# Corrections and Additions

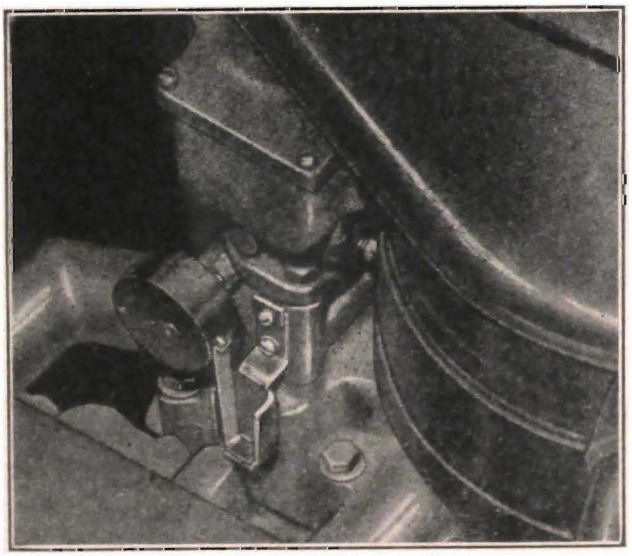
## ADDITIONS

### Damper Valve Lock-Out

A new thermostat lock-out has been designed and is attached as an assembly to the rear carburetor damper valve, which controls the cut-in period of damper valve when engine is cold.

The thermostat and bracket is mounted to the damper valve body and extends down over the exhaust manifold and heat from the manifold operates the thermo spring and times the lock-out release from the damper valve weight pin.

The mounting of lock-out to damper valve assembly is by two screws, the lower hole is used as a pivot, the upper hole is elongated for movement of assembly to get proper adjustment.



The use of the lock-out is to prevent the rear carburetor from operating on cold engines until after the automatic choke on front carburetor has reached its near open position.

Lock-outs are set at the factory so that the thermo spring releases from the lock-out pin on damper valve weight at temperature of 110°± 2°F. This check can be made in service by removing the damper valve assembly and submersing the lock-out in water of 110°±2°F. Lock-out should not open in water of less than 108° and should be open or clear of the pin at not higher than 112°F.

### Operating Check for "Damper Valve Lock-Out Thermostat"

With engine cold, drive car on warm-up making full throttle accelerations from 15 to 25 m.p.h. If a light spit or sag in acceleration occurs in the range from 15 to 20 m.p.h., particularly towards the end of the warm-up period, it indicates that the lock-out is releasing too soon. If accelerations are O.K., continue driving for about four miles. Stop and check for release by rotating weight by hand or observing its operation on acceleration. If thermostat has released weight at this time it is not holding on too long.

If thermostat shows out of adjustment, remove assembly and follow instructions for setting in temperature bath.

### Intake Manifold (All Series)—Compound Carburetion

Engines equipped with compound carburetion will have the two inner branches of the intake manifold equipped with venturis cast in the manifold for better distribution of fuel to the cylinders. These two inner branches feed cylinders No. 3-4-5 and 6.

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## CORRECTIONS

### Float Needle Seats (Carter)—Page 6-62

Change 529S Rear and 534S Rear from .093 to .076.

### Piston Fitting Chart—Page 6-9

Cylinder and piston marking: In the first two columns for both the Series 40-50 and Series 60-70-90 engines change the two, • • yellow and • yellow to two X X yellow and one X yellow, leaving the other two yellows and two green as they are.

### Chassis Suspension—Page 3-10

Stabilizer specification: Shaft on all series except Series 90 will have $\frac{11}{16}$" diameter.


This 1942 Shop Manual is complete within itself; that is, no reference need be made to past model manuals. The Body Section has been greatly enlarged and radio service instructions have been added to the Electrical Section.

Portions of this manual covering changes on 1942 models as compared to 1941 models may be quickly identified by large dots which precede or follow lines, paragraphs or illustrations covering such changes.

*Buick Motor Division*

GENERAL MOTORS SALES CORPORATION

FLINT, MICHIGAN

**September 2, 1941** **BPS—1.27**

# 1942 MODELS

### SPECIAL—SERIES 40-A—118" WHEELBASE

47 . . . . . 6-Passenger Special Four-Door Sedan
44 . . . . . 3-Passenger Special Business Coupe
44-C . . . . . 6-Passenger Special Convertible Coupe (Full Rear Seat)
48 . . . . . 3-Passenger Special Business Coupe (Sedanet Type)
48-S . . . . . 6-Passenger Special Sedanet

### SPECIAL—SERIES 40-B—121" WHEELBASE

41 . . . . . 6-Passenger Special Four-Door Sedan
46 . . . . . 3-Passenger Special Business Coupe
46-S . . . . . 6-Passenger Special Sedanet
49 . . . . . 6-Passenger Special Estate Wagon
41-SE . . . . 6-Passenger Special Four-Door Sedan (Super Equipment)
46-SSE . . . . 6-Passenger Special Sedanet (Super Equipment)

### SUPER—SERIES 50—124" WHEELBASE

51 . . . . . 6-Passenger Super Four-Door Sedan
56-S . . . . . 6-Passenger Super Sedanet
56-C . . . . . 6-Passenger Super Convertible Coupe

### CENTURY—SERIES 60—126" WHEELBASE

61 . . . . . 6-Passenger Century Four-Door Sedan
66-S . . . . . 6-Passenger Century Sedanet

### ROADMASTER—SERIES 70—129" WHEELBASE

71 . . . . . 6-Passenger Roadmaster Four-Door Sedan
76-S . . . . . 6-Passenger Roadmaster Sedanet
76-C . . . . . 6-Passenger Roadmaster Convertible Coupe

### LIMITED—SERIES 90—139" WHEELBASE

90 . . . . . 8-Passenger Limited Four-Door Sedan (Auxiliary Seats)
90-L . . . . . 8-Passenger Limited Limousine
91 . . . . . 6-Passenger Limited Four-Door Sedan
91-F . . . . . 6-Passenger Limited Four-Door Formal Sedan

# UNIT INDEX

## NEW CAR, 1000 AND 2000 MILE INSPECTION AND ADJUSTMENT

The purpose of New Car, 1000 and 2000 Mile Inspection and Adjustment Forms (BPS 6.22 and 6.23) is to assure that all cars are delivered to purchasers in proper operating condition, also that all difficulties which develop during the first 2000 miles of car usage are made during that period.

The items listed for these inspections are the regular items subject to adjustment on every car. On some cars, it may be found necessary to make adjustments other than specified in the regular list and in such cases, whatever is required should be taken care of in addition to the items listed for that inspection.

The following examples will illustrate some of this additional work.

EXAMPLE 1. Item 14 under "New Car" states: "Check body hardware, glass and hood operation." This item should include checking and adjusting as required, such items as hood alignment, hood hinges, louvres, fasteners, instruments, instrument panel, clock, etc., to eliminate any possibility of noise or other trouble.

EXAMPLE 2. In some cases, during new car inspection, it will be found necessary to adjust or clean carburetor and fuel pump and adjust choke for satisfactory engine performance. In other cases, these items may be found satisfactory at the time of the new car inspection but will require attention either at the 1000 mile or 2000 mile period.

Space on these check sheets does not permit listing each individual item which may require attention, but it is intended, that all abnormal conditions be corrected, as required on each particular car, and that it is the dealer's responsibility to deliver every car in good mechanical adjustment and to maintain it in proper adjustment for the first 2000 miles.

Thorough road testing of car to determine service operations needed to be performed and following comments of purchaser is best assurance that car will be delivered and maintained in proper operating condition.

## PRODUCT REPORT

Product Report Form S-758-2 is furnished to all Buick Dealer Service Departments to enable them to report product difficulties.

These forms should be filled out in duplicate and forwarded to Zone Offices each week. Zone offices forward the reports to the factory. The factory Engineering and Inspection Departments analyze the complaints and use same to improve product quality.

Unless a Product Report is made on each service difficulty and each difficulty reported each time it occurs, it is impossible for the factory analysis to be correct.

Dealer Service Department co-operation in supplying reports is appreciated by the factory. Service Departments are repaid indirectly for time spent on these reports in that it enables the factory to build the product so as to require the minimum of service when cars are received by Dealer Organizations.

## 1000 AND 2000 MILE INSPECTION AND ADJUSTMENT
## 1942 BUICK—ALL SERIES

Owner _____ Model _____ Body _____ Job _____ Color _____

Address _____ Frame _____ Trim _____ Radio No. _____

Phone _____ Mileage _____ Motor _____ Key _____ R. O. No. _____

**INSTRUCTIONS**

Check all operations listed, perform adjustments as required.

Inspections and ad... are performed gratis except the items indicated by (★), for which owner will be charged at regular prices.

★Lubricate car c... tires (including sp...

1. Road test car ... possible) for b... chassis and bo... engine operati... rect if necessar...
2. Oil filter cap b...
3. Oil leaks—ch... required.

★11. Engine oil —

13. Road test ca...

1. Road test c... possible) fo... chassis and ... engine oper... if required.
2. Write repa... listed here.
3. Oil leaks — required.
4. Cooling sy... sure and ... correct if r...
5. Inspect u... or damag... quired.
6. Inspect ga... en if nece...

★24. Lubricat...

25. Road tes...

Form BPS 6 23
Printed U S A 250...

## NEW CAR INSPECTION AND ADJUSTMENT
## 1942 BUICK—ALL SERIES

Owner _____ Model _____ Body _____ Job _____ Color _____

Address _____ Frame _____ Trim _____ Radio No. _____

Phone _____ Mileage _____ Motor _____ Key _____ R. O. No. _____

**INSTRUCTIONS**

Check all operations listed, perform adjustments as required.

Inspections and adjustments are performed gratis except the items indicated by (★), for which owner will be charged at regular prices.

★Lubricate car complete, also includes: Check fluid in bra... ...ter cylinder, check water in battery, properly inflate tires (including spare) and check anti-freeze.

1. Lubricate car complete (see "Instructions" above).

Time Allowance .5 hour.

2. Wheel nuts—tighten.
3. Floor mats—install and fasten mat at underseat heater
4. Tools—check and wrap.
5. Wheel shields—install if used.
6. Brake pedal clearance—under floor panel—adjust.
7. Clutch lash—adjust as required.
8. Distributor points and spark plugs adjust as required.
9. Heater and defroster—connect.
10. Adjust accelerator pedal rods (See Shop Manual).
11. Lights, check operation and aiming.
★12. Start engine and fill radiator while engine is running. (Anti-freeze if required).
★13. Add rust preventive.
14. Radiator cap—tighten.
15. Gages and clock—check and correct if necessary.
16. Caster and toe-in and steering wheel position—check and adjust if required.
17. Horns and horn ring—check and correct if required.

18. Windshield w... correct if requ...
19. Radio and a... correct if req...
20. Heater — c... required.
21. Seat adjust... if required.
22. Hardware— required.
23. Key and ... and corre...
24. Glass — required.
25. Hood — required.
26. Doors — —co...
27. Body ... check ... requir...
28. Acce... check...

Time Allowance 3 hours.

39. Wash and polish car.
40. Remove protector papers, tags, and stickers.
41. Tires ... remo...

Time allowance 1.5 hours.

44. Fill in Owner's Service Policy also Identification Card.
45. ...

Form BPS 6 22
Printed U S A 125m Pads 7-49

FORM S-738-2 BUICK
PRINTED IN U. S. A.

### PRODUCT REPORT

DEALER _____ ZONE _____

DATE—FROM _____ TO _____

COMPLAINT—DO NOT LIST MORE THAN ONE TYPE. (STATE CAUSE IF POSSIBLE)

REMEDY (STATE CORRECTION MADE AND RESULT)

LIST BELOW ALL SERIAL NUMBERS ON WHICH THIS TROUBLE HAS BEEN FOUND DURING THE PAST WEEK.

| SERIAL NUMBERS | BODY NUMBERS | SERIES | MILEAGE |
|---|---|---|---|
| | | | |

SIGNED _____ REPRESENTATIVE

DETAILED DESCRIPTION OF BOTH COMPLAINT AND CORRECTION WILL DEFINITELY ASSIST THE FACTORY IN IMPROVEMENT OF THE PRODUCT

USE OTHER SIDE FOR DETAILS WHERE NECESSARY

New Car, 1000 Mile and 2000 Mile Inspection Sheet and Product Report

# GENERAL MOTORS INSTITUTE

The Buick Motor Division has long recognized that there must always be men trained by the Divisions and by its dealers and distributors to carry on the work without interruption; to bring about continued progress in the product in manufacture, in distribution, in service; to take over as retiring employes lay down their tools. Without training and development of personnel, occurring simultaneously with production and distribution, there would be no industrial progress and in time industrial and business operations would cease.

General Motors is alert to this necessity. Through the General Motors Institute the Corporation has provided a focal point for its educational and training program. Here it also has provided a research laboratory for improvement of methods by which men are trained and developed.

It is through the Institute that Buick Motor Division has taken steps to assure constant progress in personnel development for their dealers and dealer employes as well as for the Division itself.

### Training for the Buick Dealer Organizations

In this task of providing a focal point for educational and training activities, the Institute applies twenty years of experience in developing men for industry. In these two decades its program — in terms of man-hours of instruction given annually — has progressed to such an extent that it has been the largest ever conducted by an industrial organization.

The institute is in a position to meet the following two general requirements for education and training of the Buick dealer organization:

1. Education and training required for the development of members of the present organization.
2. Education and training required for the proper induction of young beginning employes, particularly those needed for future responsible positions.

To satisfy the first requirement, and to meet the special training requirements of the plant and the distributors and dealers, numerous special courses have been developed. These courses have been conducted in various ways—some on a basis requiring full-time attendance at the Institute for periods of from two to eight weeks; some on a part-time basis, including opportunity courses in evening school or spare-time training; still others on an extension basis at the plants of the Divisions of the Corporation or with the dealers and distributors in the field.

These courses have covered, among numerous others, such subjects as:

Service Management
Office and Clerical Work
Motor Dealer Accounting
Used Car Reconditioning
Body Repair and Maintenance
Motor Tune-Up
Service Salesmanship
Collision Damage Estimating
Automotive Electricity
Training Methods for Effective Shop Operation

In response to the second requirement, i. e., the need for young men of broad foundation training to qualify for future responsibilities, there is available the co-operative program, known as the General Motors Dealer Co-Operative Training Program, which is conducted on the plan of alternate periods of practical training at the dealership and technical training of collegiate grade at the Institute.

The entire program is based upon the theory that to be qualified for work in dealerships, men should have practical experience as well as training in fundamentals, and that the best results are obtained when these two phases of training are properly coordinated, as they are in this Dealer Co-Operative Program.

Thus the young men are trained as employes of the dealer, so that upon completion of their training for the various phases of work in the dealership, they will be prepared with such a foundation that as they gain further experience, they may qualify for more responsible positions and become constructive members of the dealer's organization.

At the end of the first year, students may either pursue a special course of study by extension (correspondence) while working full time with the dealer, or when advisable, and particularly where the relationship with the dealer makes it constructive, be reappointed for an additional year of advanced cooperative training.

Two sequences are available for students during the second year, one in Technical Operation and Management, and one in Sales and Management. The program is also sufficiently flexible to enable dealers to enter men of considerable previous training and experience for one year of special training.

This program has proved to be a great aid to many dealers in developing their organization, and many have used this to induct their own sons into their business where they will eventually take over greater responsibilities in the future.

The facilities of the Institute are available to all Buick dealers, and the Institute will be glad to cooperate with the dealers in meeting their respective training needs. Further information with reference to any type of training offered can be obtained direct from General Motors Institute, Flint, Michigan.

# MANUFACTURER'S WARRANTY

It is expressly agreed that there are no warranties, expressed or implied, made by either the Dealer or the Manufacturer on the Buick motor vehicles, chassis or parts furnished hereunder, except the Manufacturer's Warranty against defective materials or workmanship as follows:

*"The Manufacturer warrants each new motor vehicle, including all equipment or accessories (except tires) supplied by the Manufacturer, chassis or part manufactured by it to be free from defects in material and workmanship under normal use and service, its obligation under this warranty being limited to making good at its factory any part or parts thereof which shall, within ninety (90) days after delivery of such vehicle to the original purchaser or before such vehicle has been driven 4,000 miles, whichever event shall first occur, be returned to it with transportation charges prepaid and which its examination shall disclose to its satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on its part, and it neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale of its vehicles.*

*"This warranty shall not apply to any vehicle which shall have been repaired or altered outside of an authorized Buick Service Station in any way so as in the judgment of the Manufacturer to affect its stability and reliability, nor which has been subject to misuse, negligence or accident."*

The Manufacturer has reserved the right to make changes in design or add any improvements on motor vehicles and chassis at any time without incurring any obligation to install same on motor vehicles and chassis previously purchased.

## 1942 MODELS—GENERAL INFORMATION

| ITEMS | SERIES 40-A | SERIES 40-B | SERIES 50 | SERIES 60 | SERIES 70 | SERIES 90 |
|---|---|---|---|---|---|---|
| Wheelbase | 118" | 121" | 124" | 126" | 129" | 139" |
| Tread—Front | 59 1/8" | 58 7/8" | 58 7/8" | 59 1/8" | 59 1/8" | 58 29/32" |
| Tread—Rear | 62 3/16" | 61 15/16" | 61 15/16" | 62 3/16" | 62 3/16" | 63 1/16" |
| Overall Length with Bumpers | 201 13/16" | 207 1/2" | 212 3/8" | 212 1/4" | 217 1/8" | 226 1/4" |
| Overall Length (without bumpers) | 198 1/32" | 203 23/32" | 204 3/32" | 208 9/32" | 209 3/16" | 222 9/32" |
| Overhang (C. L. of Front Axle to Front of Bumper) | 35 3/4" | 35 3/4" | 36 1/2" | 35 3/4" | 36 1/2" | 35 3/4" |
| Overhang (C. L. of Rear Axle to Rear of Rear Bumper) | 48 1/4" | 50 3/4" | 51 1/2" | 50 3/4" | 51 7/8" | 52" |
| Overall Width—At Widest Point | ←——Over Rear Fenders——→ | | ←——Over Rear Fenders——→ | | ←——Over Rear Fenders——→ | |
| Over Front Fenders at Widest Point | 72 3 1/32" | 74 9/16" | 76 7/8" | 73 3/4" | 75 7/16" | 73 3/4" |
| Over Rear Fenders (Without Wheelhouse Covers) | 75 15/16" | 76 1/16" | 78" | 76 1/16" | 78" | 78 3/8" |
| Over Rear Fenders (Including Wheelhouse Covers with Mldg.) | 77 7/16" | 77 9/16" | 78 5/8" | 77 9/16" | 78 5/8" | 79 7/8" |
| Body Width—Maximum (No Sheet Metal) | 70 1/4" | 72" | 69 3/4" | 72" | 69 3/4" | 73 7/8" |
| Height—At Normal Load | 65 25/64" | 64 7/8" | 62 23/32" | 64 15/16" | 62 25/32" | 67 3/16" |
| Height—At Curb Weight | 67 1/16" | 66 1/2" | 64 23/64" | 66 2 1/32" | 64 27/64" | 68 29/32" |

## STARTING SERIAL NUMBER—ALL 1942 SERIES

Flint Production ..... 1-4257442

California Production ..... 2-4273684

Linden Production ..... 3-4263684

NOTE: The first digit of serial number determines where the car was built. Digit "1" denotes Flint production; digit "2" California production; digit "3" Linden production.

## STARTING ENGINE NUMBER—ALL 1942 SERIES

All Series ..... 4457941

NOTE: Engine numbers will have no Flint, California or Linden identification; however, they will carry prefix "A", "4", "5", "6", "7" or "9," identifying Series 40A, 40, 50, 60, 70, or 90.