

1940 MODEL SPECIFICATIONS

Make of Car **BUICK** Model **1940 SERIES 80** Date **Sept. 18, 1939**

LUBRICATION (cont'd)

Wristpins—yes or no **No**
 Camshaft bearings—yes or no **Yes**
 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 plus 10% Kerosene**
 Normal oil pressure—lbs. at M.P.H. **45 at 35**
 Pressure at which relief valve opens **45**
 Capacity of oil reservoir—quarts, dry **10** refill **8**
 Oil pressure gauge make **AC**
 Oil reservoir level gauge type **Stick**
 External oil filter make **AC**
 Oil cooler make **None**
 Chassis lubrication—
 Type **High Pressure**
 Make **Lincoln**

FUEL

Gasoline tank—capacity **19**
 Fuel feed—
 Type—vacuum tank, electric pump, gravity vacuum
 pump or camshaft pump **Camshaft Pump**
 Make **AC** Model
 Carburetor—
 Make **Stromberg** Model **A.A.V.-26**
 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** Model
 Air cleaner—intake silencer make **AC**
 Muffler make **Hayes**

COOLING

Radiator Pressure Control Valve **7#**
 Water pump—
 Type **Centrifugal (Ball Erg.-Spr. Loaded Seal)**
 Drive **Belt**
 Is pump equipped with packing nut **No**
 Water circulation thermostat make **Harrison**
 By-pass for recirculation—yes or no **Yes**
 Radiator shutter—Make **None**
 Radiator core—

COOLING (cont'd)

Type **Vee-Cellular**
 Make **Harrison**
 Cooling system—capacity, quarts
 Water jackets full length of cylinders—yes or no **No**
 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**
 Number used **1**
 Angle of vee
 Length, outside Width, maximum
 Fan—
 Make **Hayes Industries**

IGNITION

Ignition unit—
 Make **Delco-Remy** Model **1110805**
 Manual or octano selector, degrees advance **retard**
 Maximum automatic advance, degrees **22 - 26**
 Vacuum advance, degrees **10 - 12**
 Breaker gap **.015"**
 Cam angle **31°**
 Timing—Breaker points open **6** degrees crankshaft travel
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX before) top center~~
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ ~~XXXXXXXX~~
 Timing marks on 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**
 Ignition lock make **Delco-Remy & Briggs-Stratton**
 Spark plug—
 Thread—10 m.m., 14 m.m. or 18 m.m. **14**
 Make **AC** Model **46**
 Gap **.025"**
 Ignition cable make **Packard**

BATTERY

Make **Delco-Remy**
 Capacity—ampere hours **115** @ 20 hour rate
 Number of plates per cell **17**
 Bench charging rate—
 Start **7 or Higher** Finish **more than 7**
 Which battery terminal is grounded **Negative**
 Location of battery **Under Hood**

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TRANSMISSION (Cont'd)

Transmission ratio—
 In overdrive 1.53 - 1
 In low 2.39 - 1 In second In reverse 2.39 - 1
 Constant mesh gears on second Yes
 Spur or helical gears—
 For second speed Helical
 For first speed Helical
 For reverse speed Helical
 Synchronous meshing second and third gears Yes
 Transmission oil—
 Capacity—pints 2-1/2
 Grade recommended—S.A.E. viscosity Above -10°F SAE 90 EP
 Summer Below -10°F SAE 80 EP
 Winter
 Universal joints—
 Make G.I. or Spicer
 Number used 1
 Type—fabric, rubber, metal with anti-friction bearing or metal with plain bearing Metal/Plain Brg.
 Lubricated with Transmission Lubricant
 Drive taken through springs, torque arm, torque tube or radius rods Torque Tube
 Torque taken through springs, torque arm, torque tube or radius rods Torque Tube

REAR AXLE

Rear axle—
 Make Own Model Series 80
 Type—semi, full or three-quarter floating Semi
 Minimum road clearance under center of rear axle—tires inflated 8-17/32"
 Rear axle oil—
 Capacity—pints 4
 Grade and type recommended—S.A.E. viscosity *
 Summer SAE 90 Hypoid Winter
 Type of gearing—spiral bevel, worm, hypoid Hypoid
 Gear ratio—standard 5-passenger 4-door sedan 4.182 - 1
 Optional gear ratios None
 Number of teeth—
 In ring gear 46 In pinion 11
 How is pinion adjusted—screw or shims Shims
 How is pinion bearing adjusted—screw or shims None
 Are pinion bearings in sleeve No
 Backlash between pinion and ring gear .008" to .010"
 Are pinion bearings preloaded Yes
 How is pinion bearing preload obtained At Manufacturing
 Are differential bearings preloaded Yes
 How is differential bearing preload obtained Screw

* For temperatures above minus 10°F. use SAE 90 Hypoid.
 For temperatures below minus 10°F. use SAE 80 Hypoid.

TIRES and WHEELS

Tires—
 Make U.S. - Firestone - Goodyear - Goodrich
 Size 16" x 7.50" No. of plies 4
 Inflation pressure—Front 25# Cold 30# Cold
 27# Warm Rear 34# Warm
 Rim—Diameter 16" Width 5.00"
 Axle clearance for jack—tires inflated
 Front Rear
 Wheels—
 Type Demountable Steel Disc
 Make Motor Wheel

SPRINGS

FRONT SPRING—

Independent or conventional suspension Independent
 Type—coil, semi-elliptic or transverse Coil
 Make Own
 Material Steel 9260
 Sway eliminators—torsional, lateral, none Torsional
 If leaf—
 Length Width
 Number of leaves—5-passenger, 4-door sedan
 Are radius rods used on axle
 Shackled front or rear
 Anti-shock shackle location

If coil—

Free length 14-7/8"
 Length under ~~normal load~~ Normal Load 10-1/16"
 Rate for above 119 at Wheel pounds per inch

REAR SPRING—

Independent or conventional suspension Coil Spg. Sus.
 Type—coil, semi-elliptic or transverse Coil
 Make Own
 Material Steel 9260
 Sway eliminators—torsional, lateral, none None

If leaf—

Length Width
 Number of leaves—5-passenger, 4-door sedan
 Spring leaves lubricated with
 Spring cover make
 Spring shackles—

Front—Type Make
 Rear—Type Make

Spring bolts—

Type

If coil—

Free length 20-1/4"
 Length under ~~normal load~~ Normal Load 10-7/8"

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SPRINGS (cont'd)

Rate for above **147 at wheel** pounds per inch
 Shock absorbers—
 Make **Delco**
 Type—*one way, two way* **2**
 Fluid capacity—front rear

STEERING

Steering gear—
 Type **Worm and Double Roller**
 Make **Saginaw** Model **Series 80**
 Ratio **22 - 1**
 Lubricant recommended **Steering Gear Lubr. - GM 4568LI**
 Steering wheel diameter **18"**
 Drag link longitudinal or transverse **Longitudinal**
 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*
 Caster—*degrees* **0 ± 3/8** to
 Camber—*degrees* ~~or~~ **max. 1/4 inches** to **Pos. 1**
 Toe-in—*inches* **0** to **1/16**
 Crosswise inclination of kingpin—*degrees* **4 to 5**
 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
 Brake lining moulded, semi-moulded or woven **Woven on primary,**
~~knives~~ **moulded on secondary.**

BRAKES (cont'd)

Drum **Cast Iron** Diameter **14"**
 Material
 Lining—
 Length per wheel **26-13/16"**
 Width **2"** Thickness **1/4"**
 Clearance—*toe* **.008"** to **.010"** *heel* **.008"** to **.010"**
 Total foot braking area **214.6 sq. in.**
 Percent braking power on rear wheels **47%**
 Hand brake location, ~~on floor under cowl at left~~ **under cowl at left**
 Hand lever operates on—~~transmission or governor controls, rear service brakes~~ **Rear Service**
 Hand brake—
 Internal or external **Internal**
 Drum diameter **14"**
 Lining—
 Length per drum **26-13/16"**
 Width **2"** Thickness **1/4"**
 Clearance **.008"** to **.010"**

FRAME

Frame—
 Make **A. O. Smith**
 Type **Double Drop**
 Depth—*maximum* **9"**
 Thickness—*maximum* **7/64"** (**5/32"** on Convertibles)
 Flange width—*maximum* **2-1/4"**
 Wheelbase **135"**
 Tread—
 Front **59-7/16"**
 Rear **62-1/2"**
 Weight of standard 5-passenger four-door sedan—
 Shipping
 Curb
 Per cent on front axle
 Price of standard 5-passenger, 4-door sedan
 *First serial number, this series. **Flint, Mich. - #13596807**
 Serial number location **Right side top of frame**
 by dash
 Overall length of car—
 With bumpers and bumper guards **219"**

*South Gate, Calif. - #23601856
 Linden, N.J. - #33611856

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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 and Fan

Water pump/bearing—
 Make or type New Departure
 Size or number 954208

Fan bearing—
 Make or type
 Size or number

Starting motor commutator end bearing—
 Make or type Cast Iron
 Size or number563" x 15/16"

Starting motor drive end bearing—
 Make or type Oilless Bushing
 Size or number563" x .625" x 3/4"

Starting motor ~~sub~~ ^{middle} bearing—
 Make or type Oilless Bushing
 Size or number7575" x .812" x 23/32"

Generator commutator end bearing—
 Make or type Bushing
 Size or number5625" x .7835" x 51/64"

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

Super-charger—
 Make or type
 Size or number

Clutch throwout bearing—
 Make or type New Departure
 Size or number 954221

Clutch pilot bearing—
 Make or type New Departure
 Size or number 907109

Transmission main shaft pilot bearing—
 Make or type Roller - 14 Required
 Size or number 1294780

Transmission reverse idler bearing—
 Make or type Bushing
 Size or number 553119 (.847" x .937" x 1")

Transmission main shaft front bearing—
 Make or type New Departure
 Size or number 954144

Transmission main shaft rear bearing—
 Make or type New Departure
 Size or number 954120

Transmission countershaft front bearing—
 Make or type Roller - 26 Required
 Size or number 1298445

Transmission countershaft rear bearing—
 Make or type Roller - 26 Required
 Size or number 1298445

Overdrive shaft rear bearing—
 Make or type
 Size or number

BEARINGS (cont'd)

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 Hyatt
 Size or number 149523

Differential left bearing—
 Make or type Hyatt
 Size or number 149523

Rear wheel inner bearing—
 Make or type Hyatt
 Size or number 125686 (Inner Race - 125685)

Rear wheel outer bearing—
 Make or type
 Size or number

Front wheel inner bearing—
 Make or type New Departure
 Size or number 909028 (Cup 909628; Cone 909528)

Front wheel outer bearing—
 Make or type New Departure
 Size or number 909027 (Cup 909627; Cone 909527)

Kingpin upper bearing—
 Make or type Split Bushing
 Size or number 1289176 (1.0635" x 1.181" x 1-1/2)

Kingpin lower bearing—
 Make or type Split Bushing
 Size or number 1289176 (1.0635" x 1.181" x 1-1/2)

Kingpin thrust bearing—
 Make or type Nice
 Size or number 1289123

Front spring—Bolt—
 Bushing size
 Bushing type

Shackles—
 Upper end
 Lower end

Rear spring—Bolt—
 Bushing size
 Bushing type

Shackles—
 Upper end
 Lower end

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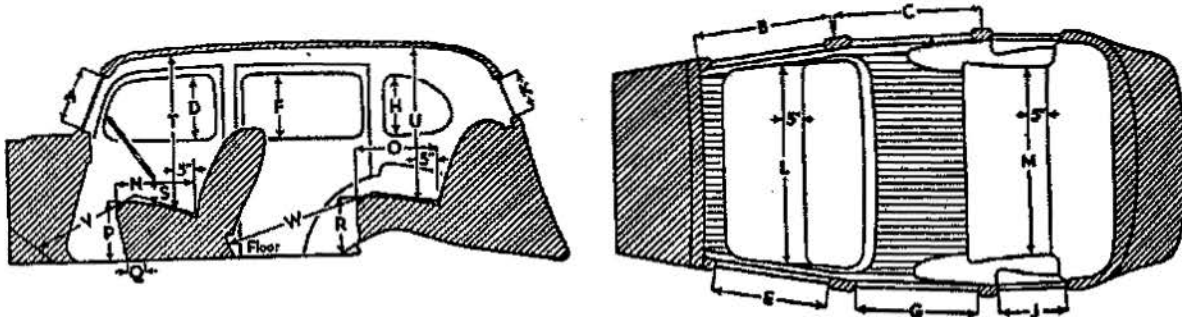
Make of Car **BUICK** Model **1940 SERIES 80** Date **Sept. 13, 1939**

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 80		
Lacquer make	Duco		
Body finish, lacquer or synthetic enamel	Lacquer		
Fender finish, lacquer or synthetic enamel.....	Lacquer		
Hardware make	Tarnstedt		
Speedometer make	AC		
Gasoline gauge make	AC		
Thermometer make	AC		
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	L.O.F.		
Safety glass type, laminated or tempered.....	Safety Plate Glass		
In windshield	Laminated		
In side windows	Laminated		
In rear window	Laminated		
Bumper make	Gordon Mfg. Co. or Std. Steel		
Bumper guard make	Guide Lamp		
Car heater make	Harrison		
No. of tail lights included	2		
No. of visors included	2		
No. of horns included	2		
No. of windshield wipers included	2		
No. of windshield washers included	0		
No. of spare tires included	1		

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



EXTERIOR

Overall height, road to roof with no load	71-3/4"
Minimum height of floor in front compartment, no load	20-5/8"
Minimum height of floor in rear compartment, no load	19-1/2"
Distance between hinge centers, front door	21-1/2"
Distance between hinge centers, rear door	14-1/4"
Windshield opening height (A)	15"
Windshield opening width, to center strip if divided	23-1/2" Each
Width of front door, at handle (B)	39-3/8"
Width of rear door, at handle (C)	32-1/4"
Height of front door, maximum	49-1/2"
Height of rear door, maximum	49-1/2"
Height of window opening in front door, maximum (D)	14"
Width of window opening in front door, maximum (E)	31"
Height of window opening in rear door, maximum (F)	14-3/16"
Width of window opening in rear door, maximum (G)	26-1/2"
Height of rear quarter window opening, maximum (H)	11-1/2"
Width of rear quarter window opening, maximum (J)	18"
Height of rear window opening, maximum (K)	10-3/4"
Width of rear window opening, maximum (if divided list each)	18-3/8" Each

INTERIOR

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

Width of front seat cushion, measured 5 inches from back (L)	50"
Width of rear seat cushion, measured 5 inches from back (M)	51"
Depth of front seat cushion (N)	18-7/16"
Depth of rear seat cushion (O)	21-1/16"
Height of front seat cushion (P)	12-1/4"
Front seat horizontal adjustment, inches (Q)	4-7/16"
Front seat vertical adjustment, inches	3/4"
Height of rear seat cushion (R)	15"
Vertical distance between steering wheel and seat cushion (S)	6-1/2"
Head room at front seat, measured 5 inches from back (T)	38"
Head room at rear seat, measured 5 inches from back (U)	35-1/8"
Leg room in front seat, measured from 6 inches up on toe board (V)	40-13/16"
Leg room in rear seat, measured from center of foot rest (W)	44-1/16"
Width of left front pillar on diagonal with door closed	4-7/8"

Note: Cushion height and headroom taken 12" from centerline of car.

