

Studebaker

SERVICE BULLETIN

DECEMBER

NO. 235



1949

KEEP BATTERIES FULLY CHARGED

Please record this article on page 73 of your 2R Series Trucks Shop Manual and on page 60 of your 1947 Shop Manual.

"Wet" batteries, those which have been filled with distilled water, cannot stand neglect and must receive regular care if they are to provide full service life to the purchaser. Such batteries as those in show-room display vehicles, vehicles in storage, units for sale on your Used Car and Truck lot and, in some cases, those in display racks in your parts department - all must receive regular inspection, test, and service to keep them active and charged.

It is the responsibility of every dealer to care for the batteries in his possession, inasmuch as the battery manufacturer cannot be expected to make gratis replacement of batteries which fail prematurely in service due to dealer's neglect. Unless such care is given, furthermore, many early battery failures will result and customer dissatisfaction may be generated.

When a storage battery is fully charged, the electrolyte is at its maximum strength or highest specific gravity. When the battery is partly discharged, a portion of the electrolyte combines with the active material on the plates to produce a sulphated condition. On charging the battery, this process is reversed and the sulphate is transferred back to the electrolyte.

Batteries should not be permitted to stand for any length of time in a sulphated condition or damage to the plates may result.

The following preventive maintenance precautions should insure fully charged batteries at all times. Perhaps your service manager will want to give to one man the assignment of battery care, selecting, for example, the first and fifteenth day of each month for this man to check all the batteries in your dealership.

Battery Care

1. Check water level in each cell. If level is too low, add distilled water as required to

In this issue

	PAGE
ASH RECEIVER RATTLE ELIMINATED - 9G, 17A	2
BATTERIES, KEEP FULLY CHARGED	1
BRAKE PIPE-TAIL PIPE INTERFERENCE - 9G, 17A	3
CARBURETOR SPEED CONTROL DISCONTINUED - 9G, 17A	4
CASTER REVISED - 9G, 17A	3
CHAMPION TIRE RE-GROOVER	5
CLAYTON VEHICLE ANALYZER	6
COWL VENTILATOR SCREEN - 9G, 17A	2
CRANKCASE BREATHER FOR SLUDGE PREVENTION	2
DOUBLE DUTY MERCHANDISER	5
FUTURFORM CAR WASHER	5
GASOLINE FILLER PIPE RESTRICTION - 9G, 17A	4
GENERATOR NOTICE ON COMMANDER STRIPPED ENGINE	4
HEAD LAMP RIMS LOOSE - 9G, 17A	3
LOCK MODIFICATION TO FIT KEYS	4
SPEEDOMETER INDICATOR ERRATIC	5
VALVES, NON-CORRODING TYPE FOR EXHAUST	2

reach proper level and make no further tests until the following day.

2. With a hydrometer, preferably one which includes a temperature correction scale, test specific gravity of electrolyte in each cell.

Specific gravity of electrolyte corrected to 80° F., indicates following condition of cell:

Sp.Gr.	State of Charge
1.280	Fully Charged
1.250	75% Charged
1.220	50% Charged
1.190	25% Charged
1.130	Discharged

3. If specific gravity corrected reading is 1.250 or less, recharge the battery.

4. If battery is to be delivered before next test period, specific gravity should be brought to 1.270 or above.

CRANKCASE BREATHER KIT FOR SLUDGE PREVENTION - Commander-type Engines

Please record this article on page 91 of your 1947 Shop Manual and on page 107 of your 2R Series Trucks Shop Manual.

The problems of sludge formation in engine oil is magnified in such specialized operations as taxicab, police cruising cars, and some other types of slow moving, short run car and truck driving. Under such specialized operating conditions sludge formation is not confined only to the winter months, although the advent of cold weather will intensify sludge formation.

Since one of the major ingredients of sludge is the combination of chemicals and moisture in the unexhausted by-products of combustion which find their way into the crankcase, adequate crankcase ventilation is necessary to expel as much of these gases as possible before they condense and combine with the oil in the oil pan. Under normal driving conditions, standard engines are properly ventilated. For specialized slow and short run driving, however, it is important that some means for added crankcase ventilation be provided.

Installation of the Crankcase Ventilation Kit, Part No. 189125, in Studebaker Commander-type engines (1936 through 1950) will give added relief against sludge formation. The kit is installed between the engine breather tube and the carburetor drain pipe hole on the manifold. The kit is available through your parts depot and consists of the following component parts.

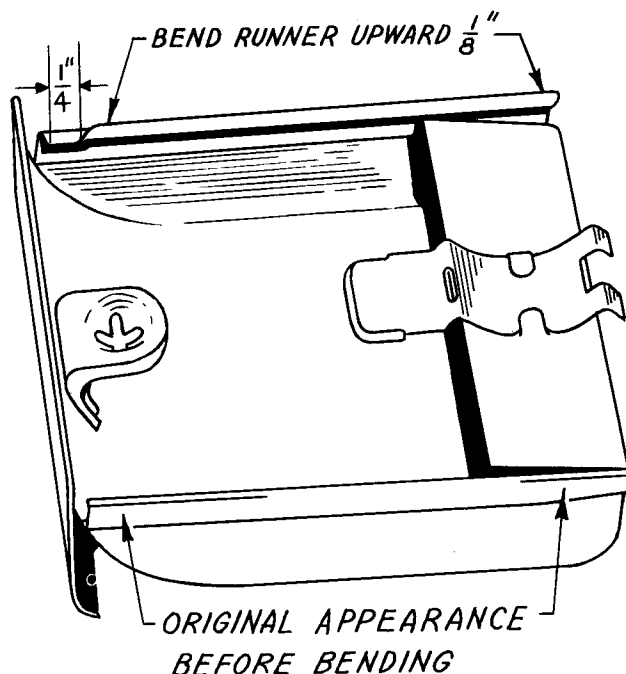
Part No.	Quantity	Part Name
189119	1	Pipe
515-03	2	Nut
189057	1	Tee
520-03	1	Elbow

LEFT COWL VENTILATOR OUTER SCREEN ELIMINATED FROM 9G, 17A MODELS

Below is a reprint of Passenger Car Service Letter No. 818 which may now be discarded from your files.

Both inner and outer screens have heretofore been provided for the left cowl ventilator on passenger cars. It is felt that the inner screen will provide all the protection necessary to prevent bugs, insects, etc., entering the car through this opening. Therefore, the use of the outer screen on the left cowl ventilator has been discontinued.

This change became effective on 1950 model 9G Champions with Serial No. G-488000 and 1950 model 17A Commanders with Serial No. 4407000.



ASH RECEIVER RATTLE ELIMINATED - 9G, 17A

Should the ash receiver rattle when in the closed position, the noise can be eliminated by removing the receiver and bending the runner on each side upward 1/8" starting the bend 1/4" from the front of the receiver and continuing rearward.

NON-CORRODING EXHAUST VALVES 9G, 17A; 2R SERIES TRUCKS

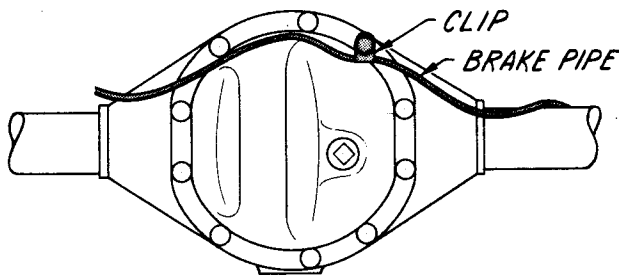
Please record this article on page 107 of your 2R Series Trucks Shop Manual.

To reduce the possibility of valves sticking under conditions of short or intermittent engine operation, a new corrosion resistant type steel is now being used in the valve stem of the exhaust valves for 9G, 16A model passenger cars and all 2R Series Trucks.

It is believed the new material should increase valve life. The new exhaust valve entered production with the following engine numbers:

Model	Engine No.
9G	524330
17A	H378620
2R5 - 2R10	1R50175
2R15	2R10323
2R16A - 2R17A	4R14693

There has been no change in the part number of exhaust valves.



RIGHT REAR BRAKE PIPE - EXHAUST TAIL PIPE INTERFERENCE - 9G, 17A

Below is a reprint of Passenger Car Service Letter No. 817, which may now be discarded from your files.

Under unusual and extreme conditions, interference may occur between the exhaust tail pipe and the right rear brake pipe where it extends along the rear axle housing on 1950 model passenger cars.

To prevent the possibility of this interference, the brake pipe has been lowered by reversing the clip which holds it to the rear axle housing. This change entered production with Model 9G Champion Serial No. G-511700, and Model 17A Commander Serial No. 4415128.

We suggest, when 1950 model passenger cars built prior to these serial numbers are in your service department, you arrange to reverse the clip which holds the brake pipe to the rear axle housing so as to position the brake pipe slightly below the top of the rear axle housing as shown in the illustration.

CASTER SPECIFICATIONS REVISED - 9G; 17A

This article is a reprint of Passenger Car Service Letter No. 815 which may now be discarded from your files.

The following are revised caster specifications for 1950 model 9G and 17A passenger cars:

Model 9G Champion $+1^{\circ}$ to -1°
Model 17A Commander $-1/2^{\circ}$ to $-2 1/2^{\circ}$

CAUTION: There should be no more than $3/4^{\circ}$ variation between the caster reading on the right side and the caster reading on the left side. More than $3/4^{\circ}$ variation may result in the car pulling either to the right or to the left.

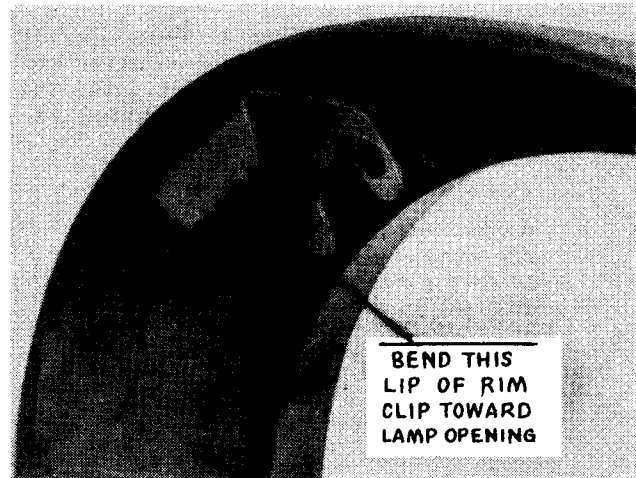
Caster should, of course, be checked on every new car during its preparation for retail delivery. Should the situation arise where caster requires adjustment and cannot be brought within these revised specifications through the procedures outlined in the 1950 Passenger Car Preliminary Shop Manual, you

should communicate with the General Service Department.

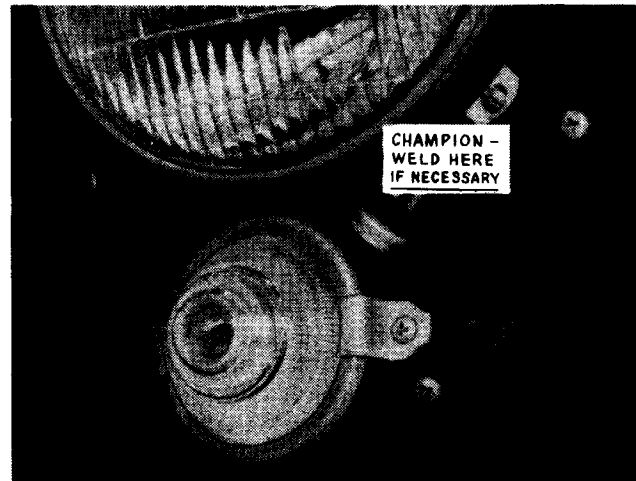
When doing so, please be certain to give us full details concerning not only the caster readings you have obtained, but also furnish details as to the camber readings as well.

LOOSE HEAD LAMP RIMS - 9G, 17A

If a head lamp rim is found loose, tighten it as follows:



Commander (17A) - Remove the head lamp rim and bend the clip at the top of the rim toward the opening for the lamp. The clip must not be bent too far or it will not be possible to reinstall the rim.

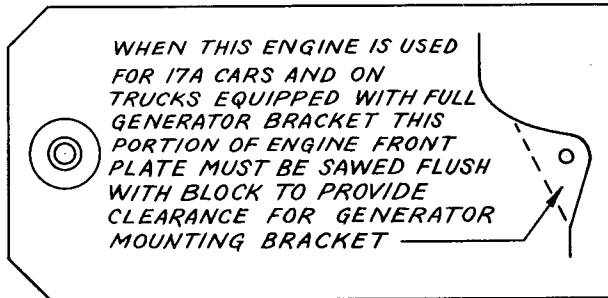


Champion (9G) - Adjust the clip as for Commander (17A) above. In addition, inspect the bracket riveted to the lower head lamp body. If the bracket is loose, remove the lamp body-to-fender mounting screws and pull the lamp body out of the fender. Protect the finish of the fender with wet rags and arc weld the lower part of the bracket to the lamp body as shown in the illustration. Reassemble the lamp body and rim to the car.

GASOLINE FILLER PIPE RESTRICTION - 9G, 17A

There is normally a slight bend in the Neoprene coupler between the two metal sections of the gasoline tank filler pipe. On some cars it was found that this Neoprene coupler was installed with the bend in the wrong direction, resulting in a twist and obstruction when the filler pipe assembly was installed. This twist and obstruction makes it difficult to fill the gasoline tank.

Such cases can be corrected by loosening the upper hose clamp of the Neoprene coupler and rotating the metal upper filler neck until the twist is out of the coupler. Retighten the hose clamp.



COMMANDER STRIPPED ENGINE GENERATOR BRACKET NOTICE

Please record this article on page 107 of your 2R Series Trucks Shop Manual.

Only one Commander-type stripped engine, Part No. 525802, is available for service installation in 7A thru 17A passenger cars and K5, K15, L5, M16, 2R16, 2R17, 2R16A, and 2R17A trucks. This engine is the 102 h.p., 245 cu. in. engine as used in current model Commander cars and 2R16A and 2R17A trucks. So that this same engine can be installed in the prior model Commanders and trucks listed above, a generator mounting bracket is provided to accommodate the type of generator used with those models. When this stripped engine is used in current model 17A Commander or 2R16A or 2R17A trucks having the Delco-Remy generator, however, the bracket must be sawed off the engine front plate as described on the tag illustrated above. The tag is attached to each Part No. 525802 engine before shipment from the factory.

PART NUMBERS CORRECTION TWO-PIECE PROPELLER SHAFT - 2R15-21

Please change the following part numbers on page 4 of Service Bulletin No. 230:

7-08486 should read 7-0848G Propeller Shaft Support Screw
678294 should read 679294 Upper Cushion
678293 should read 679293 Lower Cushion

CARBURETOR SPEED CONTROL DISCONTINUED - 9G, 17A

Below is a reprint of Passenger Car Service Letter No. 818 which may now be discarded from your files.

The use of a carburetor speed control (governor) on passenger cars to limit maximum speeds during the first 500 miles of the run-in period, is no longer considered necessary. Therefore, the installation of the carburetor speed control on all passenger car models has been discontinued.

As a consequence, we have revised our recommendation for driving during the first 1,000 miles of car operation to read as follows:

"It is desirable to limit driving speeds during the first 1,000 miles of operation in order that the closely fitted parts of the engine and chassis may have an opportunity to 'wear-in' smoothly.

"For the first 500 miles it is recommended that you do not drive your car at speeds in excess of 50 miles per hour. For the second 500 miles it is recommended that you do not drive your car at speeds in excess of 60 miles per hour.

"While it is always better to let your engine warm up at lower speeds, you should, by all means, follow such a practice during the first 1,000 miles of operation.

"Further, it is well to avoid continuous high speed driving during the first 1,000 miles even though the engine has been warmed up."

This revised recommendation will appear on page fifteen of the Owner's Guide supplied with each new passenger car.

MODIFYING LOCK CYLINDERS TO FIT OWNER'S KEYS

Please record this article on page 37 of your 2R Series Trucks Shop Manual.

When a single lock cylinder, such as for a package compartment door, is installed in service, the customer is provided with a key which operates that cylinder but no other on the car. This causes the owner to carry three keys instead of the usual two if he is to use all of the locks on his car.

We suggest that you advise such owners that the tumbler combination of the new lock cylinder can be changed to match the key used to operate the original lock. Such a change

in the tumbler combination makes it possible for the owner to carry only the original two keys which came with his car.

A locksmith in your vicinity can make this change in tumbler combination quickly and at a reasonable charge. We believe it advisable for you to contact a nearby locksmith regarding his rates for this service so that you will be in a position to offer it to those of your service customers who desire it.

ERRATIC SPEEDOMETER INDICATOR

Occasionally an owner reports that the indicator needle of the speedometer is jerky or erratic in its operation. This is usually traceable to a kink or bind in the speedometer cable. A bind will also occur if the cable is not lubricated properly.

Inspect the cable housing visually to see if a kink, crack, or bind which results from a sharp bend or crack in the cable housing is evident. If it cannot be seen, remove the cable and cable housing from the car and hold each end of the assembly so that the cable forms a U-loop as it hangs down. If the cable is kinked or binding turning one end of it will cause the loop to "flop." Such a speedometer cable should be replaced.



TIRE GROOVING EQUIPMENT

Enclosed with this issue of the Service Bulletin is a catalog insert sheet describing the Champion tire grooving equipment for use in dealer used car and truck reconditioning programs.

There are two sizes of groovers, light duty for average passenger car tire regrooving and heavy duty for truck applications, as well as a convenient self-locking tire holder.

This equipment is manufactured by and may be ordered from O. E. Thompson & Sons, Ypsilanti,

Michigan. Prices shown on the announcement are subject to change without notice.

NOTE.--Export dealers may order from The Studebaker Export Corporation.

DOUBLE DUTY MERCHANDISER SELLS WHILE IT SERVES

A functional, sparkling service merchandiser which doubles as a parts and accessories display board and counter as well as a two-man service write-up desk is described and illustrated in the enclosed folder published by Display Corporation, Milwaukee 2, Wisconsin.

This gleaming white unit, trimmed in red and polished chromeware, with concealed indirect fluorescent lighting for the write-up and display areas includes large, unobtrusive storage spaces in two drawers, bins behind the two lower display panels, and special side compartments for storage of hydrometers and cloths.

A merchandiser such as this is valuable when placed in the usual service write-up desk location for it is here that the maximum traffic of owners congregates. Exposure to the latest motoring accessories at this point adds greatly to the customer's impulse to buy and affords your service salesmen an added opportunity to sell both new and prior model owners items which they would not otherwise buy.

To be used most effectively, the display should be kept in sparkling order at all times and from time to time the parts and accessories displayed should be changed to keep the display in tune with the season, such as winter items, spring, vacation, fall tune-up, and the like.

The service-parts-and-accessories merchandiser sells for \$185 f.o.b. Milwaukee, Wisconsin. Orders should be placed directly with Display Corporation on the order blank provided in the folder.

NOTE.--Export dealers may order from The Studebaker Export Corporation.

FUTURFORM CAR WASHER

Mailed with this issue of the Service Bulletin is a folder describing the John Bean Division's new Futurform high pressure car washer units.

Futurforms are encased in a white enameled body trimmed in chrome. There are three models available delivering 6½, 13, or 22 gallons per minute at 300 pounds pressure. The 6½ gallon unit is designed to handle one spray gun, the 13 gallon unit accommodates two guns, and the 22 gallon unit can supply four guns for larger

installations. Each Futurform washer is equipped with the correct number of John Bean Tommy Guns, said to be highly efficient, eliminating pressure or volume losses often associated with poorly designed cheap spray guns.

Further information and price quotations are available on request to John Bean Division, Food Machinery and Chemical Corporation, Lansing 4, Michigan.

NOTE.--Export dealers may obtain prices from or place orders with The Studebaker Export Corporation.

CLAYTON VEHICLE ANALYZER OPENS NEW POSSIBILITIES FOR CUSTOMER CONFIDENCE AND GOODWILL

Mailed with this issue of the Service Bulletin is a folder describing the Clayton Vehicle Analyzer (Chassis Dynamometer).

This new and increasingly popular piece of shop equipment will be of special interest to those dealers whose service volume warrants the investment and wish to maintain an efficient service department that will build profit and goodwill on the sound foundation of customer satisfaction.

Some of the problems that today hinder efficient shop operation are:

1. Time consuming methods of diagnosis.
2. Errors in diagnosis causing waste in time and materials.
3. Inadequate methods of final inspection causing customer complaints or lost customers.

The experience of dealers now using the Vehicle Analyzer method of diagnosis and inspection indicates that these problems can be eliminated to the benefit of everyone in the organization.

Customer confidence and satisfaction come about with accurate diagnosis, expert workmanship, improved performance and honest service values, assuring the dealer of a busy, efficient and profitable service department.

In the Vehicle Analyzer the *service manager* has a dependable *quality control instrument*

which allows him to establish a uniformly high standard of workmanship for his department. He can demand and obtain *measurable* performance improvement from each job because it starts through the service department with a complete and accurate diagnosis and must pass a rigid final inspection before its return to the owner.

The *service salesman* profits because his customers will be better satisfied with *performance tested* service. He can handle more cars and has the assurance that his recommendations and repair orders are in the best interests of his employer and his customer. Because necessary road tests before or after service are made on the Vehicle Analyzer, his time is conserved to *sell and build goodwill*. At no cost to himself, he has in the Vehicle Analyzer operator, a capable assistant who helps him increase his customer labor sales through more complete and accurate diagnosis.

The *mechanic* also profits from the Vehicle Analyzer because the repair orders are specific. He can start *fixing* troubles instead of *finding* troubles. He can complete more jobs daily and his workmanship can be proved with mechanical precision to remove all doubt as to its quality.

The ability of the Clayton Vehicle Analyzer to measure performance in terms of actual horsepower at the rear wheels, called *road horsepower*, has made it possible to establish Standard Performance Ratings. These ratings have been established and compiled along with other testing data for Studebaker cars for a number of years back and will be released shortly to all dealers having Clayton Vehicle Analyzers in their shops.

We suggest you read the attached folder carefully and consider the possible advantages of the Vehicle Analyzer in your operation. Consult your Studebaker service representative or address your inquiry directly to Clayton Manufacturing Company, P. O. Box 550, El Monte, California, for further information.

The Clayton Manufacturing Company has representatives in most parts of the world who are prepared to supply and install Clayton Vehicle Analyzers. Export dealers may write The Studebaker Export Corporation for the address of the nearest Clayton representative.

16A LAND CRUISER INTERIOR FOR SALE

Prendergast Motors, 129 So. Locust St., Dubuque, Iowa, has a complete 1949 Land Cruiser interior trim including seats, seat backs,

upholstery, etc., for sale.

Dealers should get in touch with Jerome G. Prendergast at the above address for further information.