cast iron braking surface - optional equipment.

(b) 8.50 x 14 standard on all station wagons - pressure: 20 front and 26 rear.

AMA Specifications—Passenger Car

Page 19

MAKE OF CAR	PONTIAC	MODEL YEAR	1964	DATE ISSUED	9-6-63	REVISED(a)
MODEL	CATALINA	STAR CHIEF	BONNEVILLE	GRAND PRIX		

BRAKES—SERVICE (cont.)

		Banded or riveted		Riveted	
Brake lining	Front Shoe	Material		Molded Asbestos	
		Size (length x width x thickness)	Front wheel	9.29 x 2.50 x .22	
			Rear wheel	9.29 x 2.00 x .22	
	Segments per shoe		One		
	Rear Shoe	Material		Molded Asbestos	
		Size (length x width x thickness)	Front wheel	11.94 x 2.50 x .22	
Rear wheel			11.94 x 2.00 x .22		
Segments per shoe		One			

BRAKES—PARKING

Type of control		Foot Lever Application - Hand Lever 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

FRAME or UNITIZED CONSTRUCTION

Type and description

Perimeter Type - Boxed

SUSPENSION—GENERAL (See Supplemental page 19 for details on Air Suspension)*

Provision for car leveling		None
Provision for brake dip control		Compound Anti-Dive Control Front Suspension
Provision for acc. squat control		Geometry of Rear Suspension Links
Special provisions for car jacking		None
Shock absorber front & rear	Type	Direct Acting - Two Way
	Make	Delco
	Piston dia.	1.00
Other special features		

SUSPENSION—FRONT

Type and description

Ball joint independent front suspension with upper control arms pivoted at inner end on rubber bushings. Lower control arms mounted on rubber bushings.

Air Suspension:
Air spring type
Compressor drive type
make
drive ratio

Normal operating pressures
spring rates
leveling data

(Continued)

AMA Specifications – Passenger Cars

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

MODEL CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

SUSPENSION FRONT (cont.)

Spring	Type	Coil		
	Material	SAE 9260		
	Size (coil design height & I.D., bar length x dia.)	10.6 x 4.05		
	Spring rate (lb. per in.)	315		
	Rate at wheel (lb. per in.)	90		
	Design load (lb. @ design height)	1950-2000 @ 10.6	2000 - 2050 @ 10.6	1950-2000 @ 10.6
Stabilizer	Type (link, linkless, frameless)	Link		
	Material & bar diameter	SAE 1080 Steel (a)		

STEERING

Mechanical (std., opt., NA)		Standard			
Power (std., opt., NA)		Optional			
Wheel diameter		15.74 x 16.5 Standard			
Turning diameter	Outside front	Wall to wall (l. & r.)	46.1	47.0	46.1
		Curb to curb (l. & r.)	42.8*	43.7*	42.8
	Inside rear	Wall to wall (l. & r.)	25.5	26.1	25.5
		Curb to curb (l. & r.)	26.0*	26.6*	26.0
Outside wheel angle with inside wheel at 20°		18°			
Mechanical	Gear	Type	Recirculating Ball Bearing		
		Make	Saginaw		
		Ratio	Gear	24:1	
			Overall	29.1:1	
No. wheel turns		5.50			
Power	Type (coaxial, linkage, etc.)		Coaxial		
	Make		Saginaw		
	Trade name		Power Steering		
	Gear	Type	Recirculating Ball Bearing		
		Ratio	Gear	17.5:1	
			Overall	22.5:1	
	Pump driven by		Belt from Crankshaft		
Number wheel turns		4.25:1			
Linkage	Type		Link Parallelogram		
	Location (front or rear of wheels, other)		Rear of Wheels		
	Drag link (trans. or longit.) Tie rods (one or two)		Transverse Strg. Rod Connects Tie Rods, Pitman & Idler Arms Two		

(Continued)

(a) .75 dia. on Bonneville Convertible and all Catalina models except Station Wagons -
.875 dia. on all Station Wagons, Star Chief, Grand Prix, and Bonneville models
except Convertible.

* Except Station Wagon which is as follows:	Wall to Wall	Curb to Curb
Outside Front	45.7	42.5'
Inside Rear	25.3	25.8'

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)
 MODEL _____ CATALINA | STAR CHIEF | BONNEVILLE | GRAND PRIX

STEERING (cont)

Steering Axis	Inclination of camber (deg.)		4° 50' @ 0° Camber	
	Bearings (type)	Upper	Ball Joint	
		Lower	Ball Joint	
	Thrust	Thrust Taken by Lower Ball Joint		
Wheel alignment (range and preferred)	Caster (deg.)		1-1/2° Negative ± 1/2°	
	Camber (deg.)		1/4° Positive ± 1/2°	
	Toe-in (outside tread-inches)		0 to .125 Toe-in Measured 9 In. Above Floor	
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	

SUSPENSION—REAR

Type and description		Four Link Pivoted Control Arm			
Drive and torque taken through (see page 17)		Control Arms			
Spring	Type	Coil			
	Material	SAE 9260			
	Size (length x width, coil design height and I.D.; bar length & dia.)	7.84 x 5.50			
	Spring rate (lb. per in.)	122 (1)	135 (1)	122 (3)	110 (1)
	Rate at wheel (lb. per in.)	110 (1)	122 (1)	110 (1)	110 (1)
	Design load (lb. at design height)	955-995 (1)	1000-1040 (1)	1040-1080 (1)	875-915 (1)
	Mounting insulation type		Rubber		
if leaf	No. of leaves		None		
	Inserts	Type and size	None		
		Material	None		
	Shackle (comp. or tens.)		None		
Stabilizer	Type (link, linkless, frameless)		None		
	Material		None		
Track bar type		Not Used			

(1) Figures apply to 4-door Sedans and Grand Prix Coupe - specifications for other models vary to compensate for different loading.

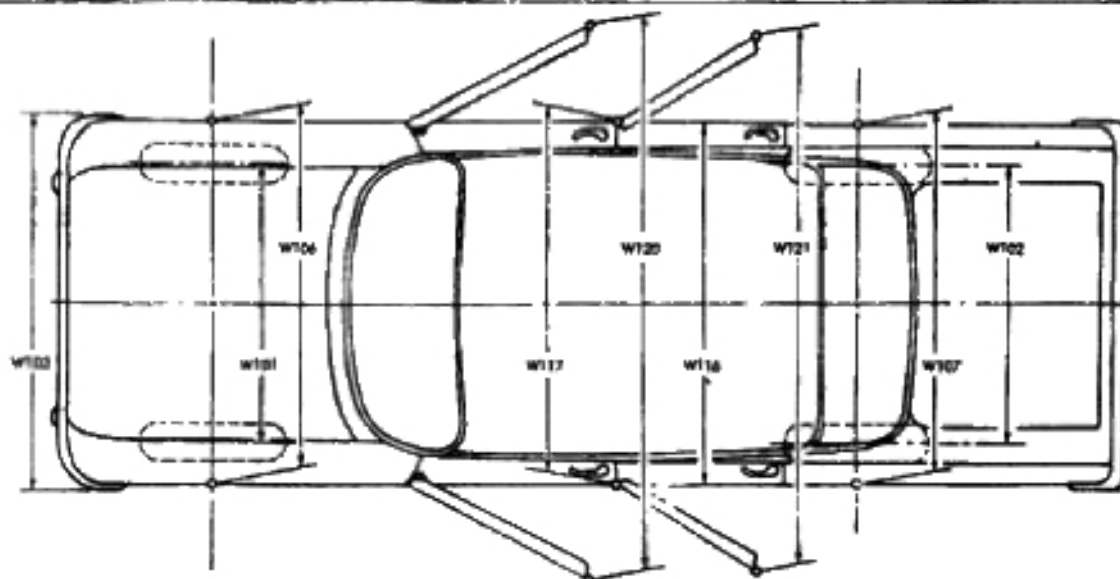
MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

CAR AND BODY DIMENSIONS—GENERAL

NOTE: Included in the dimension definitions listed on pages 34-36 are those which have been adopted by SAE. These are indicated by a number following the type of dimension, e.g., L3. Additional dimensions have been added by the AMA Specifications Review Committee. These are shown by an additional letter, e.g., H67a. The symbol "a" has been added as a suffix to denote a dimension adopted by the AMA and submitted to the SAE for approval. The dimensions are developed from the following basic points:

1. Body dimensions are for all body styles.
2. All interior dimensions are taken with manikin 15.0 inches outboard of car centerline unless otherwise stated.
3. All interior dimensions are measured with the front seat in the lowest and rearmost position.
4. Unless otherwise specified, all exterior height dimensions are taken with a full design load which consists of 5 passengers, 300 lbs. front, 450 lbs. rear; includes spare wheel, tire and tools, and full complement of gas, oil, water and tires to recommended pressure, etc.
5. The SAE manikin with 90th percentile leg length will be used for recording purposes.
6. The H Point is the pivot center of the manikin's torso and thigh.
7. The Torso Line is a line parallel to the small of manikin's back and extending through the H Point.

EXTERIOR WIDTH DIMENSIONS



MODEL	Ref. No.	CATALINA					
		2369	2311	2347	2339	2367	2335
Tread - front	W101	63					
Tread - rear	W102	64					
Maximum overall car width	W103	79.2					
Maximum overall body width	W116	79.2					
Maximum body width at #2 pillar	W117	75.9	--	--	75.9	--	75.9
Front fender overall width	W106	78.9					
Rear fender overall width	W107	79.2					
Maximum overall car width - front doors open	W120a	143.8	156.4	156.3	141.8	156.3	141.4
Maximum overall car width - rear doors open	W121a	139.6	--	--	139.6	--	140.2

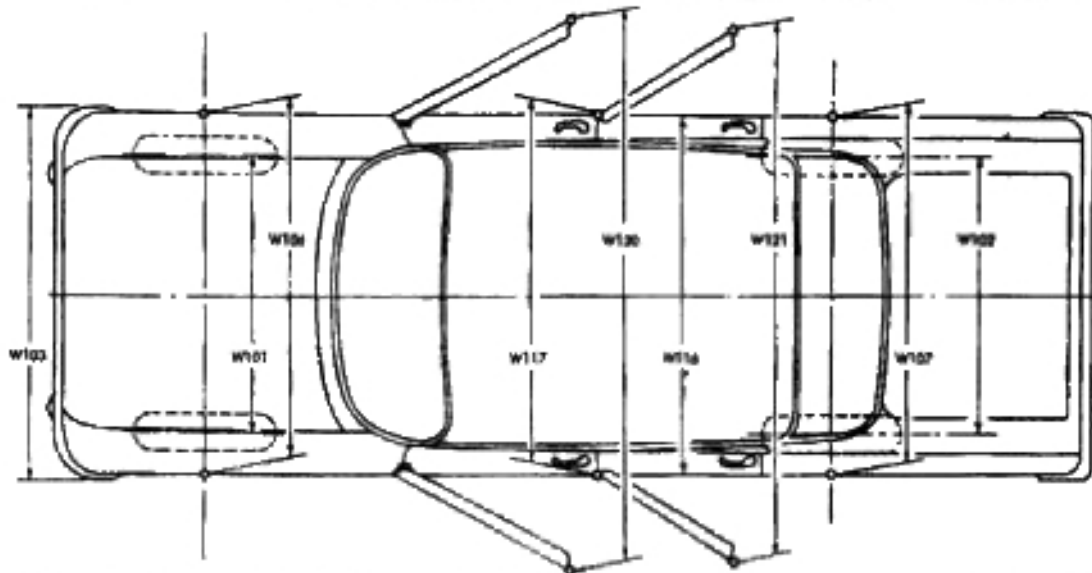
MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

CAR AND BODY DIMENSIONS—GENERAL

NOTE: Included in the dimension definitions listed on pages 34-36 are those which have been adopted by SAE. These are indicated by a number following the type of dimension, e.g., L3. Additional dimensions have been added by the AMA Specifications Review Committee. These are shown by an additional letter, e.g., H67a. The symbol "a" has been added as a suffix to denote a dimension adopted by the AMA and submitted to the SAE for approval. The dimensions are developed from the following basic points:

1. Body dimensions are for all body styles.
2. All interior dimensions are taken with manikin 15.0 inches outboard of car centerline unless otherwise stated.
3. All interior dimensions are measured with the front seat in the lowest and rearmost position.
4. Unless otherwise specified, all exterior height dimensions are taken with a full design load which consists of 5 passengers, 300 lbs. front, 450 lbs. rear; includes spare wheel, tire and tools, and full complement of gas, oil, water and tires to recommended pressure, etc.
5. The SAE manikin with 90th percentile leg length will be used for recording purposes.
6. The H Point is the pivot center of the manikin's torso and thigh.
7. The Torso Line is a line parallel to the stall of manikin's back and extending through the H Point.

EXTERIOR WIDTH DIMENSIONS



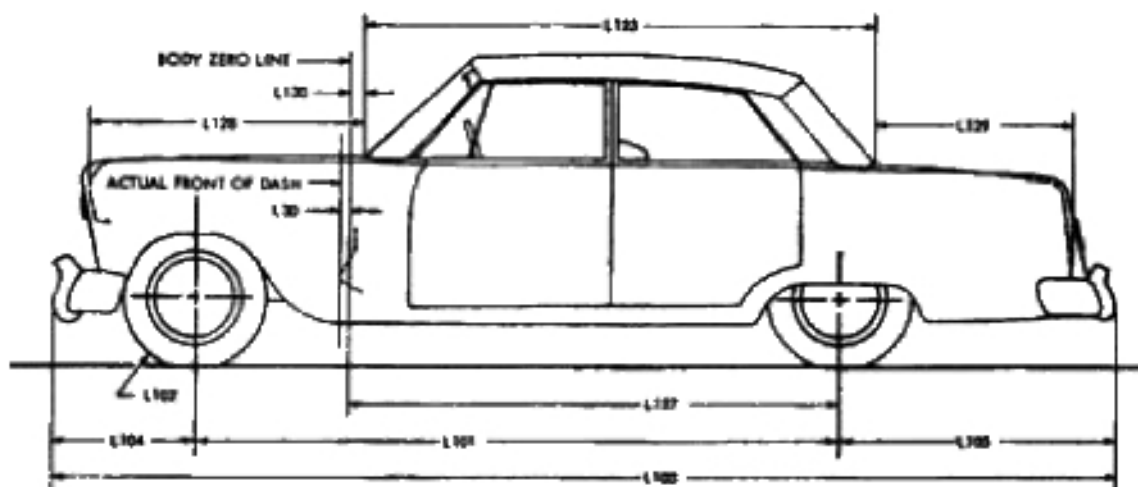
MODEL	Ref. No.	STAR CHIEF			BONNEVILLE			GRAND PRIX
		2669	2639	2839	2847	2867	2835	2957
Tread - front	W101				63			
Tread - rear	W102				64			
Maximum overall car width	W103				79.2			
Maximum overall body width	W116				79.2			
Maximum body width at #2 pillar	W117		75.9		--		75.9	--
Front fender overall width	W106				78.9			
Rear fender overall width	W107				79.2			
Maximum overall car width - front doors open	W120a		141.8		156.3		141.4	162.1
Maximum overall car width - rear doors open	W121a		139.6		--		140.2	--

AMA Specifications – Passenger Car

Page 23

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(=)

EXTERIOR LENGTH DIMENSIONS

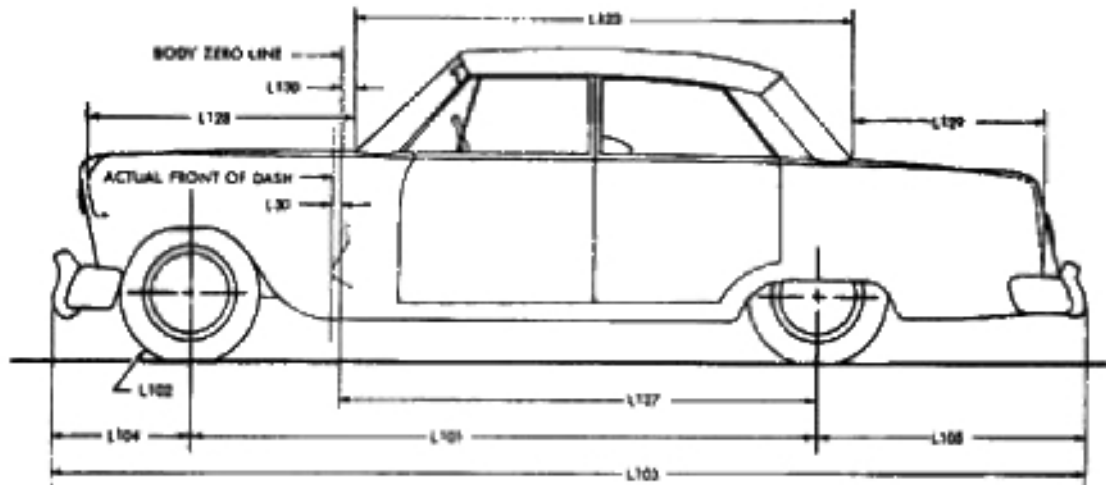


MODEL	Ref. No.	CATALINA						
		2369	2311	2347	2339	2369	2335	2345
Body zero line to actual front of dash	L30	.54						
Wheelbase	L101	120.0				119.0		
Overhang - front	L104	36.4						
Overhang - rear	L105	56.6				58.4		
Overall length	L103	213.0				213.8		
Hood length at car centerline	L128a	54.9						
Body upper structure length at car centerline	L123	103.3		103.4	106.0	105.9	141.5	
Deck length at car centerline	L129a	49.0		48.8	46.2		--	
Body zero line to centerline of rear wheels	L127	101.5				100.5		
Body zero line to windshield cowl point	L130a	4.1		4.2	4.1	4.2	3.9	
Tire size	L102	8.50 x 14				8.50 x 14		

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*) _____

EXTERIOR LENGTH DIMENSIONS

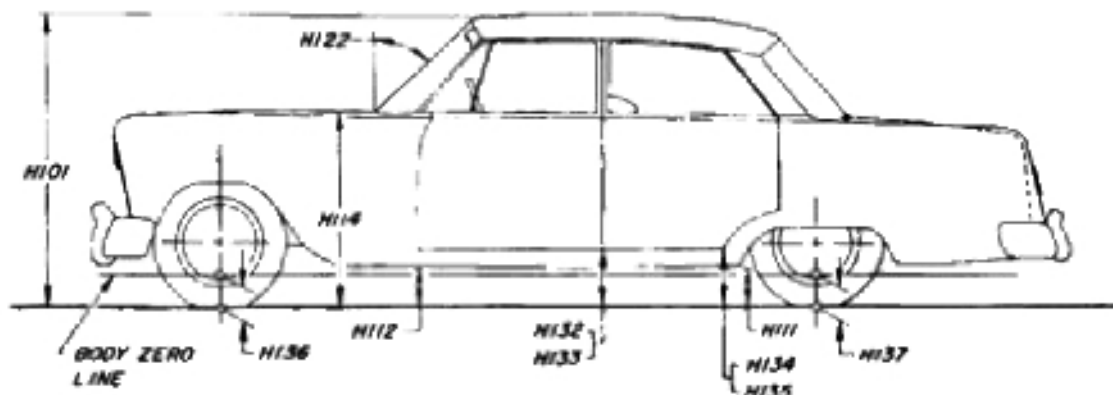


MODEL	Ref. No.	STAR CHIEF					BONNEVILLE		GRAND PRIX
		2669	2639	2839	2847	2867	2835	2957	
Body zero line to actual front of dash	L30	.54							
Wheelbase	L101	123.0					119.0	120.0	
Overhang - front	L104	36.4							
Overhang - rear	L105	60.6					58.4	56.6	
Overall length	L100	220.0					213.8	213.0	
Hood length at car centerline	L128a	54.9							
Body upper structure length at car centerline	L123	103.3	106.0	103.4	105.9	141.5	102.7		
Deck length at car centerline	L129a	56.0	53.3	55.7	53.3	--	49.6		
Body zero line to centerline of rear wheels	L127	104.5					100.5	101.5	
Body zero line to windshield cowlf point	L130a	41		42		3.9	4.1		
Tire size	L102	8.00 x 14					8.50 x 14	8.00 x 14	

AMA Specifications - Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

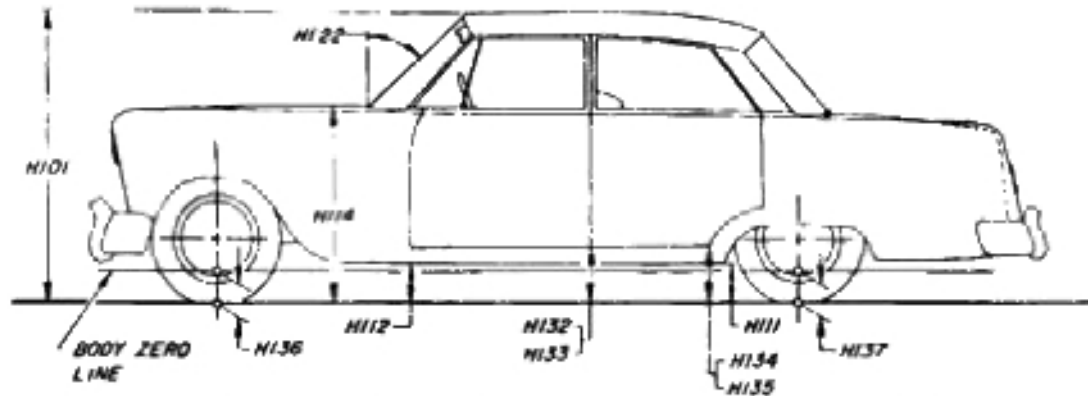
EXTERIOR HEIGHT DIMENSIONS



MODEL	Ref. No.	CATALINA						
		2369	2311	2347	2339	2367	2335	2345
Overall height	H101	55.8		54.7	55.2	55.2	56.7	
Hood at rear to ground	H114	37.9				37.7	38.2	
Rocker panel to ground - front	H112	9.0				8.8	9.3	
Rocker panel to ground - rear	H111	8.6				8.4	8.9	
Bottom of door to ground, open - front	H132	12.9	13.1	13.1	12.9	12.9	13.3	
Bottom of door to ground, closed - front	H133	11.8	11.7	11.7	11.8	11.6	12.2	
Bottom of door to ground, open - rear	H134	11.6	-	-	11.6	-	11.9	
Bottom of door to ground, closed - rear	H135	11.6	-	-	11.6	-	11.9	
Windshield slope angle	H12r	55.0°		54.5°	57.5°	54.5°	55.0°	
Body zero to ground - front	H136	5.1				4.9	5.4	
Body zero to ground - rear	H137	5.1				4.9	5.4	

AMA Specifications- Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)
EXTERIOR HEIGHT DIMENSIONS

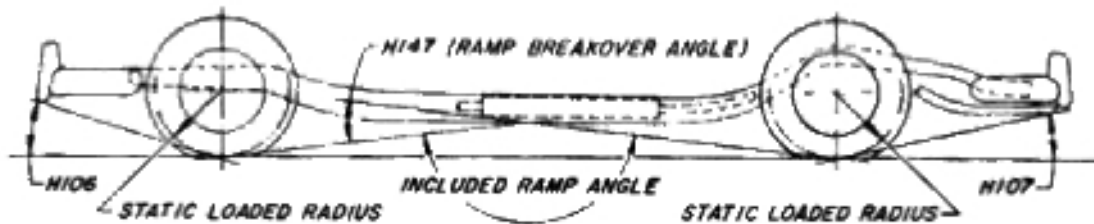
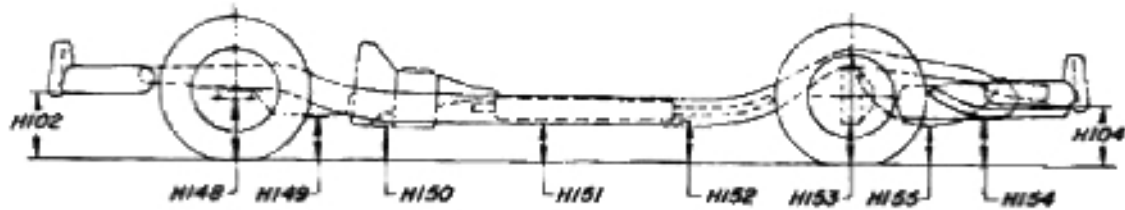


MODEL	Ref. No.	STAR CHIEF			BONNEVILLE			GRAND PRIX
		2669	2639	2839	2847	2867	2835	2957
Overall height	H101	55.8	55.2		54.7	55.2	56.7	54.6
Hood at rear to ground	H114		37.9			37.7	38.2	37.9
Rocker panel to ground - front	H112		9.0			8.8	9.3	9.0
Rocker panel to ground - rear	H111		8.6			8.4	8.9	8.6
Bottom of door to ground, open - front	H132		12.9		13.1	12.9	13.3	13.1
Bottom of door to ground, closed - front	H133		11.8		11.7	11.6	12.2	11.7
Bottom of door to ground, open - rear	H134		11.6		-	-	11.9	-
Bottom of door to ground, closed - rear	H135		11.6		-	-	11.9	-
Windshield slope angle	H122	55.0°	57.5°		54.5°	55.0°		57.5°
Body zero to ground - front	H136		5.1			4.9	5.4	5.1
Body zero to ground - rear	H137		5.1			4.9	5.4	5.1

AMA Specifications—Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*)

GROUND CLEARANCE DIMENSIONS

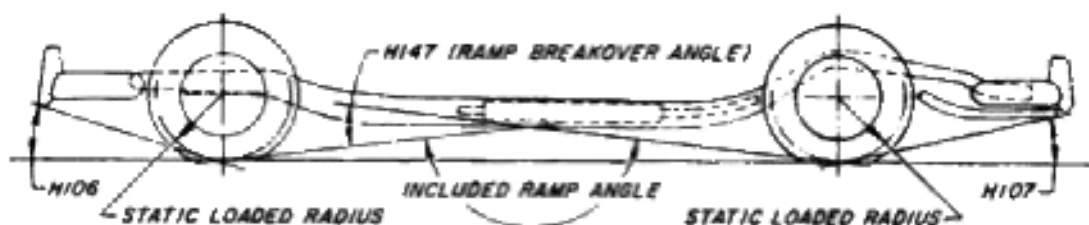
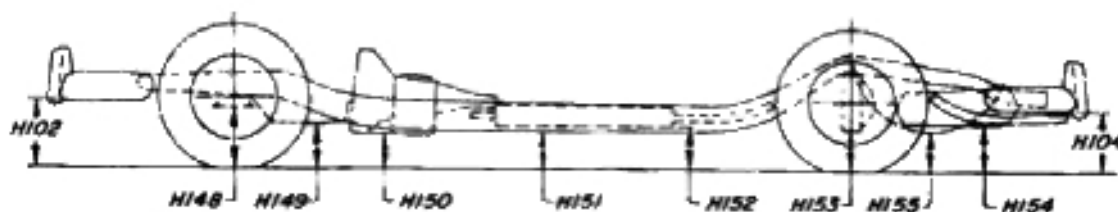


MODEL	Ref. No.	Catalina						
		2311	2335	2345	2339	2347	2367	2369
Front bumper to ground	H102	10.7		11.5			10.7	
Rear bumper to ground	H104	12.0		10.9			12.0	
Angle of approach	H106	20.3°		21.0°			20.3°	
Angle of departure	H107	12.8°		12.5°			12.8°	
Ramp breakover angle	H147	12.6°		13.5°			12.6°	
Front suspension to ground	H148	6.0		6.4			6.0	
Oil pan to ground	H149	6.7		7.1			6.7	
Flywheel housing to ground	H150	6.0		6.4			6.0	
Frame structure to ground	H151	6.0		6.4			6.0	
Exhaust system to ground	H152	6.0		6.2			6.0	
Rear axle differential to ground	H153	6.3		6.6			6.3	
Fuel tank to ground	H154	8.2		9.3			8.2	
Spare tire well to ground	H155	None		6.3			None	
Minimum running ground clearance	H156	6.0		6.2			6.0	

AMA Specifications—Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*)

GROUND CLEARANCE DIMENSIONS

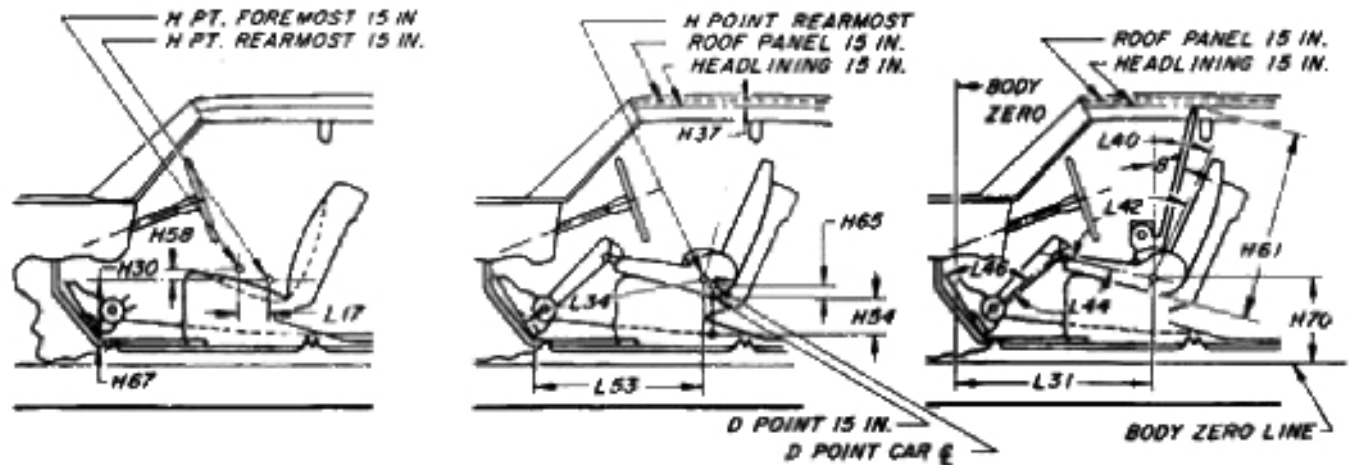


MODEL	Ref. No.	Star Chief		Bonneville			Grand Prix	
		2639	2669	2835	2839	2847	2867	2957
Front bumper to ground	H102	10.7		11.5			10.7	
Rear bumper to ground	H104	12.0		10.9			12.0	
Angle of approach	H106	20.3°		21.0			20.3°	
Angle of departure	H107				12.5°			12.8°
Ramp breakover angle	H147	12.3°		13.5°		12.3°		12.6°
Front suspension to ground	H148	6.0				6.0		
Oil pan to ground	H149	6.7				6.7		
Flywheel housing to ground	H150	6.0				6.0		
Frame structure to ground	H151	6.0				6.0		
Exhaust system to ground	H152	6.0				6.0		
Rear axle differential to ground	H153	6.3				6.3		
Fuel tank to ground	H154	8.2				9.3		
Spare tire well to ground	H155	None				6.3		
Minimum running ground clearance	H156	6.0				6.2		

AMA Specifications—Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

FRONT COMPARTMENT DIMENSIONS



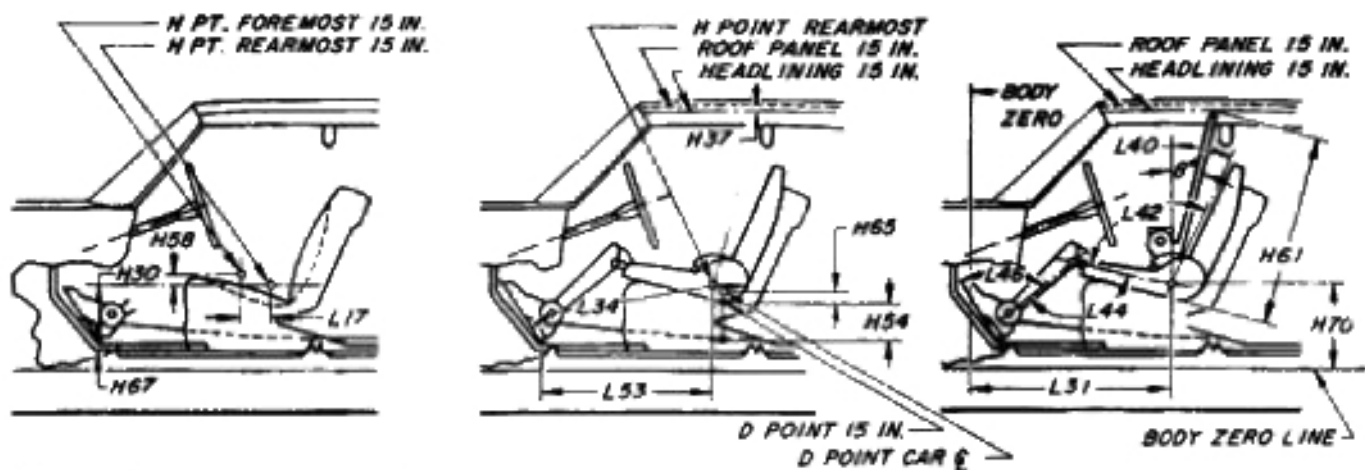
CATALINA

MODEL	Ref. No.	CATALINA						
		2311	2335	2345	2339	2347	2367	2369
H Point to body zero line	L31							
H Point to body zero line - front	H70							
Effective head room	H61	39.0	38.9	38.6	38.2	39.3	39.0	
Headlining to roof height	H37							
Maximum effective leg room - accelerator	L34	42.0	41.4			41.5		
H Point to heel point	H30							
Depressed floor covering thickness	H67							
Back angle	L40							
Hip angle	L42							
Knee angle	L44							
Foot angle	L46							
D Point differential, side to center	H65							
D Point to tunnel	H54							
H Point to accelerator floor point	L53							
H Point travel	L17							
H Point rise	H58							

AMA Specifications—Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

FRONT COMPARTMENT DIMENSIONS

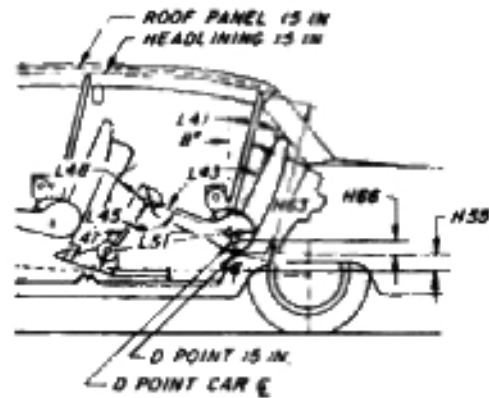
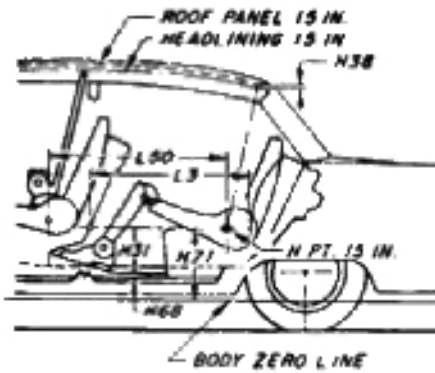


MODEL	Ref. No.	Star Chief		Bonneville				Grand Prix
		2639	2669	2835	2839	2847	2867	2957
H Point to body zero line	L31							
H Point to body zero line - from	H70							
Effective head room	H61	39.0	39.4	39.8	39.1	38.6	39.7	38.2
Headlining to roof height	H37							
Maximum effective leg room - accelerator	L34	41.9	42.0	41.6		41.5		41.2
H Point to heel point	H30							
Depressed floor covering thickness	H67							
Back angle	L40							
Hip angle	L42							
Knee angle	L44							
Foot angle	L46							
D Point differential, side to center	H65							
D Point to tunnel	H54							
H Point to accelerator floor point	L53							
H Point travel	L17							
H Point rise	H58							

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(=)

REAR COMPARTMENT DIMENSIONS

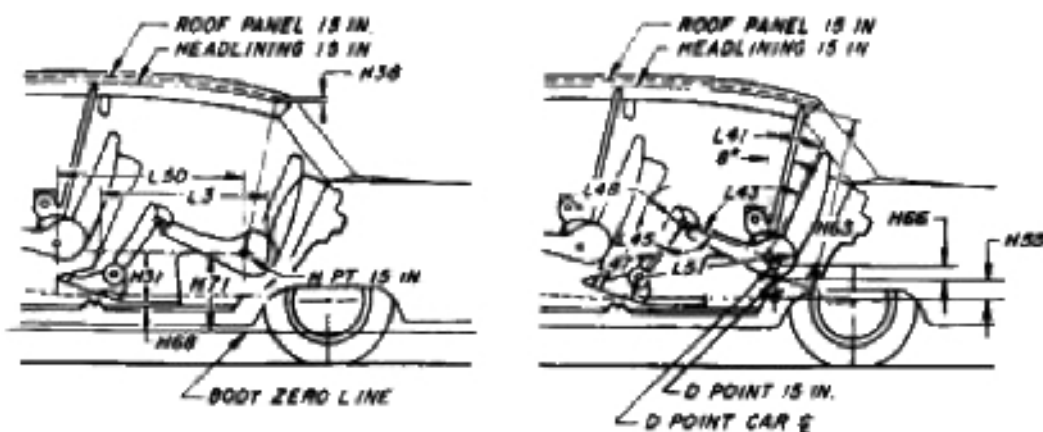


MODEL	Ref. No.	Catalina						
		2311	2335	2345	2339	2347	2367	2369
H Point couple distance	L50							
H Point to body zero line - rear	H71							
Effective head room	H63	37.8	39.6		37.1	38.4	38.2	38.0
Headlining to roof height	H38							
Minimum effective leg room	L51	38.1	39.1		38.4	35.4		38.7
H Point to heel point	H31							
Depressed floor covering thickness	H68							
Minimum knee room	L48							
Rear compartment room	L3							
Back angle	L41							
Hip angle	L43							
Knee angle	L45							
Foot angle	L47							
D Point differential, side to center	H66							
D Point to tunnel	H55							

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(*) _____

REAR COMPARTMENT DIMENSIONS

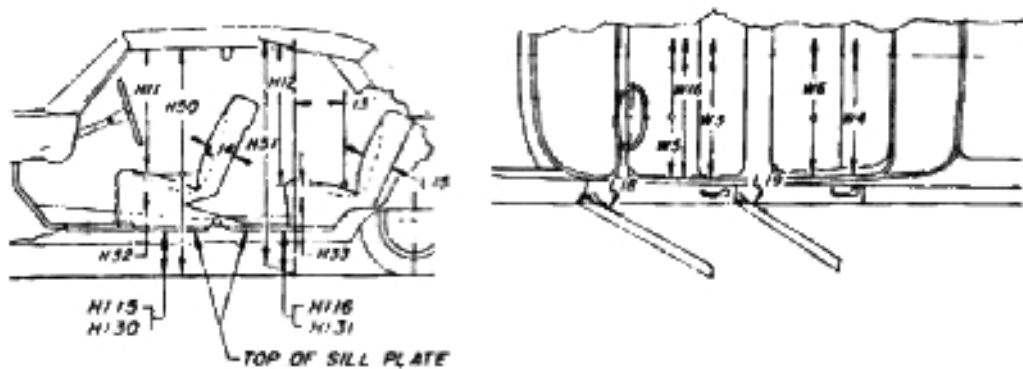


MODEL	Ref. No.	Star Chief		Bonneville				Grand Prix
		2639	2669	2835	2839	2847	2867	2957
H Point couple distance	L50							
H Point to body zero line - rear	H71							
Effective head room	H63	37.3	37.8	39.6	37.3	38.4	38.2	38.0
Headlining to roof height	H38							
Minimum effective leg room	L51	38.3	38.5	39.0	38.3	35.3	35.3	37.0
H Point to heel point	H31							
Depressed floor covering thickness	H68							
Minimum knee room	L48							
Rear compartment room	L3							
Back angle	L41							
Hip angle	L43							
Knee angle	L45							
Foot angle	L47							
D Point differential, side to center	H66							
D Point to tunnel	H55							

AMA Specifications – Passenger Car

MAKE OF CAR **PONTIAC** MODEL YEAR **1964** DATE ISSUED **9-6-63** REVISED (a) **9-17-63**

SEAT AND ENTRANCE DIMENSIONS

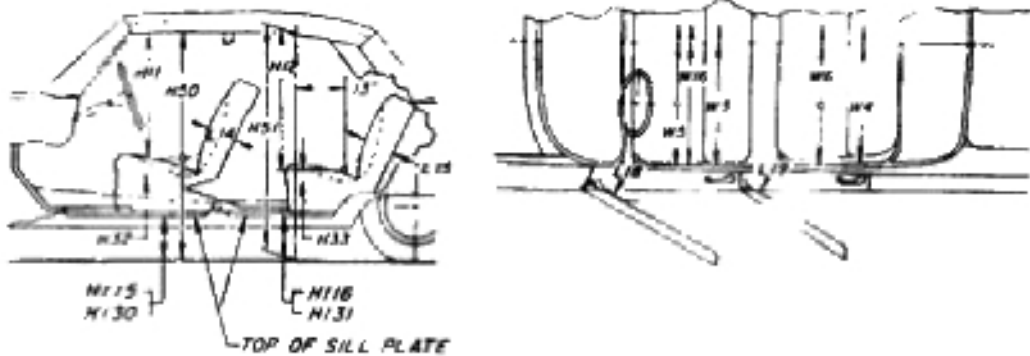


	Ref. No.	Catalina						
		2311	2335	2345	2339	2347	2367	2369
Shoulder room - front	W3	58.8			58.7	58.6		58.8
Hip room - front	W5	63.5	63.6			63.7		63.5
Seat width - front	W16							
Upper body opening to ground - front	H50							
Entrance height - front	H11							
Step height - front (design load)	H115							
Step height - front (curb load)	H130							
Entrance foot clearance - front	L18							
Seat cushion deflection - front	H32							
Seat back thickness - front	L14							
Shoulder room - rear	W4	57.6	58.0		58.2	57.7	50.6	58.2
Hip room - rear	W6	62.7	63.3			55.3	51.7	63.3
Upper body opening to ground - rear	H51							
Entrance height - rear	H12							
Step height - rear (design load)	H116							
Step height - rear (curb load)	H131							
Entrance foot clearance - rear	L19							
Seat cushion deflection - rear	H33							
Seat back thickness - rear	L15							

AMA Specifications – Passenger Car

MAKE OR MODEL PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (4) 9-17-63

SEAT AND ENTRANCE DIMENSIONS



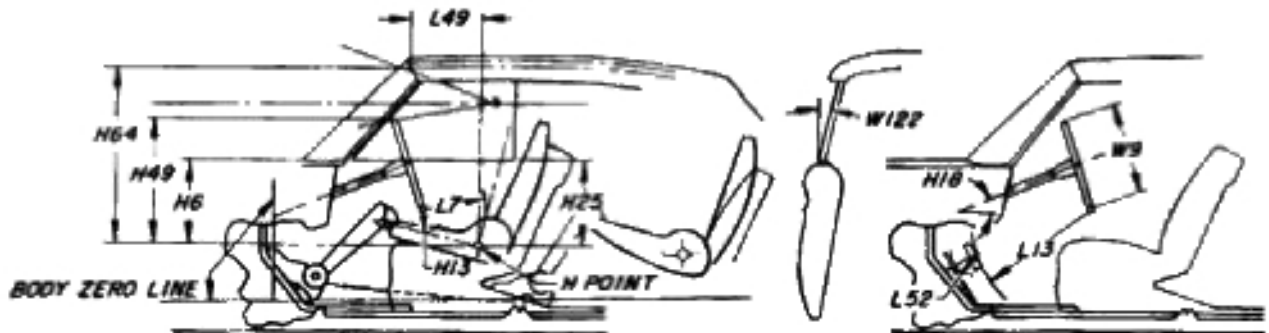
	Ref. No.	Star Chief		Bonneville				Grand Prix
		2639	2669	2835	2839	2847	2867	2957
Shoulder room - front	W3	58.7	58.8	58.7	58.6			
Hip room - front	W5	63.6	63.5	63.7			63.6	
Seat width - front	W16							
Upper body opening to ground - front	H50							
Entrance height - front	H11							
Step height - front (design load)	H115							
Step height - front (curb load)	H131							
Entrance foot clearance - front	L18							
Seat cushion deflection - front	H32							
Seat back thickness - front	L14							
Shoulder room - rear	W4	58.2	58.0	58.2	57.7	50.6	57.6	
Hip room - rear	W6	63.5	63.3	63.5	55.3	51.7	55.3	
Upper body opening to ground - rear	H51							
Entrance height - rear	H12							
Step height - rear (design load)	H116							
Step height - rear (curb load)	H131							
Entrance foot clearance - rear	L19							
Seat cushion deflection - rear	H33							
Seat back thickness - rear	L15							

AMA Specifications – Passenger Car

Page 29

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (e)

VISION AND CONTROL DIMENSIONS



MODEL	Ref. No.	Catalina	Star Chief	Bonneville	Grand Prix
H Point to windshield bottom DLO	H6				
H Point to windshield upper DLO	H64				
H Point to windshield upper DLO	L49				
Belt height - front	H25				
Steering wheel center to centerline of car	W7				
Steering wheel maximum outside diameter	W9			16.5	
Steering column angle - horizontal	H18				
H Point to top of steering wheel	H49				
Steering wheel torso clearance	L7				
Steering wheel thigh clearance	H13				
Brake pedal knee clearance	L13				
Brake pedal to accelerator	L52				
Tumble-home	W122				

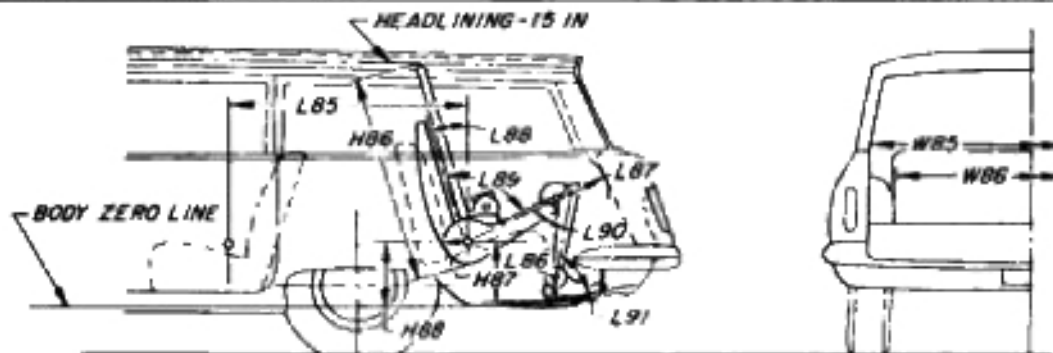
AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED(a) _____

LUGGAGE COMPARTMENT

MODEL	Ref. No.	Catalina					Star Chief		Bonneville			Grand Prix
		2311	2339	2347	2367	2369	2639	2669	2839	2847	2867	
Usable luggage capacity												
Total Volume-Cu Ft.		31.3		33.0		31.3		33.2		34.9		33.0
Liftover height	H195											25.9
Position of spare tire storage		(a)	(a)	(a)	(b)	(a)	(b)	(b)	(b)	(b)	(b)	(a)
Method of holding lid open		Torsion Bar Counterbalance										

THIRD SEAT DIMENSIONS



MODEL	Ref. No.	Catalina 2345
Seat facing direction		Rear
Shoulder room	WB5	51.9
Hip room	WB6	46.7
H Point couple distance	L85	39.8
H Point to body zero line - third seat	H88	22.4
Effective head room	H86	37.1
Effective leg room	L86	33.1
H Point to heel point	H87	12.3
Knee room	L87	9.8
Back angle	L88	16°
Hip angle	L89	78°
Knee angle	L90	81.5°
Foot angle	L91	116°

(a) Inclined at center of forward end of compartment.

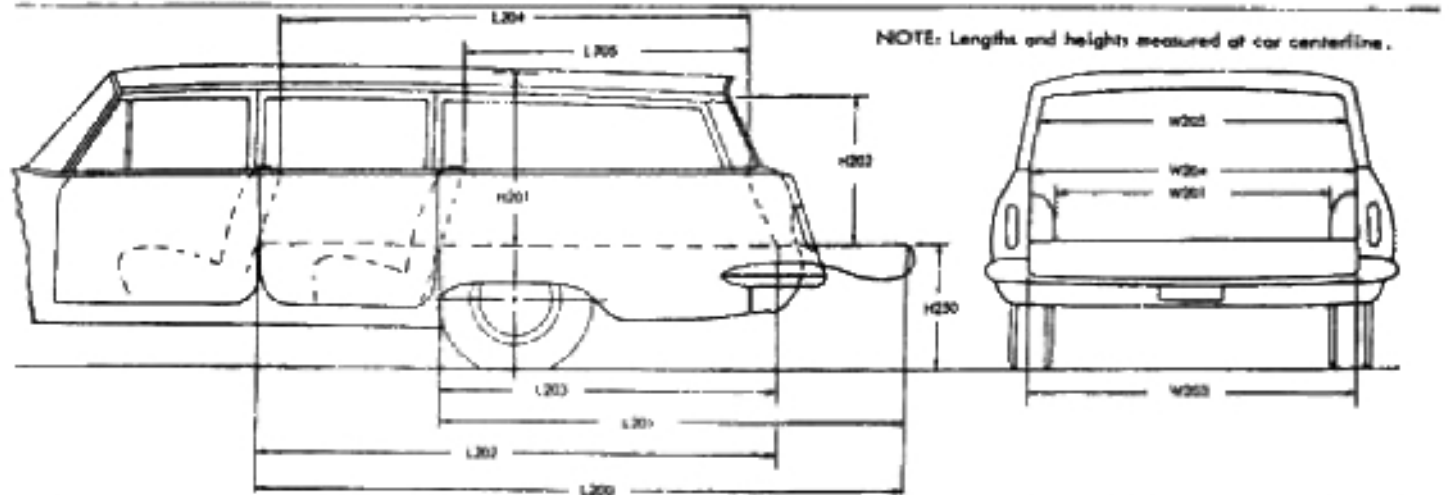
(b) Flat on Right hand side of compartment floor.

AMA Specifications—Passenger Car

Page 31

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED^(a)

STATION WAGON—CARGO SPACE DIMENSIONS



MODEL	Ref. No.	CATALINA		BONNEVILLE
		2335	2345	2835
Floor length from back of front seat at floor level to end of lowered tail gate or floor	L200	122.3		122.2
Floor length from back of second seat at floor level to end of lowered tail gate or floor	L201	88.6		
Floor length from back of front seat at floor level to inside of closed tail gate	L202	92.3	92.2	
Floor length from back of second seat at floor level to inside of closed tail gate	L203	58.6	58.5	
Minimum horizontal distance from top rear of front seat back to inside of tail gate at belt	L204	81.8		
Minimum horizontal distance from top rear of second seat back to inside of tail gate at belt	L205	47.2		
Maximum width of cargo space at floor - specify location	W200a	62.2	61.8	
Minimum distance between wheel houses at floor level	W201	48.5		
Rear end opening width at floor	W203	56.2		
Rear end opening width at belt	W204	52.8		
Maximum width of rear opening above belt	W205	52.5		
Maximum height - floor covering to headlining at centerline of rear axle	H201	31.4	31.2	
Maximum height of rear opening - tail and lift gates open	H202	30.4	30.2	
Platform height from ground to top of tail gate floor covering at rear most edge of tail gate - curb height	H250	23.5		
Rear end closure (e.g., one piece door, hinged left - sliding glass, drop tail gate)		Sliding Glass - Drop Tail Gate		
Cargo volume index (cu. ft.) W4 x L204 x H201		86.4 (a)		85.8 (a)

(a) Add 10.5 cu. ft. for compartment under floor on 2-seat models (2335 & 2835) - Add 5.7 cu. ft. for 3-seat model (2345)

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (a)

C A T A L I N A

MODEL	2369	2311	2339	2347	2367	2335	2345
-------	------	------	------	------	------	------	------

BODY—MISCELLANEOUS INFORMATION

Drs. hinged (front, rear)	Front doors	Front					
	Rear doors	Front	--	Front	--	Front	
Type of finish (lacquer, enamel, other)	Acrylic Lacquer						
Hood hinge location (front, rear)	Rear						
Hood counterbalanced (yes, no)	Yes						
Hood release control (internal, external)	External						
Vehicle (Serial) No. Location	Left Front Body Pillar						
Engine No. Location	Front of R. H. Cylinder Bank						
Theft protection - type	Ignition switch terminals guarded by locked on conn. body. Ignition key starter control with "in harness" wiring from switch to starter and coil add to protection offered by locked doors.						
Vent window control method (crank, friction pivot)	Front	Crank					
	Rear	None					
Seat cushion type	Front	(a)					
	Rear	(b)					
Seat back type	Front	(c)					
	Rear	(d)					
Windshield type (single curved, compound curved, other)	Single Curved	Compound Curved			Single Curved		
Rear window type (flat, curved, one piece, three piece)	One Piece						
	Curved	Flexible		Flat			
Side glass type (curved, flat)	Flat						
Side glass exposed surface area	1322.8	1346.3	1360.6	1236.2	1115.5	2669.3	
Windshield glass exposed surface area	1587.5		1405.7	1461.2		1587.5	
Backlight glass exposed surface area	1257.1		1239.9	941.9	1103.0		938.3
Total glass exposed surface area	4167.4	4190.9	4006.2	3639.3	3679.7	5195.1	

- (a) Zig zag spring with foam pad.
- (b) Zig zag spring with foam pad except cotton pad on Catalina Safari.
- (c) Zig zag spring with cotton pad.
- (d) Formed wire spring with cotton pad.

AMA Specifications – Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

	STAR CHIEF	BONNEVILLE			GRAND PRIX		
MODEL	2669	2639	2839	2847	2867	2835	2957

BODY—MISCELLANEOUS INFORMATION

Drs. hinged (front, rear)	Front doors	Front						
	Rear doors	Front	--	Front	--			
Type of finish (lacquer, enamel, other)		Acrylic Lacquer						
Hood hinge location (front, rear)		Rear						
Hood counterbalanced (yes, no)		Yes						
Hood release control (internal, external)		External						
Vehicle (Serial) No. Location		Left Front Body Pillar						
Engine No. Location		Front of R. H. Cylinder Bank						
Theft protection - type		Ignition switch terminals guarded by locked on conn. body. Ignition key starter control with "in harness" wiring from switch to starter and coil add to protection offered by locked doors.						
Vent window control method (crank, friction pivot)	Front	Crank						
	Rear	None						
Seat cushion type	Front	(a)				(d)		
	Rear	(a)						
Seat back type	Front	(b)				(d)		
	Rear	(c)						
Windshield type (single curved, compound curved, other)		Single Curved	Compound Curved		Single Curved			
Rear window type (flat, curved, one piece, three piece)		Curved		One Piece		Flexible	Flat	Concave
Side glass type (curved, flat)		Flat						
Side glass exposed surface area		1322.8	1360.6	1236.2	1115.5	2669.3	1309.4	
Windshield glass exposed surface area		1587.5	1405.7	1461.2		1587.5	1405.7	
Backlight glass exposed surface area		1257.1	1239.9	941.9	1103.0	938.3	1276.5	
Total glass exposed surface area		4167.4	4006.2	3639.3	3679.7	5195.1	3991.6	

- (a) Zig Zag spring with foam pad.
- (b) Zig Zag spring with cotton pad.
- (c) Formed wire spring with cotton pad.
- (d) Contour molded foam pad.

AMA Specifications - Passenger Car

MAKE OF CAR PONTIAC MODEL YEAR 1964 DATE ISSUED 9-6-63 REVISED (*)

ESTIMATED WEIGHTS

Model	CURB WEIGHT - POUNDS			% PASS. WEIGHT DISTRIBUTION				SHIPPING WEIGHT
	Front	Rear	Total	Pass. In Front		Pass. In Rear		
				Front	Rear	Front	Rear	
Catalina								
Sedan (4-Door)	2369		3952					3757
Sedan (2-Door)	2311		3878					3683
Sedan (4-Dr. HT)	2339		4021					3826
Coupe (2-Dr. HT)	2347		3924					3729
Conv. Cpe. (2-Dr.)	2367		4013					3818
S. Wagon (4-Dr. 6-Pass.)	2335		4331					4175
S. Wagon (4-Dr. 9-Pass.)	2345		4383					4227
Star Chief								
Sedan (4-Door)	2669		4092					3897
Sedan (4-Dr. HT)	2639		4141					3946
Bonneville								
Sedan (4-Dr. HT)	2839		4183					3988
Coupe (2-Dr. HT)	2847		4087					3892
Conv. Cpe. (2-Dr.)	2867		4157					3962
S. Wagon (4-Dr. 6-Pass.)	2835		4415					4259
Grand Prix								
Coupe (2-Dr. HT)	2957		4125					3930
Accessories & Equipment Differential Weights				Remarks				
Hydra-Matic Trans.			18.0	Catalina Except 2335 & 2345				
Hydra-Matic Trans.			12.0	Catalina 2335 & 2345				
Hydra-Matic Trans.			56.0	Star Chief				
Hydra-Matic Trans.			40.0	Bonneville				
Hydra-Matic Trans.			3.0	Grand Prix				
Power Steering			34.0					
Power Brakes			7.0					
Air Conditioning			153.0					
Radio - Deluxe			8.0					
Windshield Washer			5.0					
Catalina Decor Option			16.0					

* These are weights that are reported to states for licensing purposes.

DIMENSION DEFINITIONS

- W3** SHOULDER ROOM - FRONT. The minimum lateral dimension between the door garnish moldings or nearest interference. Measured at H Point station.
- W4** SHOULDER ROOM - REAR. Measured in the same manner as W3.
- W5** HIP ROOM - FRONT. The lateral dimension through H Point to trimmed surfaces.
- W6** HIP ROOM - REAR. Measured in the same manner as W5.
- W7** STEERING WHEEL CENTER TO CENTERLINE OF CAR. Measured horizontally from steering wheel center to centerline of car. The point of steering wheel center is located in the surface plane of wheel.
- W9** STEERING WHEEL MAXIMUM OUTSIDE DIAMETER. Define if other than round.
- W14** SEAT WIDTH - FRONT. The maximum trimmed width of front seat cushion.
- W85** SHOULDER ROOM - THIRD SEAT. Measured in the same manner as W3.
- W86** HIP ROOM - THIRD SEAT. Measured in the same manner as W5.
- W101** TREAD - FRONT. Measured at centerline of tires, with nominal number, at ground.
- W102** TREAD - REAR. Measured at centerline of tires at ground.
- W103** MAXIMUM OVERALL CAR WIDTH. Include bumpers, moldings, or sheet metal protrusions.
- W104** FRONT FENDER OVERALL WIDTH. Measured at centerline of front wheels, excluding moldings.
- W107** REAR FENDER OVERALL WIDTH. Measured at centerline of rear wheels, excluding moldings.
- W116** MAXIMUM OVERALL BODY WIDTH. Measured across body, excluding hardware and applied moldings, but including fenders when integral with body.
- W117** MAXIMUM BODY WIDTH AT P₂ PILLAR. Measured across body at P₂ pillar, excluding hardware and applied moldings.
- W120** MAXIMUM OVERALL CAR WIDTH, FRONT DOORS OPEN. Measured with front doors in maximum hold-open position.
- W121** MAXIMUM OVERALL CAR WIDTH, REAR DOORS OPEN. Measured in same manner as W120.
- W122** TUMBLE-HOME. The angle from vertical to the front door glass outer surface or the chord of a curved door glass, measured at the front H Point station.
- L3** REAR COMPARTMENT ROOM. The horizontal dimension from the back of front seat to front of rear seat back at a height tangent to the top of rear seat cushion.
- L7** STEERING WHEEL TORSO CLEARANCE. The minimum distance from the lower edge of steering wheel, in straight-ahead position, to the Torso Line.
- L13** BRAKE PEDAL KNEE CLEARANCE. The minimum dimension from the lower edge of the steering wheel to the brake pedal face centerline.
- L14** SEAT BACK THICKNESS - FRONT. The maximum thickness of the seat back, excluding bolsters.
- L15** SEAT BACK THICKNESS - REAR. Measured in the same manner as L14.
- L17** H POINT TRAVEL. The horizontal dimension between the H Point in the most forward and rearward seat positions.
- L18** ENTRANCE FOOT CLEARANCE - FRONT. The minimum horizontal dimension between seat and nominal line of door or pillar at a height between the sill plate base and 4.0 inches above the base. Door should be in the maximum hold-open position.
- L19** ENTRANCE FOOT CLEARANCE - REAR. Measured in the same manner as L18 on four-door models. On two-door crossovers, the minimum dimension between rear corner of front seat, with front seat back tilted forward, and trimmed foot pillar, built-in quarter console panel, or rear seat cushion at a height between the sill plate base and 4.0 inches above the base.
- L20** BODY 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.
- L31** H POINT TO BODY ZERO LINE - FRONT. Horizontal dimension.
- L34** MAXIMUM EFFECTIVE LEG ROOM - ACCELERATOR. Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. Measured with the right foot on accelerator pedal.
- L40** BACK ANGLE - FRONT. The angle between a vertical line through the H Point and the Torso Line.
- L41** BACK ANGLE - REAR. Measured in the same manner as L40.
- L42** HIP ANGLE - FRONT. The angle between Torso Line and a line extending from knee pivot center to H Point.
- L43** HIP ANGLE - REAR. Measured in the same manner as L42.
- L44** KNEE ANGLE - FRONT. The angle between a line from H Point to knee pivot center and a line from the knee pivot center to the ankle pivot center.
- L45** KNEE ANGLE - REAR. Measured in the same manner as L44.
- L46** FOOT ANGLE - FRONT. The angle between a line extended from the knee pivot center through the ankle pivot center and a line tangent to the sole and heel of manikin bare foot.
- L47** FOOT ANGLE - REAR. Measured in the same manner as L46.
- L48** MINIMUM KNEE ROOM - REAR. The minimum dimension from the knee pivot center to the back of front seat back.
- L49** H POINT TO WINDSHIELD UPPER DLO. The horizontal dimension from H Point to the point of tangency of horizontal line of vision (described in dimension H44) with body upper structure.

DIMENSION DEFINITIONS (cont.)

- L30 H POINT COUPLE DISTANCE.** The horizontal dimension from the front seat H Point to the rear seat H Point.
- L51 MINIMUM EFFECTIVE LEG ROOM - REAR.** Measured along a diagonal line from ankle pivot center to H Point plus a constant of 10.0 inches. Measured with the foot positioned to nearest interference between seat structure and toe, instep or lower leg.
- L52 BRAKE PEDAL TO ACCELERATOR.** The minimum dimension from center of brake pedal face to accelerator. Measured in the side view.
- L53 H POINT TO ACCELERATOR FLOOR POINT.** The horizontal dimension from intersection of accelerator and depressed floor covering to the H Point.
- L85 H POINT COUPLE DISTANCE - THIRD SEAT.** The horizontal dimension from the second seat H Point to the third seat H Point.
- L86 EFFECTIVE LEG ROOM - THIRD SEAT.** Measured in the same manner as L51. With rear-facing third seat foot is positioned in foot well or to nearest interference with rear end or rear closure.
- L87 KNEE ROOM - THIRD SEAT.** Measured in the same manner as L48. With rear-facing third seat, dimension is measured to rear closure.
- L88 BACK ANGLE - THIRD SEAT.** Measured in the same manner as L40.
- L89 HIP ANGLE - THIRD SEAT.** Measured in the same manner as L42.
- L90 KNEE ANGLE - THIRD SEAT.** Measured in the same manner as L44.
- L91 FOOT ANGLE - THIRD SEAT.** Measured in the same manner as L46.
- L101 WHEELBASE.**
- L302 TIRE SIZE.**
- L303 OVERALL LENGTH.** Include bumper guards if standard equipment.
- L304 OVERHANG - FRONT.** Measured from C/L of front wheels to front of car, including bumper guards if standard equipment.
- L305 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 theoretical intersection of extended windshield glass plane and normal cowl surface to the theoretical intersection of extended back window glass plane and normal deck surface or in the case of a Fastback roof or Station Wagon, to back glass lower reveal molding, or rubber when molding is not used.
- L127^a BODY ZERO LINE TO CENTERLINE OF REAR WHEELS.** A horizontal dimension.
- L128 HOOD LENGTH AT CAR CENTERLINE.** The horizontal dimension from the foremost point on sheet metal hood surface, excluding series identification or ornamentation, to the theoretical intersection of extended windshield glass plane and normal cowl surface.
- L129 DECK LENGTH AT CAR CENTERLINE.** The horizontal dimension from the rearmost point of the body sheet metal (visible above bumper), excluding series identification or ornamentation, to the theoretical intersection of extended back window glass plane and normal deck surface.
- L130 BODY ZERO LINE TO WINDSHIELD COWL POINT.** The horizontal dimension from body zero line to the theoretical intersection of extended windshield glass plane and normal cowl surface.
- H6 H POINT TO WINDSHIELD BOTTOM DLO.** Vertical dimension.
- H11 ENTRANCE HEIGHT - FRONT.** The vertical dimension from H Point to upper trimmed body opening.
- H12 ENTRANCE HEIGHT - REAR.** The vertical dimension from H Point to the upper trimmed body opening at a section 13.0 inches forward of the H Point.
- H13 STEERING WHEEL THROU CLEARANCE.** The minimum dimension from the bottom of steering wheel, in straight-ahead position, to centerline of thigh.
- H18 STEERING COLUMN ANGLE - HORIZONTAL.** The angle the centerline of steering column makes with the horizontal.
- H25 BELT HEIGHT - FRONT.** The vertical dimension from H Point to bottom of side window DLO.
- H30 H POINT TO HEEL POINT - FRONT.** The vertical dimension from the H Point to the manikin accelerator heel point on the depressed floor covering.
- H31 H POINT TO HEEL POINT - REAR.** The vertical dimension from the H Point to the manikin heel point on the depressed floor covering.
- H32 SEAT CUSHION DEFLECTION - FRONT.** The vertical dimension from a point on the undepressed seat cushion to the depressed seat cushion. Measured at the H Point station.
- H33 SEAT CUSHION DEFLECTION - REAR.** Measured in the same manner as H32.
- H37 HEADLINING TO ROOF HEIGHT - FRONT.** The dimension from the intersection of the headlining and the extended effective head room line to the roof panel. Measured perpendicularly to the roof panel.
- H38 HEADLINING TO ROOF HEIGHT - REAR.** Measured in the same manner as H37.
- H48 H POINT TO TOP OF STEERING WHEEL.** The vertical dimension from the H Point to top of steering wheel, in straight-ahead position.
- H50 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.
- H51 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.

DIMENSION DEFINITIONS (cont.)

- H54 D POINT TO TUNNEL - FRONT.** The vertical dimension from the D Point, at ear centerline, to top of tunnel.
- H55 D POINT TO TUNNEL - REAR.** Measured same manner as H54.
- H56 H POINT REAR.** The vertical dimension between the H Point in the rear forward and rearward ear position.
- H61 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.
- H62 EFFECTIVE HEAD ROOM - REAR.** Measured same as H61.
- H64 H POINT TO WINDSHIELD UPPER DLO.** Vertical dimension from H Point to highest horizontal line of vision through windshield at 15 inch section.
- H65 D POINT DIFFERENTIAL, SIDE TO CENTER - FRONT.** Vertical dimension from side occupant to center occupant D Point.
- H66 D POINT DIFFERENTIAL, SIDE TO CENTER - REAR.** Measured in the same manner as H65.
- H67 DEPRESSED FLOOR COVERING THICKNESS - FRONT.** The vertical dimension from mainline occupant heel point normally to underbody sheet metal immediately below heel point.
- H68 DEPRESSED FLOOR COVERING THICKNESS - REAR.** Measured same as H67.
- H70 H POINT TO BODY ZERO LINE - FRONT.** Vertical dimension.
- H71 H POINT TO BODY ZERO LINE - REAR.** Vertical dimension.
- H86 EFFECTIVE HEAD ROOM - THIRD SEAT.** Measured in the same manner as H61.
- H87 H POINT TO HEEL POINT - THIRD SEAT.** Measured in the same manner as H71.
- H88 H POINT TO BODY ZERO LINE - THIRD SEAT.** Vertical dimension.
- H101 OVERALL HEIGHT.** Measured with full design load.
- H102 FRONT BUMPER TO GROUND.** Minimum dimension.
- H104 REAR BUMPER TO GROUND.** Minimum dimension.
- H106 ANGLE OF APPROACH.** The angle between the 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 interfering component, including license plate.
- H107 ANGLE OF DEPARTURE.** The angle between the 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 interfering component, including license plate.
- H111 ROCKER PANEL TO GROUND - REAR.** The vertical dimension from ground to bottom of rocker panel, including flanges. Measured at front of rear wheel opening.
- H112 ROCKER PANEL TO GROUND - FRONT.** The vertical dimension from ground to bottom of rocker panel, including flanges. Measured at frontmost point of rocker panel.
- H114 HOOD AT REAR TO GROUND.** Measured from hood opening line on ground, exclusive of moldings.
- H115 STEP HEIGHT - FRONT (DESIGN LOAD).** The vertical dimension from top of sill plate base, at C/L of front door sill plate, to ground.
- H116 STEP HEIGHT - REAR (DESIGN LOAD).** Measured in same manner as dimension H115.
- H122 WINDSHIELD SLOPE ANGLE.** The angle between a vertical line and the windshield surface at ear centerline. On compound-curved windshields the chord of the arc is used and limited to that portion of the windshield comprehended by an 18-inch chord.
- H130 STEP HEIGHT - FRONT (CURB LOAD).** The vertical dimension from top of sill plate, at C/L of front door sill plate, to ground.
- H131 STEP HEIGHT - REAR (CURB LOAD).** Measured same as H130.
- H132 BOTTOM OF DOOR TO GROUND, OPEN - FRONT.** Measured from bottom outside corner of door with door in maximum hold-open position.
- H133 BOTTOM OF DOOR TO GROUND, CLOSED - FRONT.** See note on door as H132 dimension, with door closed.
- H134 BOTTOM OF DOOR TO GROUND, OPEN - REAR.** Measured in same manner as H132.
- H135 BOTTOM OF DOOR TO GROUND, CLOSED - REAR.** Measured in same manner as H132.
- H136 BODY ZERO TO GROUND - FRONT.** A vertical dimension measured at front wheel centerline.
- H137 BODY ZERO TO GROUND - REAR.** A vertical dimension measured at rear wheel centerline.
- H147 RAAP BREAKOVER ANGLE.** 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.
- H148 FRONT SUSPENSION TO GROUND.** Minimum clearance to lower control arm lower shaft or lower plate on the ear centerline.
- H149 OIL PAN TO GROUND.** Minimum clearance measured from sheet metal or drain plug.
- H150 FLYWHEEL/CONVERTER HOUSING AND TRANSMISSION ASSEMBLY TO GROUND.** Minimum clearance.
- H151 FRAME STRUCTURE TO GROUND.** Minimum clearance measured approximately midway between front and rear axles. In this measurement, cross bars and X-members shall be considered part of the frame.
- H152 EXHAUST SYSTEM TO GROUND.** Minimum clearance. See location.
- H153 REAR AXLE DIFFERENTIAL SYSTEM TO GROUND.** Minimum clearance.
- H154 FUEL TANK TO GROUND.** Minimum clearance measured to sheet metal or drain plug, but excluding supports or straps.
- H155 SPARE TIRE WELL TO GROUND.** Minimum clearance.
- H156 MINIMUM RUNNING GROUND CLEARANCE.** Location of measurement on the car is to be clearly recorded.
- H195 LIFTOVER HEIGHT.** Vertical dimension from luggage compartment lower opening to ground.

INDEX

SUBJECT	PAGE NO.	SUBJECT	PAGE NO.
Angles of Approach, Departure	25	Leap Height & Spacing	14
Automatic Transmission	1, 16	Lagroom	26, 27, 30
Axle, Steering	21	Lengths - Overall	1, 23
Axle, Rear	1, 17	Lifters, Valve	5
Battery	10	Linkage - Clutch, Brake	15, 19
Bearings, Engine	4, 5, 6	Lubrication	6, 7, 15, 16, 17
Belts - Fan, Generator, Water Pump	9	Luggage Capacity	30
Body - General Information, types	Title, 1, 22, 32	Motor, Starting	10
Exterior Dimensions	1, 22, 23, 24	Muffler	7
Interior Dimensions	26, 27, 28, 29, 30	Overdrive	16
Clearance Dimensions	25	Piston Pins & Rings	2, 4
Brakes - Parking, Service, Power	18, 19	Pistons	2
Camber	21	Power Brakes	18
Camshaft	5	Power Steering	20
Capacities		Power Teams	3
Cooling System	9	Propeller Shaft, Universal Joints	16, 17
Fuel Tank	8	Pumps - Oil, Fuel	7, 8
Lubricants		Water	9
Engine Crankcase	7	Radiator, Hoses	9
Transmission and Overdrive	15, 16	Ramp Break-over Angle	25
Rear Axle	17	Rearset - Axle	1, 2, 17
Carburetor	3, 8	Compression	1, 2, 3
Caster	21	Steering	20
Choke, Automatic	8	Transmission	15, 16
Circuit Breakers, Fuses	14	Rear Axle	1, 2, 17
Clearances, Ground	25	Regulator - Generator	10
Clutch - Pedal Operated	15	Rim	18
Coil, Ignition	11	Rings, Piston	4
Connecting Rod	4	Rods - Connecting	4
Cooling System	9	Shock Absorbers, Front & Rear	19
Compressor Ventilation	7	Spark Plugs	11
Crankshaft	5	Speedometer	12
Cylinder and Cylinder Head	2	Springs - Front & Rear Suspension	20, 21
Dimension Definitions	34, 35, 36	Valve, Engine	6
Distributor - Ignition	11	Stabilizer (Sway Bar) - Front & Rear	20, 21
Electrical System	10, 11, 12, 13, 14	Steering Motor	10
Engine		Steering	20, 21
Bars, Stroke, Displacement, Type	1, 2	Suppression - Ignition, Radio	11
Compression Ratio	1, 2	Suspension - Front & Rear	19, 20, 21
Firing Order, Cylinder Numbering	2, 11	Switches	12
General Information, H.P. & Torque	1, 2	Tailpipe	7
Lubrication	6, 7	Thermometer, Cooling	9
Power Teams	3	Timing, Engine & Valve	5, 6, 11
Exhaust System	7	Tires	1, 18
Equipment Availability	32	Tire In	21
Fan, Cooling	9	Torque Converter	16
Filters - Engine Oil, Fuel System	7, 8	Torque - Engine, Rated	1, 2, 3
Frams	19	Transmission - Types	1, 2, 8, 10, 16
Front Suspension	19, 20	Automatic	1, 2, 8, 10, 16
Fuel, Fuel Pump, Fuel System	1, 2, 8	Manual & Overdrive	1, 2, 8, 10, 16
Fuel Injection	1, 8	Ratios	10, 16
Fuses, Circuit Breakers	14	Front	1, 23
Generator and Regulator	10	Trunk Luggage Capacity	30
Glass	24, 32	Turning Diameter	20
Height (Lamps)	14	Unitized Construction	19
Headroom - Body	26, 27, 30	Universal Joints, Propeller Shaft	16, 17
Heights - Overall	1, 24	Valves - Intake & Exhaust	3, 6
Hood	23	Vibration Damper	5
Horns	12	Voltage Regulator	10
Horsepower - Brake, Taxable	1, 2, 3	Water Pump	9
Ignition System	11	Weights - Shipping, Curb	20
Inflation - Tires	18	Wheel Alignment	1, 23
Instruments	7, 12	Wheelbase	18
Kipping (Steering Axle)	21	Wheels & Tires	1, 21
Lamp Bulbs	13	Wheel Spindle	1, 21
		Widths - Car & Body	26, 32
		Windshield	12
		Windshield Wiper	12