

Automobile Manufacturers Association

Consolidated Specification Questionnaire

1950 MODEL

Mechanical Details

Make of Car..... Oldsmobile..... Model '48"
 Oldsmobile Division
 Name of Maker..... General Motors Corporation..... Address Lansing, Michigan.....
 Date..... 11-28-49.....

NOTE: (1) Subject to Correction: It is understood that the following data are subject to correction in the case of cars not in production at the time this compilation was requested.
(2) Only standard equipment included in Factory Delivered price should be included in this questionnaire.

ENGINE

No. of cylinders 8.....
 Valve arrangement Valve-in-Head.....
 Bore 3-3/4"..... Stroke 3-7/16"
 Cylinder head, cast iron or aluminum Cast Iron.....
 Cylinder sleeve, Yes..... No..... No.....
 Piston displacement 303.73 cu. in.....
 Taxable horsepower 45.0.....
 Horsepower rating—

To be based on actual performance corrected to 60°F. at sea level (barometric pressure 29.92 inches of mercury) with standard fuel. (Octane No. of fuel 86 Research

—With Bare Engine—

Maximum brake hp. 135..... at..... 3600..... R.P.M.

—With Standard Accessories—*

Maximum brake hp. 129..... at..... 3600..... R.P.M.

*Those standard accessories needed for normal operation including fan, generator, starter, air cleaner, muffler, manifolds, fuel and water pumps.

Maximum torque—

With bare engine, lb. ft. 263..... at..... 1800..... R.P.M.

With standard accessories,* lb. ft. 255..... at..... 1800..... R.P.M.

Compression Ratio—

Standard 7.25..... Optional.....

Standard compression pressure —pounds—

At cranking speed 136#..... at 150 R.P.M.

At what R.P.M. 183# @ 1000 R. P. M.

PISTONS and RINGS

Piston

Make Own.....

Material Aluminum Alloy.....

Features—split skirt, invar strut, oval, tin-plated, aluminum oxide finish, auto-thermic, V-Bridge, porous chrome plate, etc. Auto-thermic, Cam Grnd., Tin plate Steel strut.

Weight—ounces—without rings, pin or bushing 19.88 oz.

Length 4".....

Clearance—

Top land 032"..... to..... 026"

Skirt, top 0005"..... bottom 0005"..... to..... 0010"
 0015"

PISTONS and RINGS (cont'd)

Piston ring groove depth—

Oil 193"..... Compression 200"

No. of oil rings used per piston One.....

Width of oil rings 3/16".....

Width of oil ring gap 008"..... to..... 016"

No. of compression rings used per piston Two.....

Width of compression rings 5/64".....

Width of compression ring gap 010"..... to..... 020"

Maximum wall thickness of oil rings 150"

Maximum wall thickness of compression rings 187"

Are ring expanders used, Yes..... Yes..... No.....

RODS and PINS

Wristpin—

Material S. A. E. #1117 Steel.....

Length 3.016"..... Diameter 9805"

Locked in rod, piston or floating Full Floating.....

Clearance in piston 0000 loose to..... 0002

Clearance in rod 0003"..... to..... 0005"

Connecting rod—

Length—center to center 6.625".....

Material GM X-1335 Steel.....

Weight—ounces 29.54 oz.

Crankpin journal—

Diameter 2 1/4"..... Length 2"

Lower bearing—

Material Durex 100-A with GM 4167-M Babbitt Overlay

Clearance 0009"..... to..... 0029"

End play 002"..... to..... 011"

Ship—solid, laminated or none None.....

Spun or separate Separate.....

Rods and pistons removed from above or below Above.....

CRANKSHAFT

Material S. A. E. 1145 Mod. Steel.....

Weight—stripped 60#.....

Vibration dampener used—yes or no No.....

Type

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CRANKSHAFT (cont'd)

Crankshaft counterweights used, number of 6
 Which main bearing takes thrust Rear
 Crankshaft end play .004" to .008"

Main bearing—

Type: Cast-in or Slip-in Yes
 If slip-in: Removable from below Yes
 Necessary to align ream No

Material Durex 100-A with GM 4167 Babbitt Overlay

Clearance .0005" to .003" - Except Rear
 .002" to .0035" - Rear Only
 Shim—solid, laminated or none None

Main bearing journal diameter x length—

- No. 1 2-1/2" x 1-3/32"
- No. 2 2-1/2" x 1-1/8"
- No. 3 2-1/2" x 1-1/8"
- No. 4 2-1/2" x 1-1/8"
- No. 5 2-5/8" x 1.880"
- No. 6
- No. 7
- No. 8
- No. 9

Crankshaft gear or sprocket—

Make Link Belt - Morse Optional
 Material S. A. E. 1141 Steel
 C-1117 or 1118 Steel "Morse"

CAMSHAFT

Camshaft gear or sprocket—

Make Link Belt - Morse Optional
 Material IX Cast Iron - Morse Cast Iron

Timing chain—Link Belt

Make Link Belt - Morse Optional
 Number of links 48 L. B. - 64 Morse
 Width 27/32" Link Belt - 7/8" Morse
 Pitch 500" Link Belt - 375" Morse

VALVES

INTAKE VALVE—

Make Various
 Material S. A. E. 3140 Steel & N. E. 8645 Stl.
 Overall length 4.917"
 Actual overall diameter of head 1-3/4"
 Minimum port diameter 1-7/16"
 Angle of seat 45°
 Is valve seat an insert? No
 Stem diameter 3425 - 3417
 Stem to guide clearance .0022" to .0040"
 Lift 333
 Spring pressure and length—
 Outer—

VALVES (cont'd)

With valve closed—lb. 65# ins. 1.777
 With valve open—lb. 141# ins. 1.447
 Length out of engine—ins. 2-3/32" Approx.
 Inner— None
 With valve closed—lb. ins.
 With valve open—lb. ins.
 Length out of engine—ins.

EXHAUST VALVE—

Make Various XCR Head
 Material Silchrome XCR Steel & NE-8645 Stl.
 Overall length 4.941" Stem
 Actual overall diameter of head 1-7/16"
 Minimum port diameter 1.241"
 Angle of seat 45°
 Is valve seat an insert? No Material
 Stem diameter 3938 - 3930
 Stem to guide clearance .0027" to .0045"
 Lift 333
 Spring pressure and length—
 Outer—
 With valve closed—lb. 65# ins. 1.777"
 With valve open—lb. 141# ins. 1.447"
 Length out of engine—ins. 2-3/32" Approx.
 Inner— None
 With valve closed—lb. ins.
 With valve open—lb. ins.
 Length out of engine—ins.

Operating tappet clearance (hot or cold)—intake None
 CAM LIFT for valve timing—intake Open .0029" Close
 Operating tappet clearance (hot or cold)—exhaust None .0049"
 CAM LIFT for valve timing—exhaust Open .0029" Close
 Hydraulic valve lifters—yes or no Yes .0049"

Valve timing—

Intake opens 13.1/2 degrees BUDC piston travel 0.060 inches
 Intake closes 50.1/2 " ALDC " " 2.947 inches
 Exhaust opens 49.1/2 " BLDC " " 2.964 inches
 Exhaust closes 14.1/2 " AUDC " " 0.068 inches
 Valve Timing Marks—on Flywheel, Vibration Damper, None None

LUBRICATION

Lubricating system type—pressure or splash Pressure
 Oil pressure to—
 Main bearings—yes or no Yes
 Connecting rods—yes or no Yes
 Wristpins—yes or no No
 Camshaft bearings—yes or no Yes
 Tappets—yes or no Yes

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LUBRICATION (cont'd)

Timing gear or chain lubrication—*positive or splash* Positive
 Oil pump type Gear
 Oil grade recommended—*SAE viscosity and temperature range*—
 See Lubrication Chart

Normal oil pressure—*lbs. at M.P.H.* 40# at 30 M. P. H.
 Pressure at which relief valve opens 40
 Capacity of oil reservoir—*quarts, dry* 5 *refill* 5
 Oil pressure gauge make A. C.
 Oil reservoir level gauge type Dip Stick
 Floating type oil intake—*yes or no* No
 External oil filter make None
 Other type of oil cleaner None
 Oil cooler make None
 Chassis lubrication—*Make* Various

FUEL

Gasoline tank—*capacity* 18 Gallons
 Fuel feed—
 Type—*vacuum tank, electric pump, gravity vacuum pump or camshaft pump* Camshaft Pump
 Make A. C. Model Type CE
 Carburetor—
 Make Various Model
 Number used 1
 Size 1 7/16"
 Type—
 Up or down draft Down Single or dual Dual
 Intake manifold heat control—*manual, automatic or none* Automatic
 Automatic choke, make Various Model
 Air cleaner—*intake silencer make* A. C.
 Type—*dry felt; oil bath; oil coated fibre* Oil coated metal
 Heavy Duty type—*Make* None *Model* ribbon
 Muffler make Hayes and Walker
 Tail pipe diameter 2"

COOLING

Water pump—
 Type Sealed Centrifugal
 Drive V-Belt
 Is pump equipped with packing nut No
 Water circulation thermostat make Harrison
 Pressure relief valve—*yes or no* Yes
 By-pass for recirculation—*yes or no* Yes
 Radiator core—
 Type Tubular Vee Cell
 Make Harrison

COOLING (cont'd)

Cooling system—*capacity, quarts* 21 1/2 qts.
 Water jackets full length of cylinders—*yes or no* Yes
 Water all around cylinder—*yes or no* Yes
 Lower radiator hose—
 Inside diameter 1 3/4" Length 13 7/8" Approx.
 Upper radiator hose—
 Inside diameter 1 1/2" Length 9 7/16"
 Fan belt—
 Make Various
 Angle of vee 36°
 Length, outside 39" Width, maximum 3/8"
 Fan—
 Make Hayes No. of Blades 4

IGNITION

Ignition units—
 Make Delco Remy Model 1110817
 Manual or octane selector, *degrees advance* 15° *retard* 15°
 Maximum centrifugal advance crankshaft, *degrees* 30° ± 2
 at 3700 engine R.P.M.
 Inches of Mercury Necessary to operate Vacuum Advance (Plus or minus 1 inch) 6.5 to 8.5"
 Maximum Vacuum advance crankshaft, *degrees* 20°
 Breaker gap .0125-.0175 Breaker arm tension 19-23 oz.
 Dwell angle 22°
 Timing—*Breaker points open* 2 1/2° B. T. C. *degrees crankshaft rotation*
 or inches piston travel (after or before) top center
 with octane selector in the Normal position.
 Timing mark location—*flywheel, vibration dampener or none* Crankshaft Pulley
 Firing order 1-8-7-3-6-5-4-2
 Amperage draw of ignition coil—
 With engine stopped 4.5 Amp.
 With engine idling 2.0 Amp.
 Spark plug—
 Thread—10 m.m., 14 m.m. or 18 m.m. 14 m.m.
 Make A. C. Model 45
 Gap .030"
 Ignition cable make G. M.

BATTERY

Make Delco Remy Model 17K4W
 Capacity—*amperes hours* 115 A. H. @ 20 hour rate
 Number of plates per cell 17
 Bench charging rate—
 Start 12.5 Finish 5.25
 Which battery terminal is grounded Negative
 Location of battery Under-Hood

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STARTING MOTOR

Make Delco Remy Model 1107956
 Normal engine cranking speed Summer 120 R. P. M.
 Brush spring tension 24-28 oz.
 Lock test—
 Amperage draw 600
 Volts 3.0
 Torque in pounds feet 15
 No load test—
 Amperage draw 80
 Volts 5.7 R.P.M. 5500
 Type of drive—Bendix or sliding gear with overrunning clutch
 Starting device—Solenoid, manual, etc. Solenoid
 Starter operation—check items required to start engine
 1. Turn on Ignition X
 2. Depress starter pedal
 3. Depress accelerator pedal X
 4. Depress clutch pedal
 5. Operate button on dash X
 6. Pull out throttle
 Starting motor pinion meshes front or rear Front
 No. of teeth in flywheel 145
 Face width of flywheel teeth 3/8"
 Gear ratio between starter armature and flywheel 16.11:1

GENERATOR

Make Delco Remy Model 1102704
 Type—bird brush, shunt, etc. Shunt
 Brush spring tension 24 to 28 oz.
 Current regulator, voltage regulator or current and voltage control unit Current & Voltage Control
 Maximum-controlled charging rate
 Temperature 70° - 140°
 Amperes 40 Amp.
 Voltage 8 V
 R.P.M. 1880 at 70° - 2320 at 140°
 Cutout relay—
 Voltage at closing 6.5
 Amperes to open, reverse current 0 to -4
 Air gap .020"
 Voltage regulator—
 Volts 7.3 @ 9 Amp.
 Temperature 150°
 Air gap .075"
 Current regulator—
 Amperes 40 Amp.
 Temperature 150°
 Air gap .075°
 Car speed for maximum charging rate 22 MPH and up
 Ammeter or charge indicator make A. C.

LAMPS

Lighting switch make Delco Remy
 Are tail and dash lights in series No
 Headlights—
 Make Guide Lamp
 Location—in fender, in catwalk, or radiator shell Fender
 Parking or fender light make Guide
 Tail and stop light make Guide
 Horn—
 Type—vibrator or motor Vibrator No. used 2
 Make Delco Remy
 Amperage draw of each High Note 18 Amp.
 Low Note 20 Amp.

CLUTCH

Make Long Mfg. Div.
 Drive type—
 Direct to flywheel face Yes
 Through fluid flywheel No
 Semi-centrifugal Yes
 Power operated unit—make None
 Vibration insulation or neutralizer—fabric, rubber blocks or springs Spring-Friction Type
 No. of clutch driving discs 1
 No. of clutch driven discs 1
 Clutch facing—
 Material—woven or moulded asbestos, cork Woven asbestos
 Inside diameter 7"
 Outside diameter 10.5"
 Thickness .137
 No. required 2

TRANSMISSION - Syncro-Mesh

Transmission—
 Make Own Model
 No. of forward speeds 3
 Manual shift—yes, no Yes
 Automatic or auxiliary shifting mechanism—yes, no No
 If yes, Make
 Type—centrifugal, vacuum, electric or hydraulic
 Automatic overdrive— No
 Make
 Oil capacity—pints
 Oil grade recommended—S.A.E. viscosity
 Summer Winter
 Gear ratio in high—standard 5-passenger
 4-door sedan 1:1
 Transmission ratio—
 in overdrive In second 1.53:1
 in third 1:1 In fourth
 in low 2.39:1 In reverse 2.39:1

See Auxiliary sheet 4A attached, for information on Oldsmobile's Hydra-Matic Drive. This unit is available for all '88" model cars, car prices being increased accordingly. The information listed herein, under clutch and transmission applies to the 1950 design syncro-mesh transmission, standard equipment for all '88" model cars.

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HYDRA - MATIC DRIVE SPECIFICATIONS

TYPE	High efficiency fluid coupling combined with a fully automatic transmission.
LOCATION	Unit with engine.
TYPE OF GEARING	Planetary.
CONTROL LOCATION	Steering Column & Throttle.
NUMBER OF FORWARD SPEEDS	4
TRANSMISSION RATIOS:	
First	3.8195 to 1
Second	2.6341 to 1
Third	1.45 to 1
Fourth	1 to 1
Reverse	4.3045 to 1
TRANSMISSION OIL CAPACITY	10.5 quarts Hydra-Matic Fluid Refill
CLUTCH	None
AXLE RATIO - STANDARD	3.42:1

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TRANSMISSION (cont'd)

Constant mesh gears on second Yes
 Spur or helical gears—
 For second speed Constant Mesh Helical
 For first speed Sliding Helical
 For reverse speed Sliding Helical
 For all speeds

Synchronous meshing and third gears Yes
 Transmission oil—
 Capacity—pints 3 Pts.
 Grade recommended—S.A.E. viscosity
 Summer S. A. E. 90 Winter 90

Universal joints—
 Make Mechanics or Saginaw
 Number used 2
 Type—metal with anti-friction bearing or metal with plain bearing
 Lubricated with Permanently

Drive taken through springs, torque arm, torque tube or radius rods Stabilizing Arms
 Torque taken through springs, torque arm, torque tube or radius rods Stabilizing Arms

REAR AXLE

Rear axle—
 Make Own Model

Type—Semi, full or three-quarter floating Semi-Floating
 Minimum road clearance under center of rear axle—tires inflated

Rear axle oil—
 Capacity—pints 3 3/4
 Grade and type recommended—S.A.E. viscosity
 Summer See Lub. Chart Winter

Type of gearing—spiral bevel, worm, hypoid Hypoid
 Gear ratio—standard 5-passenger 4-door sedan 3.64:1
 Optional gear ratios 3.9:1

Number of teeth—
 In ring gear 40 In pinion 11
 How is pinion adjusted—screw or shims shims
 How is pinion bearing adjusted—screw or shims Nut
 Are pinion bearings carried in sleeve No
 Backlash between pinion and ring gear .004" to .008"

TIRES and WHEELS

Tires—
 Make Various
 Size 7.60" x 15" No. of plies 4

TIRES and WHEELS (Cont'd)

Inflation pressure—Front 24# Rear 24#
 Rim—Diameter 15" Width 5.50F
5.50K (Optional)

SPRINGS**FRONT SPRING—**

Independent or conventional suspension Independent
 Type—coil, semi-elliptic, transverse, torsion Coil
 Make Own
 Material GM 9260 M Spring Steel
 Torsional stabilizer at front Yes

If leaf—
 Length Width

Number of leaves—5-passenger, 4-door sedan
 Are radius rods used on axle

If coil—
 Free length 15 3/8"
 Length under curb weight 10"

REAR SPRING—

Independent or conventional suspension Conventional
 Type—coil, semi-elliptic, transverse, torsion Coil
 Make Own
 Material GM 9260 M Spring Steel
 Torsional stabilizer at rear Yes

If leaf—
 Length Width

Number of leaves—5-passenger, 4-door sedan
 Spring leaves lubricated with

Spring cover, Yes No

Spring shackles—
 Front—Type Make

Rear—Type Make

Spring bolts—
 Type

If coil—
 Free length 17 9/16"
 Length under curb weight 11 1/8"
 Rate for above 100# pounds per inch

Shock absorbers—
 Make Delco
 Type, one way with lever, two way with lever, or direct acting
 Front Two way with Lever
 Rear Two way with Lever
 Fluid capacity (oz.)—front 134-140cc rear 154-163cc

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STEERING

Steering gear—
 Type Worm and Roller
 Make Saginaw Model
 Ratio 19:1
 Lubricant recommended See Chart
 Steering wheel diameter 18"
 Drag link longitudinal or transverse Transverse
 Tie rod—one or two 2
 Is intermediate steering arm used No
 Number of turns of steering wheel for full left
 to right swing of wheels 4 1/4
 Car turning radius—feet—right, left or both 20.0'
 Caster—degrees 0° to 3/4° Neg.
 Camber—degrees or inches 1/4° Neg. 3/4° Pos.
 Toe-in—inches 1/16" to 1/8"
 Crosswise inclination of kingpin—degrees 4° 29' 47"
 Front axle—
 Make None Model
 Section type—I-beams, tubular or none None
 End type—Elliott or reverse Elliott Reversed Elliott
 Minimum road clearance—tires inflated 8 9/32"

BRAKES

Foot brakes—
 Make Various
 Type of mechanism, hydraulic or mechanical Hydraulic
 If vacuum booster is standard, state make None
 Brake lining moulded, semi-moulded or woven—
 Primary shoe Moulded
 Secondary shoe Moulded
 Drum—
 Material Cast Iron Diameter 11"
 Lining— Front Rear
 Length per wheel 21.5/16" 21.5/16"

BRAKES (cont'd)

Front Rear
 Width 2 1/2" 2" Thickness 221" - 231"
 Clearance—toe 0.15" heel 0.15"
 Total foot braking area 191.7
 Percent braking power on rear wheels 42%
 Hand lever operates on—transmission, separate rear brakes, rear service brakes or all four service brakes Rear Service
 Hand brake, if separate from service brake—
 Internal or external
 Drum diameter
 Lining—
 Length per drum
 Width Thickness
 Clearance

FRAME and OTHER GENERAL DATA

Frame—
 Depth—maximum 6 3/16"
 Thickness—maximum 120"
 Flange width—maximum 2 1/4"
 Wheelbase 119 1/2"
 Tread—
 Front 57"
 Rear 59"
 Weight of standard 5-passenger, four-door sedan—
 Shipping 3531
 Curb 3688
 Price of standard 5-passenger, 4-door sedan
 First serial number, this series 508M1001
 Serial number location On Body left front door
 Pillar
 Overall length of car—
 With bumpers and bumper guards 202"
 Overall width of car 75 3/16"
 Overall height, road to roof with no load 64 1/16" (5 Pass. Load)

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NOTE—In giving bearing dimensions, kindly use the following order: inside diameter, outside diameter and width. Where cup and cone bearings are used, give both cup and cone numbers.

BEARINGS

Water pump bearing—
 Make or type New Departure D. R. Ball
 Size or number 954446.....

Fan bearing—
 Make or type None
 Size or number

Starting motor commutator end bearing—
 Make or type Plain
 Size or number

Starting motor drive end bearing—
 Make or type None
 Size or number

Starting motor outboard bearing—
 Make or type Bronze Graphite.....
 Size or number 1/2" x 25/32"

Generator commutator end bearing—
 Make or type Bronze
 Size or number 9/16" x 25/32"

Generator drive end bearing—
 Make or type Ball Bearing.....
 Size or number W. D. 3203.....

Transmission main drive gear front pilot bearing—
 Make or type Durex
 Size or number 412562.....

Clutch throwout bearing—
 Make or type Ball Thrust.....
 Size or number 1421681.....

Transmission main drive gear rear bearing—
 Make or type New Departure Ball.....
 Size or number 954381.....

Transmission main shaft front pilot bearing—
 Make or type Roller
 Size or number 1294780.....

Transmission main shaft rear bearing—
 Make or type New Departure Ball.....
 Size or number 954383.....

Transmission countershaft front bearing—
 Make or type Needle Roller.....
 Size or number 1298445.....

Transmission countershaft rear bearing—
 Make or type Needle Roller.....
 Size or number 1298445.....

Transmission reverse idler bearing—
 Make or type Babbitt-Steel Backed Bushing.....

BEARINGS (cont'd)

Size or number 1433125.....

Overdrive shaft rear bearing—
 Make or type None.....
 Size or number

Overdrive shaft pilot bearing—
 Make or type None.....
 Size or number

Main shaft extension bearing—
 Make or type Cleveland Graphite Bronze...
 Size or number 1313790.....

Rear axle pinion shaft front bearing—
 Make or type Timken or Hyatt.....
 Size or number 188963 or 506917.....

Rear axle pinion shaft rear bearing—
 Make or type Timken or Hyatt.....
 Size or number 188960 or 506920.....

Differential right bearing—
 Make or type Hyatt or Bower.....
 Size or number 179243 or 502970.....

Differential left bearing—
 Make or type Hyatt or Bower.....
 Size or number 179243 or 502970.....

Rear wheel inner bearing—
 Make or type None.....
 Size or number

Rear wheel outer bearing—
 Make or type New Departure Ball.....
 Size or number 954172.....

Front wheel inner bearing—
 Make or type New Departure Ball.....
 Size or number 909052.....

Front wheel outer bearing—
 Make or type New Departure Ball.....
 Size or number 909001.....

Kingpin upper bearing—
 Make or type Steel Backed 4035 M. Bronze.....
 Size or number 231905.....

Kingpin lower bearing—
 Make or type Steel Backed 4035 M. Bronze.....
 Size or number 231905.....

Kingpin thrust bearing—
 Make or type Hoover Ball.....
 Size or number 230679.....

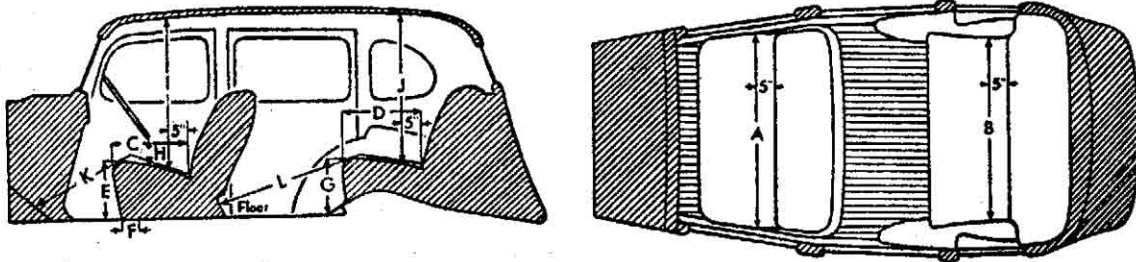
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NOTE: (1) List only that equipment which is included in the factory delivered price. Special equipment which is fitted, but not included in the factory delivered price should be listed with its additional price.
 (2) Enter on top line your own model name, or series mark corresponding to Standard, DeLuxe or Custom.

EQUIPMENT	Models		
	Standard	DeLuxe	Custom
Catalog Designation of Model	"88"	"88"	
Lacquer make	Various	Various	
Body finish, <i>lacquer or synthetic enamel</i>	Lacquer	Lacquer	
Fender finish, <i>lacquer or synthetic enamel</i>	Lacquer	Lacquer	
Hardware make	Ternstedt	Ternstedt	
Speedometer make	A. C.	A. C.	
Gasoline gauge make	A. C.	A. C.	
Thermometer make	A. C.	A. C.	
Car lock make	Various	Various	
Car lock operates <i>on ignition or ignition and steering</i>	Ignition	Ignition	
Clock make <i>mechanical or electrical</i>	None	Electric	
Cigar lighter make	Various	Various	
Safety glass make	L. O. F.	L. O. F.	
Safety glass type, <i>laminated or tempered</i>			
In windshield	Laminated	Laminated	
In side windows	Laminated	Laminated	
In rear window	Tempered	Tempered	
Bumper make	Own	Own	
Bumper guard make	Brown-Lipe-Chapin	Brown-Lipe-Chapin	
Car heater make	None	None	
Type	None	None	
Direction signal make	None	None	
Front— <i>yes or no</i>	None	None	
Rear— <i>yes or no</i>	None	None	
No. of tail lights included	2	2	
No. of visors included	2	2	
No. of horns included	2	2	
No. of windshield wipers included	2	2	
No. of spare tires included	1	1	

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BODY DIMENSIONS (Five-Passenger, Four-Door Sedan)



INTERIOR

All interior body dimensions taken with front seat in its rear position

Width of front seat cushion, measured 5 inches from back (A)	59.92
Width of rear seat cushion, measured 5 inches from back (B)	58.48
Depth of front seat cushion (C)	17 15/16" 18.10
Depth of rear seat cushion (D)	17 15/16" 18.51
Height of front seat cushion measured 12 1/2 inches from center line of body (E)	13.84
Front seat horizontal adjustment, inches (F)	4 7/16"
Front seat vertical adjustment, inches	1/2"
Height of rear cushion measured 12 1/2 inches from center line of body (G)	12.56
Vertical distance steering wheel and seat cushion (H)	5.56
Head room at front seat, measured 5 inches from back (I)	36.00
Head room at rear seat, measured 5 inches from back (J)	35.60
Leg room in front seat, measured from 6 inches up on toe board, following contour of seat cushion (K)	42.68
Leg room in rear seat, measured from center of foot rest, following contour of seat cushion (L)	41.60
Trunk capacity, cubic feet	10.46 Cu. ft.
Width of left front pillar on diagonal with door closed	

