

Studebaker SERVICE BULLETIN

DECEMBER

NO. 245



1950

NOISE SUPPRESSOR FOR DISTRIBUTOR NOT REQUIRED ON 1951 MODELS

Please record this article on the Service Bulletin Reference page of the Electrical Section of your 1951 Shop Manual.

Although the installation instruction sheets included with the first shipments of 1951 model Studebaker passenger car radios recommend the use of a noise suppressor at the distributor, you are advised that no suppressor should be added when the radio is installed in a 1951 Model 10G Champion or Model H Commander. The one in the radio package should be discarded or returned to parts stock for use when installing radios in earlier model cars or trucks.

There is a built-in high tension noise suppressor in the distributors used in the 1951 passenger cars. Use of the suppressor in 1951 distributors is definitely to be avoided since the quality of performance of the radio will be affected.

There was no such built-in suppressor, however, in the 1950 model distributors. Therefore, if a 1951 model radio is installed in a 1950 model car, use of the suppressor will be necessary.

ANTIFREEZE IN NEW VEHICLES

Please record this article on the Service Bulletin Reference page in the 1951 Shop Manual and on page 58 of your 2R Series Trucks Shop Manual.

With the arrival of cold weather, antifreeze will be included in the coolant of all vehicles shipped from the factory. For the early part of the cold weather season, enough methanol alcohol antifreeze to protect the vehicle to 5° above zero F. will be used. A green and white sticker, Form No. W1074, will be placed on the windshield to notify you of this fact.

Later, in the season, as temperatures drop further, sufficient Type N (ethyl alcohol) to

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W1074

CAUTION

When this Studebaker car left the factory, sufficient anti-freeze (Methanol Alcohol) was injected in the cooling system to protect it against freezing to 5° above zero (Fahrenheit). If this car is driven into either colder or warmer areas, solution should be checked and the required additional anti-freeze or water added.

NOTE: In checking this solution, use Methanol tester as the use of Ethyl (Denatured Alcohol) tester will show incorrect freezing temperature.

THE STUDEBAKER CORPORATION
SOUTH BEND, INDIANA

Printed in U.S.A.

FORM NO. W1074 (REDUCED) - GREEN INK.
WHITE BACKGROUND. USED IN MODERATELY
COLD SEASONS.

W1075

CAUTION

When this Studebaker car left the factory, sufficient anti-freeze ("N" Type) was injected in the cooling system to protect it against freezing to 10 degrees below zero (Fahrenheit). If this car is driven into either colder or warmer areas, solution should be checked and the required additional anti-freeze or water added.

THE STUDEBAKER CORPORATION
SOUTH BEND, INDIANA

Printed in U.S.A.

FORM NO. W1075 (REDUCED) - RED INK, WHITE BACKGROUND. USED IN VERY COLD SEASON.

protect the vehicle to 10° below zero F. will be installed in the cooling system. A red and white sticker, Form No. W1075, will be pasted on the windshield to advise of this protection.

Then, for a short time in the spring the factory will revert to the W1074 and add sufficient methanol alcohol to protect the vehicles to 5° above zero F.

When temperatures are generally above freezing, water only will be installed in the cooling systems of all vehicles shipped from the factory. A black and white sticker, Form No. W1031, will be affixed to the windshields of the vehicles.

Dealers in areas where climatic differences from those prevailing at South Bend cause differences in the cooling system requirements are urged to check the coolant with a properly calibrated and accurate tester and to add the proper type of antifreeze or water as required to obtain the protection needed by local prevailing seasonal temperatures.

When testing, be sure to read the scale on the tester calibrated for the type of anti-freeze in the car as determined by the windshield sticker.

W1031

WARNING

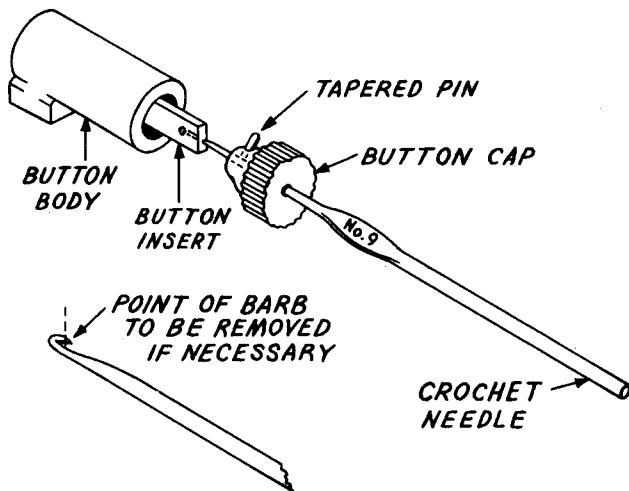
The cooling system of this car contains water only.

To prevent freezing, drain the water from both the radiator and cylinder block, or use anti-freeze solution. Drain plug on block is located at the lower left rear corner and must be removed to drain the cylinder block.

FORM NO. W1031 (REDUCED) - BLACK INK, WHITE BACKGROUND. USED IN WARM SEASONS.

LOW TEMPERATURE TIME

*WHEN YOU CHECK ANTIFREEZE NEEDS
ALSO CHECK BATTERY WATER LEVEL
AND SPECIFIC GRAVITY*



PARTS AND METHOD OF USING CROCHET NEEDLE TO INSTALL PUSH BUTTON CAPS

REPLACING STUDEBAKER-PHILCO RADIO PUSH BUTTONS

This is a reprint of Passenger Car Service Letter No. 833 which may now be discarded from your files. Please record this article on page 108 of your 1950 Shop Manual.

Should it be necessary to replace the plastic pushbutton caps on 1950 Studebaker radios, the following procedure will apply. Secure push button caps without cost from either local Philco radio distributors or your nearest Studebaker parts depot. Ask for cap, Part No. 54-4738-1. This is a Philco part number. The new cap has a hole in the center

which makes it easy to apply it to the old button body.

The illustration at the bottom of page 2 clarifies location of various parts. It is not necessary to remove the set from the car nor to dismantle the set in any way in order to remove the old push button caps. The procedure is as follows:

1. Remove pin and any remaining pieces of broken button cap.

If cap is already off, particles of old button can be removed with a No.9 crochet needle. The pin can be removed with pliers. The pin can be made accessible by engaging crochet hook behind pin inside brass insert and pulling insert out until pin is exposed.

NOTE.--Barb of needle may have to be partly removed for easier insertion in hole in insert as shown in sketch.

If button cap is still in place, pull out on cap and push pin out with a 1/16" drift pin.

NOTE.--The black push button body must not be removed from the shaft as this tears out the plastic and the button will not stay in place after it is replaced.

2. To install new cap, push No.9 crochet needle through hole in center of button from front as shown in accompanying drawing. Insert small end of tapered pin in hole in one side of button.

With needle still through button and the pin in one side of the button, engage barb of crochet needle in hole in brass insert on opposite side of the button. Pull out insert until pin in button can be pressed into the hole in the insert. Remove crochet hook and push pin completely in place. Pliers may have to be used to force the pin completely in place. Be sure pin is in button cap flush with each side so cap will seat properly.

After replacing the push button caps, be sure to retune the buttons to the station frequencies to which they were originally set.

STEERING AND FRONT SUSPENSION 1950 CHAMPION MODELS (9G)

Please record this article on page 168 of your 1950 Shop Manual. This article is a reprint of Passenger Car Service Letter No.

834, which may now be discarded from your files.

A condition of excessive front tire wear on the side opposite the driver, front end vibration or shimmy, unstable steering, or any similar condition involving the steering and front suspension system of 1950 Champion (9G) models, may be caused by one or more contributing factors.

These are listed with suggestions for correction. When dealing with any of the conditions described, check all factors in the order in which they are listed and make corrections necessary.

PROCEDURE

1. Condition: Worn or Loose Parts

Correction: Carefully check for looseness or wear at the steering tie rod or reach rod ends, steering pitman arm insulators, steering knuckles, control arm bushings, front wheel bearings, and other steering gear or linkage parts. Adjust or replace any parts as required.

2. Condition: Auxiliary Arm Bracket Distortion

Correction: To insure greater rigidity of the auxiliary arm bracket, a brace is now available for left hand control cars. Installation of the following parts will prevent distortion or bending of the auxiliary arm bracket:

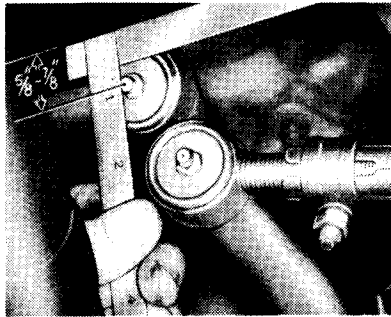
Qty.	Part No.	Part Name
1	530284	Auxiliary arm bracket brace
1	520259	Spacer
1	2-0734	Bolt
1	2-0626	Bolt
1	361-07	Plain washer - lower

(Refer to installation instructions at end of this article.)

3. Condition: Improper Positioning of Auxiliary Tie Rod End

Correction: Turn the front wheels to the straight ahead position. Place a straight edge across the lower face of the frame side rail on the side opposite the driver so that the end of the straight edge will extend above the auxiliary tie rod end ball. Be sure that the tie rod end is centered on the stud ball. Then measure from the upper edge of the straight edge to the

center of the grease fitting at the tie rod end. This measurement should be between 5/8" and 7/8". If necessary, loosen the auxiliary arm bracket-to-frame bolts and shift the bracket as required to obtain the 5/8" to 7/8" measurement.



4. **Condition:** Improper Adjustment of Steering Gear

5. **Correction:** Adjust steering gear cam lever shaft and worm for high spot and end play.

5. **Condition:** Caster, Camber, and Toe-In Not Within Specifications

Correction: Check the front end alignment, including caster, camber, toe-in, and king pin inclination, with proper front end alignment equipment and adjust as necessary to the following specifications:

Caster: -1° to -1° . Not more than $3/4^{\circ}$ variation between right and left.

LHC Camber (as nearly as possible): Right, $1/4^{\circ}$ minus; left, $1/4^{\circ}$ plus. Camber at left wheel should always be $1/2^{\circ}$ more than at right wheel. **RHC Camber:** Left, $1/4^{\circ}$ minus; right, $1/4^{\circ}$ plus. Camber at right wheel $1/2^{\circ}$ more than at left wheel.

King pin inclination: $5-1/4^{\circ}$.

Front wheel toe-in specifications (revised): 0" to $1/16$ " toe-in.

In making front end alignment checks and adjustments, take car load and weight distribution into consideration. Where cars carry normal loads without unequal weight distribu-

tion, front end alignment checks and adjustments may be made with the car unloaded. However, where cars are operated under unusual conditions (such as heavy loads or unequal weight distribution of loads), these conditions should be simulated before front end alignment checks and adjustments are made. Having simulated the condition, alignment should be set to the above specifications.

GENERAL

In addition to the above items, check shock absorbers for leakage and see that they are in good operating condition to provide normal ride control. Also, wheel and tire balance and run-out should be carefully checked and maintained to specified limits.

INSTALLATION OF CHAMPION STEERING AUXILIARY IDLER ARM BRACKET BRACE (LHC Models Only)

1. Raise car to provide working clearance.
2. Remove right rear outer control arm inner-shaft mounting bolt.
3. Remove both auxiliary steering arm-to-bracket mounting bolts.
4. Install auxiliary arm bracket brace, Part No. 530284, with the single hole to the lower control arm and place spacer, Part No. 520259, between the bracket brace and the frame crossmember flange. Install bolt, Part No. 2-0734, flat washer, Part No. 361-07, lock washer, and nut. Draw nut to loose fit.
5. Install both auxiliary steering arm-to-mounting bracket bolts with bolt, Part No. 2-0626, in lower hole (note that bracket is to be mounted on the outside of the auxiliary steering arm). Tighten securely.
6. Tighten the right rear outer lower control arm innershaft.
7. Check alignment and set to specifications given in Condition 5, above.

REPLACEMENT OF LUBRICATION FITTING AT REAR SECTION OF FRONT PROPELLER SHAFT - 1951 MODEL PASSENGER CARS

Please record this article on page 4 of the Propeller Shafts and Universal Joints Section of the 1951 Shop Manual. This article is a reprint of Passenger Car Service Letter No. 840 which may now be discarded from your files.

A straight type lubrication fitting, Part No. 188641, was used in production at the rear of the front propeller shaft on 1951 model passenger cars prior to the following serial numbers:

Champion models - G-1004052

Commander models - 8110260

This is the fitting through which the slip yoke is lubricated.

It is quite possible the use of this straight type lubrication fitting at this location will not permit sufficient clearance for the use of the average grease gun. It is felt desirable, therefore, to replace the straight type lubrication fitting with a 45° fitting, Part No. 188640, in order to provide ample clearance for all grease guns.

WILL YOU, THEREFORE, PLEASE ARRANGE TO INSTALL A 45° LUBRICATION FITTING, PART NO. 188640, AT THIS LOCATION ON ALL 1951 MODEL PASSENGER CARS WHICH YOU MAY HAVE RECEIVED WITH SERIAL NUMBERS BELOW THOSE LISTED ABOVE.

We assume that you will have a supply of the 45° lubrication fittings in your parts stock and you may, therefore, install these without delay. You may replace those used from your

parts stock by ordering from your local Parts Depot, giving them the serial numbers of the cars on which you make the installation. They will then provide the replacement fittings at no charge to you.

The straight type lubrication fittings you remove from the cars involved, need not be returned to us.

As soon as possible, the location of the lubrication fitting will be moved 3/16" to the rear of the present location. At that time, straight fittings will again be used.

T TRUCK SERVICE Information

WHEEL BEARINGS - M AND 2R SERIES TRUCKS

Please record this article on page 229 of your 2R Series Trucks Shop Manual and on the goldenrod page entitled "WHEELS AND TIRES" in your M Series Shop Manual.

Since 1946, Studebaker M and 2R Series trucks have been produced with either Timken or Bower wheel bearings as standard equipment. Therefore, any Bower bearing found in a new truck should be considered as factory standard equipment and subject to the usual warranty provisions.

Part No.	Part Name	Steering Gear Model	No. per Truck	Truck Model	Starting Serial of Latest Bushings
680210	Bushing	TA12	2	2R5-10-6-11	R5-32979 R10-17037
679257	Cam lever shaft oil seal	TA12	1	2R5-10-6-11	
680209	Bushing	TA14	2	2R14-15-16A-17A	R14-221, R15-11851, R16-28183, R17-17237
190276	Cam lever shaft oil seal	TA14	1	2R14-15-16A-17A	
680211	Bushing	T12	2	2R5-10-6-11	All models before above serials
197106	Cam lever shaft oil seal	T12	1	2R5-10-6-11	
680212	Bushing	T14	2	2R14-15-16A-17A	
199050	Cam lever shaft oil seal	T14	1	2R14-15-16A-17A	

The new bushings will be serviced for all T and TA steering gears. See parts book for starting serials of these gears.

RADIOS FOR 2R SERIES TRUCKS

Please record this article on page 73 of your 2R Series Trucks Shop Manual.

Radio sets for 1951 passenger car models will be used in 2R Series trucks. The new radio control panel is below the instrument panel.

If the truck is equipped with 4-speed transmission, it is necessary to use a shorter hand brake lever assembly, Part No. 680199.

The new radio cannot be used in conjunction with the Quad-duty type heater.

Order numbers of the new radios are as follows:

- Six tube, automatic.AC-2112
- Six tube, manualAC-2113
- Eight tube, automatic. . . .AC-2111

STEERING GEAR HOUSING BUSHING AND OIL SEAL - 2R SERIES

Please record this article on page 198 of your 2R Series Trucks Shop Manual.

As shown in the table below, new steering gear housing bushings and oil seals have entered production of 2R Series trucks and are available for service installation in prior produced 2R series trucks.

The new bushings are bronze instead of babbitt lined, making it possible to eliminate the one long and one short bushing and to use instead two short bushings. The oil seal is changed from the metal case type using a gasket to a reinforced Neoprene seal which does not require a gasket.



LAUDAR SERVICE CONTROL

A copy of the Laudar Service Control announcement and order form is mailed with this

issue of the Service Bulletin.

The Laudar control board is adaptable to shops of various sizes. Each mechanic is allotted one strip on the board. By slipping the properly filled out Laudar ticket in the proper space under the mechanic's name, the service manager can be kept posted on work yet to be done by that mechanic, the time allowed (or expected) for the job, when it will start and finish, what work the man now has in process. Likewise, a glance at the board tells the service manager or shop foreman which men have time unsold in the future, how much of it, and at what periods during the day.

Laudar service control boards are manufactured and sold by The Laudar Company, P. O. Box 30, Thomson, Georgia, to whom orders should be sent. NOTE.--Export dealers may order from The Studebaker Export Corporation.



how well do you REMEMBER?

The questions below have one correct answer. Mark the answer you believe to be correct, then check your results with the reference given.

1. The cam angle of a distributor is the rotation of the distributor cam in degrees while the points are
 - (a) ___ open.
 - (b) ___ closed.
 - (c) ___ both the same, either open or closed.

(See 1947 Shop Manual, P. 54)
2. Caster and camber is adjusted on 1950 models by
 - (a) ___ adding or removing shims at the upper control arm inner shaft.
 - (b) ___ by bending king pin until proper alignment is obtained.
 - (c) ___ use of an eccentric pin in upper control arm.

(See 1950 Shop Manual, P. 163)
3. On the '47 - '48 models, the wheel tread is
 - (a) ___ wider in the front than in the rear.
 - (b) ___ narrower in the front than in the rear.
 - (c) ___ the same, both front and rear.

(See 1947 Shop Manual, P. 108)
4. On the self-adjusting type brake used on the 6G-7G-8G-9G Champions and 14A-15A-16A-17A Commander models, are conventional brake shoe anchor pins used?
 - (a) ___ Yes.
 - (b) ___ No.

(See 1947 Shop Manual, P. 20)
5. Studebaker connecting rods are marked in production with the cylinder bore numbers on the
 - (a) ___ camshaft side.
 - (b) ___ side opposite the camshaft.

(See 1947 Shop Manual, P. 71)