

Automobile Manufacturers Association

Consolidated Specification Questionnaire

For 1948 Models

Mechanical Details

Make of Car Buick Model Series 50 Super
 Name of Maker Buick Motor Division Address Flint, Michigan

Date January 23, 1948

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 In-head
 Bore 3-3/32 Stroke 4-1/8
 Cylinder head, cast iron or aluminum Cast Iron
 Cylinder sleeve, Yes No X
 Piston displacement 248.1 Cu. in.
 Taxable horsepower 30.63

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 80)

—With Base Engine— (See Note)

Maximum brake hp. 115 et. 3600 R.P.M.

—With Standard Accessories—*

Maximum brake hp. 110 et. 3500 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. 212 et. 2000 R.P.M.

With standard accessories,* lb. ft. 208 et. 2000 R.P.M.

Compression Ratio—

Standard 6.6 to 1 Optional

Standard compression pressure —pounds—

At cranking speed 114

At what R.P.M. 140 at 1000 R.P.M.

PISTONS and RINGS Sterling Aluminum Products Inc., Aluminum Alloys Corp., Aluminum Company of America, Bohn Aluminum &

Make Brass Corporation
 Material Aluminum Alloy
 Features split skirt, inner strut, oval, tin plated, aluminum oxide finish, auto-thermic, V-bridge, porous chrome plate, etc. Cam ground turbulator top, Trans slot
 Weight—ounces—without rings, pin or bushing 13.776
 Length 4-21/64"
 Clearance—
 Top land .023" to .030"
 Skirt, top .0021 bottom .0016

PISTONS and RINGS (cont'd)

Piston ring groove depth—
 Oil .166 Compression .166
 No. of oil rings used per piston 2
 Width of oil rings Upper .1875 Lower .1860
 *Width of oil ring gap " .015 Lower .0015 (Segmental)
 No. of compression rings used per piston 2
 Width of compression rings 3/32
 Width of compression ring gap .015
 Maximum wall thickness of oil rings Upper .140 Lower .155
 Maximum wall thickness of compression rings Upper .160 Lower .140
 Are ring expanders used, Yes No X

RODS and PINS

Wristpin—

Material C, D, S, 1115
 Length 2-11/16 Diameter 13/16
 Locked in rod, piston or floating Locked in Rod
 Clearance in piston .0003 to .0004
 Clearance in rod — to —

Connecting rod—

Length—center to center 7-5/8
 Material H.R.S. 1045
 Weight—ounces 28.464

Crankpin journal—

Diameter 2" Length 1-7/32

Lower bearing—

Material Babbitt
 Clearance .0008 to .0018
 End play .005 to .010

Shims Solid—solid, laminated or none. Solid
 Spun or separate Centrifugal Cast
 Rods and pistons removed from above or below Above

CRANKSHAFT

Material 1045 H.R.S.
 Weight—stripped 85.5 lbs.
 Vibration dampener used—yes or no Yes
 Type Laminated steel flywheel supported on steel leaf springs.

Note: Bare engine is without fan and muffler. * Lower oil ring is a steel "U"-Flex ring.

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CRANKSHAFT (cont'd)

Crankshaft counterweights used, number of 8
 Which main bearing takes thrust Center
 Crankshaft end play .004 - .008
 Main bearing—
 Type: Cast-in or Slip-in X
 If slip-in: Removable from below Yes
 Necessary to align ream No
 Material Steel Backed Duxex - 100A
 Clearance .0007 - .0025
 Shim—solid, laminated or none None
 Main bearing journal diameter x length—
 No. 1 2-5/16 x 1-17/64
 No. 2 2-3/8 x 15/16
 No. 3 2-7/16 x 1-5/8
 No. 4 2-1/2 x 15/16
 No. 5 2-9/16 x 1-25/32
 No. 6
 No. 7
 No. 8
 No. 9
 Crankshaft gear or sprocket—
 Make Link Belt
 Material C. D. S. #1112

CAMSHAFT

Camshaft gear or sprocket—
 Make Link Belt
 Material Cast Iron 13 M
 Timing chain—
 Make Link Belt
 Number of links 49
 Width 1"
 Pitch .500"

VALVES

INTAKE VALVE—

Make Thompson or Rich
 Material 3140
 Overall length 5-7/64
 Actual overall diameter of head 1-17/32
 Minimum port diameter 1-1/8
 Angle of seat 45°
 Is valve seat an insert? No
 Stem diameter .3720
 Stem to guide clearance .0015 to .0035
 Lift .348
 Spring pressure and length—
 Outer—

VALVES (cont'd)

With valve closed—lb. 32 ins. 1-15/16
 With valve open—lb. 77 ins. 1-19/32
 Length out of engine—ins. 2-11/32
 Inner—
 With valve closed—lb. 20 ins. 1-21/32
 With valve open—lb. 51 ins. 1-5/16
 Length out of engine—ins. 1-29/32

EXHAUST VALVE—

Make Thompson or Rich
 Material X.B. or 2112
 Overall length 5-7/64
 Actual overall diameter of head 1-11/32
 Minimum port diameter 1-1/32
 Angle of seat 45°
 Is valve seat an insert? No Material
 Stem diameter .3725
 Stem to guide clearance .0021 to .0039
 Lift .342"
 Spring pressure and length—
 Outer—
 With valve closed—lb. 32 ins. 1-15/16
 With valve open—lb. 77 ins. 1-19/32
 Length out of engine—ins. 2-11/32
 Inner—
 With valve closed—lb. 20 ins. 1-21/32
 With valve open—lb. 51 ins. 1-5/16
 Length out of engine—ins. 1-29/32
 Operating tappet clearance (hot or cold)—intake Hot .015"
 Tappet clearance for valve timing—intake .015
 Operating tappet clearance (hot or cold)—exhaust Hot .015"
 Tappet clearance for valve timing—exhaust .015"
 Hydraulic valve lifters—yes or no No
 Valve timing—
 Intake opens 13 degrees BUDC piston travel inches
 Intake closes 68 " ALDC " " inches
 Exhaust opens 55 " BLDC " " inches
 Exhaust closes 22 " AUDC " " 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 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—*
 Not lower than 32°F. 20W or SAE 20
 As low as plus 10°F. 20W
 As low as minus 10°F. 10W
 Below minus 10°F. 10W / 10% kerosene
 Normal oil pressure—*lbs. at M.P.H.* 35 at 35 MPH
 Pressure at which relief valve opens 35
 Capacity of oil reservoir—*quarts, dry* 6-1/2 refill 5-1/2
 Oil pressure gauge make A. C.
 Oil reservoir level gauge type Stick
 Floating type oil intake—*yes or no* Yes
 External oil filter make A. C.
 Other type of oil cleaner None
 Oil cooler make None
 Chassis lubrication—*Make* Lincoln

FUEL

Gasoline tank—*capacity* 19 gallons
 Fuel feeder—
 Type—*vacuum tank, electric pump, gravity vacuum pump or camshaft pump* Camshaft pump
 Make A. C. Model Type A1
 Carburetor—
 Make Stromberg or Carter Model AAV-167 or VCD-663S
 Number used 1
 Size 1 1/4"
 Type—
 Up or down draft Down Single or dual Dual
 Intake manifold heat control—*manual, automatic or none* Automatic
 Automatic choke, make Stromberg or Carter
 Air cleaner—*intake silencer make* A. C.
 Type—*dry felt; oil bath; oil coated fibre* Oil bath
 Heavy Duty type—*Make* Walker or Hayes Model
 Muffler make Walker or Hayes
 Tail pipe diameter 2"

COOLING

Water pump—
 Type Centrifugal Ball Bearing-Spring Loaded Seal
 Drive Single Belt
 Is pump equipped with packing nut No
 Water circulation thermostat at make Harrison
 Pressure relief valve—*yes or no* Yes
 By-pass for recirculation—*yes or no* Yes
 Radiator core—
 Type Vee Cellular
 Make Harrison

COOLING (cont'd)

	Without Heater	With Heater
Cooling system— <i>capacity, quarts</i>	13	14-1/4
Water jackets full length of cylinders— <i>yes or no</i>	No	Yes
Water all around cylinder— <i>yes or no</i>	No	Yes
Lower radiator hose—		
Inside diameter	1-9/16	Length Elbow type
Upper radiator hose—		
Inside diameter	1-9/16	Length Elbow type
Fan belt—		
Make	Various	
Angle of vee		
Length, outside		Width, maximum 3/4"
Fan—		
Make	Hayes Industries. No. of Blades 4	

IGNITION

Ignition units—
 Make Delco Remy Model 1110801
 Manual or octane selector, *degrees advance* retard
 Maximum centrifugal advance crankshaft, *degrees* 22 - 26
 at 3000 engine R.P.M.
 Inches of Mercury Necessary to operate Vacuum Advance (Plus or minus 1 inch) 6 to start; 12 for full travel
 Maximum Vacuum advance crankshaft, *degrees* 10 - 12
 Breaker gap .015 Breaker arm tension 19 - 23 oz.
 Cam angle * deg.
 Timing—*Breaker points open* 4 degrees crankshaft rotation
~~on inches piston travel (after or before) top center~~
~~with piston at bottom in the position~~
 Timing mark location—*flywheel, vibration dampener or none* Flywheel
 Firing order 1-6-2-5-8-3-7-4
 Amperage draw of ignition coil—
 With engine stopped 4-1/2
 With engine idling 2-1/2
 Spark plug—
 Thread—*10 m.m., 14 m.m. or 18 m.m.* 14 MM
 Make A. C. Model 48
 Gap .025
 Ignition cable make Packard

BATTERY

Make Delco Remy Model 15E4-W
 Capacity—*ampere hours* 100 @ 20 hour rate
 Number of plates per cell 15
 Bench charging rate—
 Start 1 Amp. per pos. / Finish 1/2 Amp. per pos. / plate
 Which battery terminal is grounded Negative
 Location of battery Under hood

* Do not recommend using a dwell meter for checking point opening.

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STARTING MOTOR

Make Delco Remy Model 1107049
 Normal engine cranking speed 90
 Brush spring tension 24 - 28 oz.
 Lock test—
 Amperage draw 575
 Volts 3.4
 Torque in pounds feet 12
 No load test—
 Amperage draw 65
 Volts 5 R.P.M. 5500
 Type of drive—Bowden or sliding gear with overrunning clutch
 Starting device—Solenoid, manual, etc. Solenoid
 Starter operation—check items required to start engine
 1. Turn on Ignition Yes
 2. Depress starter pedal
 3. Depress accelerator pedal Yes
 4. Depress clutch pedal
 5. Operate button on dash
 6. Pull out throttle
 Starting motor pinion meshes front or rear Front
 No. of teeth in flywheel 146
 Face width of flywheel teeth 35/64"
 Gear ratio between starter armature and flywheel 16.22 = 1

GENERATOR

Make Delco Remy Model 1102679
 Type—third brush, shunt, etc. Shunt
 Brush spring tension 24 - 28
 Current regulator, voltage regulator or current and voltage control unit Current and voltage
 Maximum controlled charging rate
 Temperature Hot
 Amperes 34 - 36
 Voltage 8
 R.P.M. 2600 approx.
 Cutout relay—
 Voltage at closing 6.1 - 6.6 at 150°F.
 Amperes to open, reverse current -1 to -6
 Air gap .018 - .022
 Voltage regulator—
 Volts 7.4
 Temperature 150°F
 Air gap .068 - .073
 Current regulator—
 * Amperes 34 - 36
 Temperature 150°F
 Air gap .082 - .088
 Car speed for maximum charging rate 25 approx.
 Ammeter or charge indicator make A. C.

LAMPS

Lighting switch make Delco Remy
 Are tail and dash lights in series Parallel - yes
~~But - Dashlights controlled by separate switch.~~
 Headlights—
 Make Guide Lamp
 Location—in fender, in cutaway, or radiator shell In fender
 Parking or fender light make Guide Lamp
 Tail end stop light make Guide Lamp
 Horn—
 Type—vibrator or motor Vibrator No. used 2
 Make Delco Remy
 Amperage draw of each Left 17-19 Right 19-21

CLUTCH

Make Buick (Disc by Long or Borg & Beck)
 Drive type—
 Direct to flywheel face Yes
 Through fluid flywheel No
 Semi-centrifugal No
 Power operated unit—make None
 Vibration insulation or neutralizer—fabric, rubber blocks or springs Springs
 No. of clutch driving discs One and flywheel
 No. of clutch driven discs One
 Clutch facing—
 Material—woven or moulded asbestos, cork Woven
 Inside diameter 6"
 Outside diameter 10"
 Thickness .125
 No. required 2

TRANSMISSION

Transmission—
 Make Over Model Series 50
 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 None
 Oil capacity—pints
 Oil grade recommended—S.A.E. viscosity
 Summer Winter
 Gear ratio in high—standard 5-passenger
4-door sedan Direct
 Transmission ratio—
 In overdrive — In second 1.66 = 1
 In third Direct In fourth —
 In low 2.67 = 1 In reverse 3.02 = 1

* At 8 Volts - Voltage Regulator not operating.

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STEERING

Steering gear—
 Type **Ball Bearing Worm and Nut**
 Make **Saginaw** Model **Series 50**
 Ratio **19.8-1**
 Lubricant recommended **Steering Gear Lubricant**
 Steering wheel diameter **18"**
 Drag link longitudinal or transverse **None**
 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 **4-1/2"**
 Car turning radius—feet—right, left or both **Rt. 20.9 L. 20.7**
 Caster—degrees **1/4 Positive to 1-1/2 Positive**
 Camber—degrees or 7/8 Pos.inches **to 5/8 Neg.**
 Toe-in—inches **1/16 to 1/8**
 Crosswise inclination of kingpin—degrees **4-1/4° at 3/8°**
 Front axle—
 Make Model
 Section type—*I-beams, tubular or none*
 End type—*Elliott or reverse Elliott*
 Minimum road clearance—*tires inflated*

BRAKES

Foot brakes—
 Make **Bendix or Delco**
 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 **12"**
 Lining—
 Length per wheel **23-1/16**

BRAKES (cont'd)

Width **1-3/4** Thickness **3/16**
 Clearance—*toe* **.015"** *heel* **.015"**
 Total foot braking area **161-1/2 Sq. in.**
 Percent braking power on rear wheels **47**
 Parking Brake **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* **7/64"**
 Flange width—*maximum* **2-1/4"**
 Wheelbase **124"**
 Tread—
 Front **59-1/8"**
 Rear **62-3/16"**
 Weight of standard 5-passenger, four-door sedan—
 Shipping
 Curb
 Price of standard 5-passenger, 4-door sedan
 First serial number, this series **See Note**
 Serial number location **Under hood - stamped on plate**
 on **upper right side of shroud**
 Overall length of car—
 With bumpers and bumper guards **212-3/8"**
 Overall width of car **78-5/8"**
 Overall height, road to roof with no load **64-63/64"**

Note: For 1948

- Flint 1-4801266
- Southgate 2-4820001
- Linden 3-4824001
- Kansas City 4-4830001
- Atlanta 6-4834001

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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 and Fan bearing—
 Make or type New Departure 885156
 Size or number 954208

Fan bearing—
 Make or type
 Size or number

Starting motor commutator end bearing—
 Make or type Cast Iron
 Size or number .563" x .31/32"

Starting motor drive end bearing—
 Make or type Oilless Bushing
 Size or number .500" x .562" x 25/32"

Starting motor outboard bearing—
 Make or type
 Size or number

Generator commutator end bearing—
 Make or type Bushing
 Size or number .5625 x .7835 x 51/64"

Generator drive end bearing—
 Make or type New Departure 3203
 Size or number 903203

Transmission main drive gear front pilot bearing—
 Make or type New Departure 7109
 Size or number 907109

Clutch throwout bearing—
 Make or type GTL - 48 BGA
 Size or number 1308159

Transmission main drive gear rear bearing—
 Make or type New Departure - 47507 - X57
 Size or number 954244

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

Transmission main shaft rear bearing—
 Make or type New Departure 3206
 Size or number 903206

Transmission countershaft front bearing—
 Make or type Roller
 Size or number 1302154

Transmission countershaft rear bearing—
 Make or type Roller
 Size or number 1302154

Transmission reverse idler bearing—
 Make or type Bushing

BEARINGS (cont'd)

Size or number 1307898

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 905607

Rear axle pinion shaft rear bearing—
 Make or type Hyatt
 Size or number 126047

Differential right bearing—
 Make or type Bower or Hyatt
 Size or number 1317716 or 187434

Differential left bearing—
 Make or type Bower or Hyatt
 Size or number 1317716 or 187434

Rear wheel inner bearing—
 Make or type Hyatt
 Size or number 111121

Rear wheel outer bearing—
 Make or type
 Size or number

Front wheel inner bearing—
 Make or type New Departure
 Size or number 909062

Front wheel outer bearing—
 Make or type New Departure
 Size or number 909025

Kingpin upper bearing—
 Make or type Split Bushing
 Size or number 1266949

Kingpin lower bearing—
 Make or type Split Bushing
 Size or number 1266949

Kingpin thrust bearing—
 Make or type Hoover 3021 or Nice 4984
 Size or number #148393 or 134630

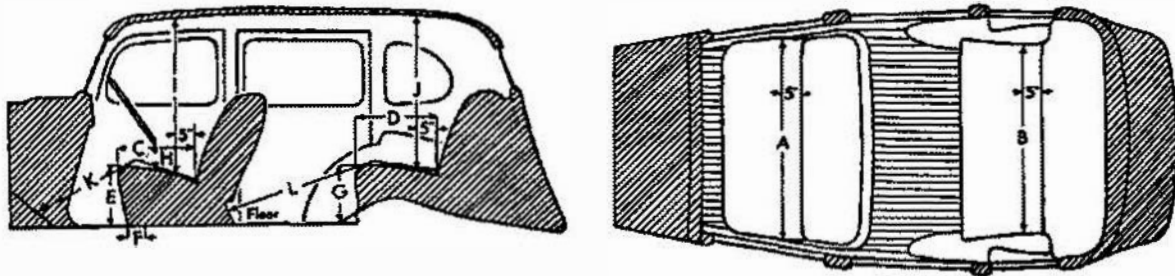
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NOTE: (1) List only that equipment which is included in the factory delivered price. Special equipment which is fitted, but not included in the factory delivered price should be listed with its additional price.
 (2) Enter on top line your own model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

EQUIPMENT	Models		
	Standard	Deluxe	Custom
Catalog Designation of Model	Series 50		
Lacquer make	Duco		
Body finish, lacquer or synthetic enamel	Lacquer		
Fender finish, lacquer or synthetic enamel	Lacquer		
Hardware make	Ternstedt		
Speedometer make	A. C.		
Gesoline gauge make	A. C.		
Thermometer make	A. C.		
Car lock make	Briggs & Stratton or Delco Remy		
Car lock operates on ignition or ignition and steering	Ignition		
Clock make	Borg		
Cigar lighter make	Casco		
Safety glass make	LOF		
Safety glass type, laminated or tempered	Safety plate glass		
In windshield	Laminated		
In side windows	Laminated		
In rear window	Tempered		
Bumper make	Standard Steel Spg. Co. or Gordon Mfg. Co.		
Bumper guard make	Guide Lamp		
Car heater make	Type		
Direction signal make	Guide Lamp		
Front—yes or no. YES Rear—yes or no. YES			
No. of tail lights included	2		
No. of visors included	2		
No. of horns included	2		
No. of windshield wipers included	2		
No. of spare tires included	None		

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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)	62
Width of rear seat cushion, measured 5 inches from back (B)	52
Depth of front seat cushion (C)	18
Depth of rear seat cushion (D)	20
Height of front seat cushion measured 12½ inches from center line of body (E)	11-7/16
Front seat horizontal adjustment, inches (F)	4-1/2
Front seat vertical adjustment, inches	1/4
Height of rear cushion measured 12½ inches from center line of body (G)	11-3/4
Vertical distance steering wheel and seat cushion (H)	6
Head room at front seat, measured 5 inches from back (I)	37-1/4
Head room at rear seat, measured 5 inches from back (J)	34-3/4
Leg room in front seat, measured from 6 inches up on toe board, following contour of seat cushion (K)	42-1/4
Leg room in rear seat, measured from center of foot rest, following contour of seat cushion (L)	43-3/8
Trunk capacity, cubic feet	15
Width of left front pillar on diagonal with door closed	4-1/4

