

Automobile Manufacturers Association
Consolidated Specification Questionnaire
For 1947 Models
Mechanical Details

Make of Car..... **PONTIAC** Model **1947-25**

Name of Maker. **Pontiac Motor Division** Address ... **196 Oakland Ave., Pontiac, Michigan**

Date. September 10th, 1946

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 **6**
 Valve arrangement **"L" Head**
 Bore **3 1/16** Stroke **1 1/8**
 Cylinder head, cast iron or aluminum **Cast Iron**
 Cylinder sleeve, Yes No
 Piston displacement **239.2**
 Taxable horsepower **30.4**
 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 **76**)

—With Bare Engine—

Maximum brake hp. **93 1/2** at. **3100** R.P.M.
 —With Standard Accessories—*

Maximum brake hp. **97 1/2** at. **3200** 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. **186** at. **1400** R.P.M.
 With standard accessories,* lb. ft. **186** at. **1100** R.P.M.

Compression Ratio—
 Standard **6.5** Optional **7.5**

Standard compression pressure —pounds—

At cranking speed **160**
 At what R.P.M. **1000**

PISTONS and RINGS

Piston
 Make **Own**
 Material **Chrome Nickel Alloy**
 Features—split skirt, inner strut, oval, tin-plated, aluminum oxide finish, auto-thermic, V-Bridge, porous chrome plate, etc. **Electroplated**
 Weight—ounces—without rings, pin or bushing **27.1**
 Length **3-19/32**
 Clearance—
 Top land **.0175** to **.0295**
 Skirt, top **.002** bottom **.002**

PISTONS and RINGS (cont'd)

Piston ring groove depth—
 Oil **.1942** Compression **.1922**
 No. of oil rings used per piston **1**
 Width of oil rings **3/16**
 Width of oil ring gap **.007-.017**
 No. of compression rings used per piston **2**
 Width of compression rings **3/32**
 Width of compression ring gap **.006-.013**
 Maximum wall thickness of oil rings **.150**
 Maximum wall thickness of compression rings **.175**
 Are ring expanders used, Yes No **X**

RODS and PINS

Wristpin—
 Material **GM-1315-A**
 Length **3-1/16** Diameter **15/16**
 Locked in rod, piston or floating **Piston**
 Clearance in piston **Press Fit** to
 Clearance in rod **.00014** to **.0006**

Connecting rod—
 Length—center to center **7-9/16**
 Material **GM 1045**
 Weight—ounces **37**

Crankpin journal—
 Diameter **2-1/8** Length **1-9/32**

Lower bearing—
 Material **Babbitt**
 Clearance **.0001** to **.0021**
 End play **.007** to **.030**
 Slip—solid, laminated or none **None**
 Spun or separate **Separate**

Rods and pistons removed from above or below.

CRANKSHAFT

Material **GM-1045**
 Weight—stripped **86.5**
 Vibration damper used—yes or no **X**
 Type **Harmonic**

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CRANKSHAFT (cont'd)

Crankshaft counterweights used, number of **9**
 Which main bearing takes thrust **#3**
 Crankshaft end play **.003** **.007**
 Main bearing—
 Type: Cast-in or Slip-in. **X**
 If slip-in: Removable from below **Yes**
 Necessary to align ream **No**
 Material **Babbitt**
 Clearance **.0003** = **.0023**
 Shim—solid, laminated or none
 Main bearing journal diameter x length—
 No. 1 **2 5/8 x 1 1/2**
 No. 2 **2-17/32 x 1-3/16**
 No. 3 **2-19/32 x 1-1/8**
 No. 4 **2-5/8 x 1-9/16**
 No. 5
 No. 6
 No. 7
 No. 8
 No. 9
 Crankshaft gear or sprocket—
 Make **Own**
 Material **Case hardened steel**

CAMSHAFT

Camshaft gear or sprocket—
 Make **Own**
 Material **Chrome Nickel Alloy Iron**
 Timing chain—
 Make **Morse**
 Number of links **56**
 Width **1**
 Pitch **3/8**

VALVES

INTAKE VALVE—
 Make **Optional**
 Material **Optional**
 Overall length **5-23/32**
 Actual overall diameter of head **1-19/32**
 Minimum port diameter **1-3/8**
 Angle of seat **30°**
 Is valve seat an insert? **No - Taper Guide**
 Stem diameter **5/16**
 Stem to guide clearance **Free** **to .0006**
 Lift **19/64**
 Spring pressure and length—
 Outer—

VALVES (cont'd)

With valve closed—lb. **.59** ins. **1-29/32**
 With valve open—lb. **.101** ins. **1-19/32**
 Length out of engine—ins.
 Inner—
 With valve closed—lb. ins.
 With valve open—lb. ins.
 Length out of engine—ins.

EXHAUST VALVE—

Make **Optional**
 Material **Optional**
 Overall length **5-23/32**
 Actual overall diameter of head **1-15/32**
 Minimum port diameter **1-5/16**
 Angle of seat **45°**
 Is valve seat an insert? **No** Material **Taper Guid**
 Stem diameter **5/16**
 Stem to guide clearance **Free** **to .0006**
 Lift **19/64**
 Spring pressure and length—

Outer—
 With valve closed—lb. **.59** ins. **1-29/32**
 With valve open—lb. **.101** ins. **1-19/32**
 Length out of engine—ins.
 Inner—
 With valve closed—lb. ins.
 With valve open—lb. ins.
 Length out of engine—ins.

Operating tappet clearance (hot or cold)—intake **.011-.013**

Tappet clearance for valve timing—intake **Same**

Operating tappet clearance (hot or cold)—exhaust **.011-.013**

Tappet clearance for valve timing—exhaust **Same**

Hydraulic valve lifters—yes or no **No**

Valve timing—

Intake opens **5** degrees BDC piston travel inches
 Intake closes **39** " ALDC " " inches
 Exhaust opens **45** " BLDC " " inches
 Exhaust closes **5** " AUDC " " inches

Valve Timing Marks—on Flywheel, Vibration Damper, None
Crankshaft & Camshaft Sprockets

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 **Yes**
 Camshaft bearings—yes or no **Yes**
 Tappets—yes or no **No**

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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—
 10W 100° +95°
 20W or 10 110° +110°
 20W or 20 120° +110°
 Normal oil pressure—lbs. at M.P.H. 35-40 @ 40 M.P.H.
 Pressure at which relief valve opens
 Capacity of oil reservoir—quarts, dry 6 Qts., refill 5 Qts.
 Oil pressure gauge make A.C.
 Oil reservoir level gauge type blade
 Floating type oil intake—yes or no No
 External oil filter make No
 Other type of oil cleaner Internal precipitation type
 Oil cooler make None
 Chassis lubrication—Make Pressure Gun

FUEL

Gasoline tank—capacity 17 Gals.
 Fuel feed—
 Type—vacuum tank, electric pump, gravity vacuum
 pump or camshaft pump Mechanical pump
 Make AC Model
 Carburetor—
 Make Carter Model W-A-I-537-5
 Number used One
 Size 1½
 Type—
 Up or down draft down Single or dual single
 Intake manifold heat control—manual, automatic or none automatic
 Automatic choke, make Carter Model
 Air cleaner—intake silencer make AC
 Type—dry felt; oil bath; oil coated fibre Oil Coated fibre
 Heavy Duty type—Make AC Model
 Muffler make Optional - Straight through type
 Tail pipe diameter 1-3/4

COOLING

Water pump—
 Type Centrifugal
 Drive 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 Cellular
 Make Harrison

COOLING (cont'd)

Cooling system—capacity, quarts 18
 Water jackets full length of cylinders—yes or no Yes
 Water all around cylinder—yes or no Yes
 Lower radiator hose—
 Inside diameter Length
 Upper radiator hose—
 Inside diameter Length
 Fan belt—
 Make Optional
 Angle of vee
 Length, outside Width, maximum
 Fan—
 Make Own No. of Blades 4

IGNITION

Ignition units—
 Make Delco Remy Model 647-0
 Manual or octane selector, degrees advance, 10 retard 10
 Maximum centrifugal advance crankshaft, degrees 25
 at 40 M.P.H., engine R.P.M.
 Inches of Mercury Necessary to operate Vacuum Advance (Plus or
 minus 1 inch) 7-9
 Maximum Vacuum advance crankshaft, degrees 15
 Breaker gap 0.020 Breaker arm tension 17-21 oz.
 Cam angle 37 deg.
 Timing—Breaker points open 246 degrees crankshaft rotation
 or inches piston travel (after or before) top center
 with octane selector in the 0 position
 Timing mark location—flywheel, vibration damper or none. Flywheel
 Firing order 1-5-3-6-2-4
 Amperage draw of ignition coil—
 With engine stopped
 With engine idling
 Spark plug—
 Thread—10 mm., 14 mm. or 18 mm. 14
 Make AC Model 45
 Gap 0.023-0.028
 Ignition cable make Packard

BATTERY

Make Delco Model 15 E 2-W
 Capacity—ampere hours 100 @ 20 hour rate
 Number of plates per cell 15
 Bench charging rate—
 Start 7 Finish 7
 Which battery terminal is grounded negative
 Location of battery Under hood

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STARTING MOTOR

Make ... Delco Remy Model 1107032
 Normal engine cranking speed 43 RPM. at 0° 10 W. oil.
 Brush spring tension 24-26 ozs.
 Lock test—
 Amperage draw 525
 Volts 3.37
 Torque in pounds foot 12
 No load test—
 Amperage draw 65
 Volts 5 R.P.M. 5000
 Type of drive—Bendix or sliding gear with overrunning clutch. Bendix
 Starting device—Solenoid, manual, etc. Manual
 Starter operation—check items required to start engine
 1. Turn on ignition X
 2. Depress starter pedal X
 3. Depress accelerator pedal X
 4. Depress clutch pedal X
 5. Operate button on dash
 6. Pull out throttle
 Starting motor pinion meshes front or rear REAR
 No. of teeth in flywheel
 Face width of flywheel teeth
 Gear ratio between starter armature and flywheel 15.55-1

GENERATOR

Make Delco Remy Model 1102665
 Type—third brush, shunt, etc. Shunt
 Brush spring tension 22-26 ozs.
 Current regulator, voltage regulator or current and
 voltage control unit Current & voltage
 Maximum controlled charging rate
 Temperature Hot
 Amperes 32-34
 Voltage 7.2 - 7.4
 R.P.M. 1140 (25 & 27)
 Cutout relay—
 Voltage at closing 6.2 - 6.7
 Amperes to open, reverse current 0.4
 Air gap020
 Voltage regulator—
 Volts 7.2 - 7.4
 Temperature Hot
 Air gap070 - .075
 Current regulator—
 Amperes 32-34
 Temperature Hot
 Air gap080 - .085
 Car speed for maximum charging rate 25
 Ammeter or charge indicator make A.C.

LAMPS

Lighting switch make Delco Remy
 Are tail and dash lights in series No
 Headlights—
 Make Guide
 Location—in fender, in cowl, or radiator shell in 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 18-21

CLUTCH

Make Inland
 Drive type—
 Direct to flywheel face Yes
 Through fluid flywheel
 Semi-centrifugal
 Power operated unit—make
 Vibration insulation or neutralizer—fabric,
 rubber blocks or springs Springs
 No. of clutch driving discs None
 No. of clutch driven discs One
 Clutch facing—
 Material—woven or moulded asbestos, cork moulded
 Inside diameter 6
 Outside diameter 9 $\frac{1}{2}$
 Thickness 1/8
 No. required 2

TRANSMISSION

Transmission—
 Make Own Model
 No. of forward speeds 3
 Manual shift—yes, no Yes
 Automatic or auxiliary shifting mechanism—yes no X
 If yes, Make
 Type—centrifugal, vacuum, electric or hydraulic
 Automatic overdrive—
 Make
 Oil capacity—pints
 Oil grade recommended—S.A.E. viscosity
 Summer Winter
 Gear ratio in high—standard 5-passenger
 4-door sedan 4.1
 Transmission ratio—
 In overdrive In second 1.66
 In third Direct In fourth
 In low 2.67 In reverse 3.02

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TRANSMISSION (cont'd)

Constant mesh gears on second Yes
 Spur or helical gears—
 For second speed
 For first speed
 For reverse speed
 For all speeds Helical
 Synchronous meshing and third gears
 Transmission oil—
 Capacity—pints 1-3/4
 Grade recommended—S.A.E. viscosity
 Summer EP 80 or 90 Winter EP 80 or 90
 Universal joints—
 Make Mechanics
 Number used
 Type—metal with anti-friction X
 bearing or metal with plain bearing
 Lubricated with Semi fluid viscous chassis
 Drive taken through springs, torque arm, torque tube or lubricant
 radius rods Springs
 Torque taken through springs, torque arm, torque
 tube or radius rods .. Springs

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 - 8-1/8
 Rear axle oil—
 Capacity—pints 3-1/4
 Grade and type recommended—S.A.E. viscosity
 All Year 90 Pass. Car Qnty Hypoid
 Summer Winter
 Type of gearing—spiral bevel, worm, hypoid Hypoid
 Gear ratio—standard 5-passenger 4-door sedan 4.1
 Optional gear ratios ... 3.9 & 4.55
 Number of teeth—
 In ring gear 41 In pinion 10
 How is pinion adjusted—screw or shims Shims
 How is pinion bearing adjusted—screw or shims NONE
 Are pinion bearings carried in sleeve Yes
 Backlash between pinion and ring gear003 to012

TIRES and WHEELS

Tires—
 Make Optional
 Size 16 x 6.00 No. of plies 4

TIRES and WHEELS (Cont'd)

Inflation pressure—Front 30 Cold Rear 30 Cold
 Rim—Diameter 16 Width 5"

SPRINGS

FRONT SPRING—

Independent or conventional suspension Independent
 Type—coil, semi-elliptic, transverse, torsion Coil
 Make Own
 Material G.M.C. 9260 M
 Torsional stabilizer at front Yes
 If leaf—
 Length Width
 Number of leaves—5-passenger, 4-door sedan
 Are radius rods used on axle No
 If coil—
 Free length
 Length under curb weight

REAR SPRING—

Independent or conventional suspension Conventional
 Type—coil, semi-elliptic, transverse, torsion Semi-elliptic
 Make Own
 Material
 Torsional stabilizer at rear No
 If leaf—
 Length 52 Width 2
 Number of leaves—5-passenger, 4-door sedan 8
 Spring leaves lubricated with Chassis lubricant
 Spring cover, Yes Yes No
 Spring shackles—
 Front-Type Make
 Rear-Type Threaded Make
 Spring bolts—
 Type Threaded
 If coil—
 Free length
 Length under curb weight
 Rate for above pounds per inch
 Shock absorbers—
 Make Delco Lovejoy
 Type, one way with lever, two way with lever, or direct acting
 Front 2 way
 Rear Direct acting
 Fluid capacity (oz.)—front rear 6-3/4 oz.

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STEERING

Steering gear—

Type Worm & roller
Make Saginaw Model
Ratio 19:1

Lubricant recommended All season steering gear

Steering wheel diameter 18

Drag link longitudinal or transverse Transverse

Tie rod—one or two 2

Is intermediate steering arm used Yes

Number of turns of steering wheel for full left
to right swing of wheels

Car turning radius—feet—right, left or both 19 1/4

Caster—degrees - 1/2 to - 1

Camber—degrees or + 1/4 inches to - 1/4

Toe-in—degrees 0 to 1/16

Crosswise inclination of kingpin—degrees 1-3/8 = 1-7/8

Front axle—

Make Model
Section type—I-beams, tubular or none

End type—Elliott or reverse Elliott

Minimum road clearance—tires inflated 8-11/16

BRAKES

Foot brakes—

Make Bendix Duo-servo
Type of mechanism, hydraulic or mechanical hydraulic

If vacuum booster is standard, state make

Brake lining moulded, semi-moulded or woven—

Primary shoe Moulded

Secondary shoe Moulded

Drum—

Material Steel & cast iron diameter 11"

Lining—

Length per wheel 21-5/16

BRAKES (cont'd)

Width F. & R. 2" R.R. = 3-1/4 Thickness 3/16

Clearance—see brake chart below

Total foot braking area 159 Sq. in.

Percent braking power on rear wheels 144

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 6-1/8

Thickness—maximum 7/16

Flange width—maximum 2-1/2

Wheelbase = 119

Tread—

Front 58

Rear 61-1/2

Weight of standard 5-passenger, four-door sedan—

Shipping 3350

Curb 3490

Price of standard 5-passenger, 4-door sedan

First serial number, this series POMA-1001

Serial number location Left front side dash

Overall length of car—

With bumpers and bumper guards 204-1/2

Overall width of car 75-3/4

Overall height, road to roof with no load 66

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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
Size or number 954210

Fan bearing—

Make or type
Size or number

Starting motor commutator end bearing—

Make or type Plain
Size or number I.D. 9/16 Length 15/16

Starting motor drive end bearing—

Make or type
Size or number

Starting motor outboard bearing—

Make or type Bronze Bushing
Size or number 3 x 9/16 x 25/32

Generator commutator end bearing—

Make or type Bronze Bushing
Size or number 9/16 x 25/32 x 53/64

Generator drive end bearing—

Make or type New Departure
Size or number 903203

Transmission main drive gear front pilot bearing—

Make or type New Departure
Size or number 907109

Clutch throwout bearing—

Make or type New Departure
Size or number 2140122

Transmission main drive gear rear bearing—

Make or type New Departure
Size or number 9541144

Transmission main shaft front pilot bearing—

Make or type Rollers
Size or number 14-7/32 x 17/32

Transmission main shaft rear bearing—

Make or type New Departure
Size or number 907506

Transmission countershaft front bearing—

Make or type Rollers
Size or number 25 - 1/8 x 13/16

Transmission countershaft rear bearing—

Make or type Rollers
Size or number 25 - 1/8 x 13/16

Transmission reverse idler bearing—

Make or type Plain Bronze Bushing

BEARINGS (cont'd)

Size or number 55/64 x 63/64 x 3/4

Overdrive shaft rear bearing—

Make or type
Size or number

Overdrive shaft pilot bearing—

Make or type
Size or number

Main shaft extension bearing—

Make or type
Size or number

Rear axle pinion shaft front bearing—

Make or type New Departure
Size or number 905306

Rear axle pinion shaft rear bearing—

Make or type Hyatt
Size or number 107391

Differential right bearing—

Make or type Hyatt Taper Roller
Size or number 179243

Differential left bearing—

Make or type Same
Size or number

Rear wheel inner bearing—

Make or type
Size or number

Rear wheel outer bearing—

Make or type New Departure
Size or number 954172

Front wheel inner bearing—

Make or type New Departure
Size or number 909052

Front wheel outer bearing—

Make or type New Departure
Size or number 909001

Kingpin upper bearing—

Make or type Bronze Bushing
Size or number 55/64 x 1-1/16 x 1-15/64

Kingpin lower bearing—

Make or type Same
Size or number

Kingpin thrust bearing—

Make or type 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.

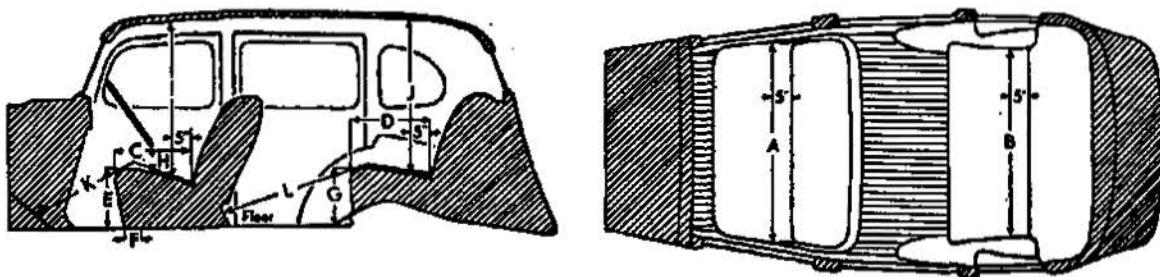
EQUIPMENT

Catalog Designation of Model
 Lacquer make
 Body finish, lacquer or synthetic enamel
 Fender finish, lacquer or synthetic enamel
 Hardware make
 Speedometer make
 Gasoline gauge make
 Thermometer make
 Car lock make
 Car lock operates on ignition or ignition and steering
 Clock make JAGGER mechanical or electrical electrical
 Cigar lighter make CASEO
 Safety glass make
 Safety glass type, laminated or tempered
 In windshield
 In side windows
 In rear window
 Bumper make
 Bumper guard make
 Car heater make OWN Type UNDERSEAT
 Direction signal make GUIDELAMP
 Front—gear no Rear—yes
 No. of tail lights included
 No. of visors included
 No. of horns included
 No. of windshield wipers included
 No. of spare tires included

Models		
Standard	DeLuxe	Custom
Torpedo.....		
Duco.....		
Lacquer.....		
Lacquer.....		
Ternstedt.....		
AC.....		
AC.....		
AC.....		
Rechester.....		
Ignition.....		
LOP. PLATE.....		
LAMINATED.....		
YES.....		
YES.....		
TEMPERED.....		
GENERAL SPRING & BUMPER CO.....		
BROWN, LIPPS, CHAPIN, DIV.....		
.....		
.....		
2.....		
2.....		
2.....		
2.....		

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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)	57 $\frac{1}{2}$
Width of rear seat cushion, measured 5 inches from back (B)	49
Depth of front seat cushion (C)	18 $\frac{1}{2}$
Depth of rear seat cushion (D)	18 $\frac{1}{2}$
Height of front seat cushion measured 12 $\frac{1}{2}$ inches from center line of body (E)	14 $\frac{1}{2}$
Front seat horizontal adjustment, inches (F)	4 $\frac{1}{2}$
Front seat vertical adjustment, inches	3 $\frac{1}{4}$
Height of rear cushion measured 12 $\frac{1}{2}$ inches from center line of body (G)	13 $\frac{1}{2}$
Vertical distance steering wheel and seat cushion (H)	6 $\frac{1}{2}$ - $\frac{3}{8}$
Head room at front seat, measured 5 inches from back (I)	36- $\frac{3}{4}$
Head room at rear seat, measured 5 inches from back (J)	36- $\frac{3}{4}$
Leg room in front seat, measured from 6 inches up on toe board, following contour of seat cushion (K)	42 $\frac{1}{2}$
Leg room in rear seat, measured from center of foot rest, following contour of seat cushion (L)	41 $\frac{1}{2}$
Trunk capacity, cubic feet	17 $\frac{1}{2}$
Width of left front pillar on diagonal with door closed	4-19/32

