

Studebaker

SERVICE BULLETIN

AUGUST

NO. 242



1950

GREASE LEAKS AT OVERDRIVE HOUSING REAR OIL SEAL OR REAR AXLE PINION BEARING OIL SEAL

Please record this article on pages 221 and 254 of your 1950 Shop Manual and on pages 177 and 221 of your 2R Series Trucks Shop Manual.

Studebaker lubrication recommendations as published in our various manuals, charts, and the authorized data sheets put out by various oil companies and the like call for a check of the transmission and rear axle oil levels every 1,000 miles.

This check is important, especially in the case of overdrive transmissions, since an oil loss of less than one pint can cause major damage to the overdrive transmission calling for expensive replacement. Frequent checking of the oil level will help in catching cases of leakage before serious damage has resulted.

Inspect overdrive equipped cars for leakage at the overdrive housing rear oil seal whenever you have the opportunity -- that is, at new car preparation time (it is a part of the H350 procedure), at each of the service policy inspections, and at other times when the car is in the shop for service. Inaugurating a habit on the part of your service men to look for such a leak from the time the car first comes in your service department, will soon result in your finding and eliminating the majority of such leaks before serious damage occurs.

In cases found to be leaking, and in which it is safe to presume that the overdrive unit is not otherwise damaged, it will be necessary to replace the overdrive housing rear oil seal, following shop manual procedures and using the following special precautions:

1. Be sure the seal surface on the propeller shaft flange and the rear oil seal bore have no nicks, burrs, or evidence of imperfection. Minor nicks can be polished out.
2. Before pressing seal in place, coat the outside diameter of the oil seal with Permatex or a similar sealing compound.

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In the event similar leaks are found at the rear axle pinion bearing oil seal, the precautions given above should be followed.

AIR CLEANER-HOOD INTERFERENCE - 17A

Please record this article on pages 40 and 193 of your 1950 Shop Manual.

When the carburetor air cleaner is properly installed on 1950 Commander (17A) models, there should be 1/4" clearance between the highest point of the cleaner and the underside of the hood directly above.

Should the air cleaner not be positioned fully down on the carburetor air horn, however, this clearance may be lost and interference between the hood and the cleaner would result. In all cases of such interference, therefore, be careful to reposition the air cleaner correctly on the carburetor.

**REPLACEMENT LUGGAGE COMPARTMENT
LOCK PARTS - 9G, 17A**

Please record this article on page 40 of your 1950 Shop Manual.

Whenever a luggage compartment lid lock or any of its parts are to be replaced, or to eliminate cases of locks that are hard to operate, we suggest the use of new lock, Part No. 290725, in combination with striker, Part No. 290735. This will provide greater ease of operation.

Attention is called to the fact that if the new lock (Part No. 290725) is used, the new striker (Part No. 290735) must also be used.

These two parts are directly interchangeable with the original parts and thus no difficulty is experienced in their installation if the information given on pages 8 and 9 of the 1950 Shop Manual is followed.



TRUCK SERVICE Information

**ROTO-CAPS HELP MAINTAIN LONG
VALVE LIFE - M AND 2R SERIES**

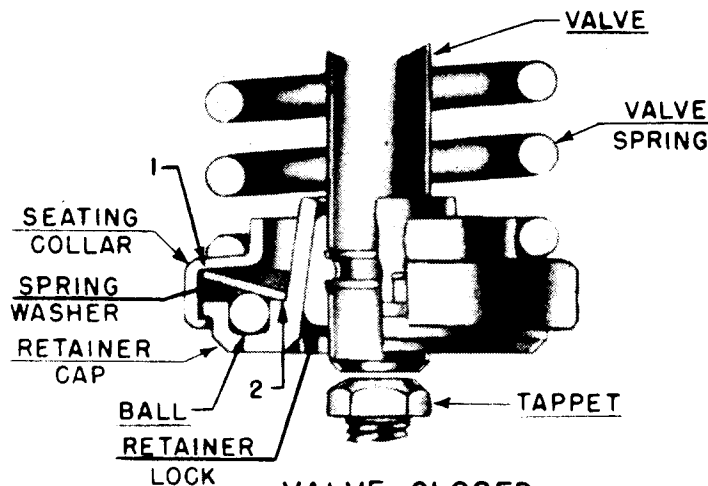
Please record this article on page 107 of your 2R Series Shop Manual.

Exhaust valve life in M and 2R Series trucks equipped with the Commander-type engine can be materially lengthened by the installation of Roto-caps. These caps are placed at the bottom of the valve stem. Through the action and reaction of balls being forced down the trough of an inclined plane (see illustrations) by a spring washer, the stem and valve head are turned a fraction of an inch each time the cam lifts the valve. A return spring in the Roto-cap trough returns the ball when the spring washer pressure is released after passage of the cam. The Roto-cap is then ready for the next impulse.

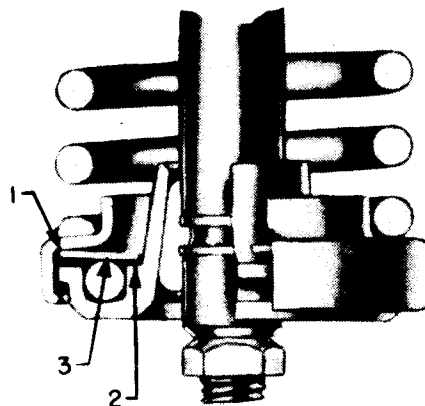
Installation

The Roto-cap replaces the standard spring retainer washer. Also, since the Roto-cap is relatively thicker than the production retainer washer, it is necessary to install shorter valve springs. These springs are a part of the kit.

The following parts, available from your nearest parts depot, are required to make the Roto-cap installation:



VALVE CLOSED
LOAD AT (1) AND (2)



VALVE OPEN

INCREASE OF VALVE SPRING PRESSURE DEFLECTS SPRING WASHER TRANSFERRING LOAD FROM (2) TO (3) CAUSING BALL TO ROLL DOWN INCLINE SHOWN IN SECTION A-A

Part No.	Quantity	Part Name
530020	1	Kit, Roto-cap
	Kit consists of:	
530418*	6	Spring, valve Roto
530417*	6	Roto-cap, valve

* For use only in replacing individual parts in engines already equipped with Roto-caps. For an initial installation, complete kit, Part No. 530020, must be used.

Valve Seat Width

So as to provide adequate area for effective wiping action of the rotating valve, it is recommended that the exhaust valve seat width be kept between 3/32" and 1/8".

Valve Spring Testing

When testing valve spring tension, the following limits of the special exhaust valve springs used in conjunction with Roto-caps, should be observed: 120 to 130 lbs. at 1-1/2" spring length. The free length of this special spring is approximately 2 1/8 inch.

CHROME PLATED PISTON RING M AND 2R SERIES TRUCKS

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

To provide extended piston ring usefulness for abnormally heavy trucking operations and to forestall premature top ring wear in especially dusty areas, a chrome plated top piston ring has been designed and made available through your regular parts depots for service installation.

The chrome plated top ring sets are for installation in M and 2R Series trucks equipped with Commander-type engines only. They come in

standard and three oversizes as follows:

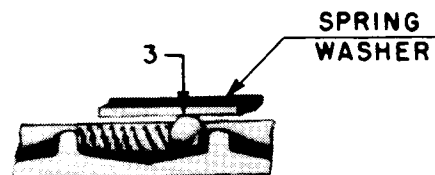
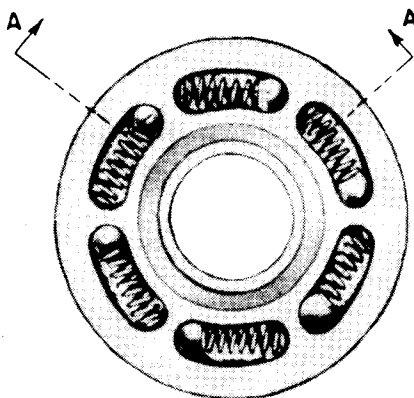
Part No.	Size	Part Name
530015	Standard	Piston Ring Kit - Chrome Plated Top Ring
530016	.020 oversize	Piston Ring Kit - Chrome Plated Top Ring
530017	.030 oversize	Piston Ring Kit - Chrome Plated Top Ring
530018	.040 oversize	Piston Ring Kit - Chrome Plated Top Ring

BEAT THE DUST - - -
SERVICE CARBURETOR
AIR CLEANERS
REGULARLY

RAPID FAN BELT WEAR - 2R10A AND 2R17A TRUCKS

Should you encounter cases of rapid fan belt wear, the cause is probably due to misalignment. A few 4R engines were produced with a water pump adapter, Part No. 529433, on which the sides were not parallel. The condition was discovered in production and it is believed very few got into the field. However, should an adapter plate be found on which the sides are not parallel it should be replaced and returned for credit.

If the engine has been repaired it is possible that an M series crankshaft pulley had been installed. The M series pulley Part No. 186705 measures 1-51/64" from end to end when measured in line with the key way. The R series pulley Part No. 676056 measures 2-3/64". The installation of the correct pulley will correct the condition.



ROTATION →

SECTION A-A

DEVELOPED THROUGH BALL PITCH DIAMETER

TOP VIEW OF RETAINER CAP
BALLS AND SPRINGS IN VALVE CLOSED POSITION

REINFORCEMENT OF TRUCK FRAME FISH-PLATING - 2R SERIES

CHANGES: 2R SERIES TRUCKS

Please record this article on page 112 of your 2R Series Trucks Shop Manual.

Please record this article on pages 37, 112, and 177 of your 2R Series Trucks Shop Manual.

In some cases where trucks with fishplated frames are subjected to continual overloading, the fishplating may separate from the frame in the area shown in the accompanying drawing. To prevent such separation, install two 3/8" bolts, Part No. 179240, in the locations indicated in the drawing. Future production fishplated frames will have rivets at these points.

When drilling the holes it will be necessary to remove the production gas tank so that the bolts can be securely tightened after they are seated in position.

The clips on the brake line, vacuum line, and wiring harness should be removed and these parts moved out of the way to prevent possible damage from the drill.

A right angle drill or drilling attachment should be used because of the limited clearance between the cab step and the frame and also to eliminate the need of removing the transmission. If this type of drilling equipment is not available, the transmission must be removed.

To assure a snug and clean fit of the bolt in the hole, it is suggested that the mechanic first drill through the fishplate and frame with a 1/4" drill and then enlarge the hole with a 23/64" drill. Then carefully ream the hole with a 3/8" reamer, install the bolt and tighten securely. Follow the same procedure for each hole.

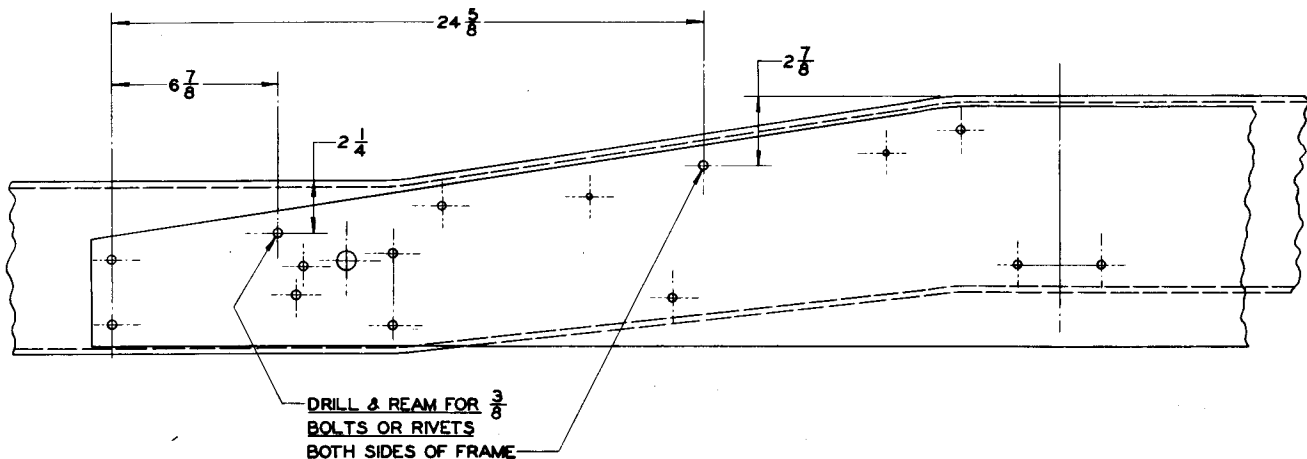
With the inception of the 2R6, 2R11, and 2R14 model trucks, it was necessary to make several changes which affect the interchangeability of certain parts. Therefore, it is recommended that you include the serial number of the truck whenever ordering parts mentioned below.

Front Fender Change

The front fenders have been changed by adding a bump or bulge in the fender splash apron to provide clearance for the upper end of the shock absorber and upper shock bracket. According to results of tests at the Proving Ground, the opening or bulge is not large enough to allow dirt and mud to enter the engine compartment. Therefore, only the latest fenders will be carried in service stock. The new parts are Part No. 653026, right and Part No. 653027, left, Front Fender Assembly, complete, for 2R5, 2R6, 2R10 and 2R11; Part No. 653028, right and Part No. 653029, left, Front Fender Assembly, complete, for 2R14, 2R15, 2R16A, and 2R17A.

SERVICE

THE AIR CLEANER
AT EVERY LUBRICATION



This change entered production with Serial Nos. 2R5-45143, 2R6-202, 2R10-21069, 2R11-101, 2R14-101, 2R15-10912, 2R16A-24878, and 2R17A-14027.

Rear Axle Assembly

When the change was made to direct acting shock absorbers a different rear axle assembly was used which has the lower shock absorber bracket installed at a different location on the axle housing.

New axle assemblies and starting serial numbers are as follows:

Model	Ratio	Part No.	Part Name	Begin with Serial No.
2R5	4.82	679817	Axle Assembly	R5-46414
2R6	4.82	679817	Axle Assembly	R6-225
2R6	4.09	679815	Axle Assembly	R6-225
2R6	4.55	679828	Axle Assembly	R6-225
2R10	4.86	679818	Axle Assembly	R10-21535
2R10	5.57	679819	Axle Assembly	R10-21535

Frame

With the change to direct acting shock absorbers it was necessary to make a change in the frame by riveting brackets to the frame to mount the upper end of the shock absorber.

Model 2R5 trucks built prior to Serial No. R5-46414 will use Frame Assembly, Part No. 679829, with regular type Delco shock absorbers. After this serial number Frame Assembly, Part No. 679886 is used for 2R5 trucks using tubular or direct acting shock absorbers.

Model 2R10 trucks built prior to Serial No. R10-21535 will use Frame Assembly, Part No. 679830, with regular type Delco shock absorbers. After this serial Frame Assembly, Part No. 679887 is used on 2R10 trucks using tubular or direct acting shock absorbers.

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The Studebaker Corporation, South Bend 27, Indiana.



CURTIS TWO-POST LIFT

In these days of fully independent front suspensions and automatic transmissions, a two-post lift has much to recommend it. A catalog insert sheet describing the Curtis lift is mailed with this issue of the Service Bulletin.

Among the leading features in favor of the two-post lift is the lack of obstruction such as that caused by massive side rails and other design elements of the roll-on and four-post types of lifts. This means less cramping to get at various underbody parts of the car and it also means much greater freedom in the use of speed wrenches, drills, and the like.

In addition, these lifts are floor flush with non-skid surfaces on the steel floor plates. This means added floor space and reduction of accident hazards when the lift is not in use. The plungers, of course, disappear entirely beneath the floor plates when the lift is in the full "Down" position.

Two pieces of allied shop equipment made by Curtis -- the air compressor and the hydraulic car washer -- are briefly described on the back of the catalog insert folder.

More detailed information (also prices) about any of these three items can be secured directly from Curtis Pneumatic Machinery Division of Curtis Manufacturing Co., St. Louis 20, Missouri.

PORTABLE PNEUMATIC LIFTS DESCRIBED

Mailed with this issue of the Service Bulletin is a folder describing the portable pneumatic Bay-Lifts for passenger cars and trucks.

While these lifts are in the class of "big brother" to the usual floor jack, they are not

in any sense substitutes for full-scale electric or hydraulic lifts which are essential to lubrication and other services.

The Bay-Lift has the advantages of portability combined with the dependability of ruggedness. This type of lift is useful in upper floors where pit-type lifts are impossible to install and where four-post lifts are impractical. Bringing the work to the mechanic's natural working level and thus eliminating crouching and other unnatural poses has been proven to increase efficiency and thus permit increase of work revenues through each department. Portable lifts are invaluable in this respect in such work as: steam cleaning, body and fender work, brake work and the like.

The lift is operated by the shop air compressor through a hydraulic reservoir and piston. A safety catch is provided so that when the desired height is reached, the air hose may be disconnected for use elsewhere.

Bay-Lifts are manufactured by Bay Manufacturing Co., 316 Arlington Avenue, Torrance, California. Further information and prices can be secured direct from the manufacturer or through your jobber.

AUTOBODY RECONDITIONING METHODS BOOKLET

Enclosed with this issue of the Service Bulletin is a copy of the Minnesota Mining and Manufacturing (3M) company's booklet showing applications of their automotive products to the reconditioning of used cars and the repair of customer cars. The booklet is entitled "Autobody Reconditioning Methods."

While the 3M company's product list is vastly more extensive than is shown in this booklet, the company has selected several of

their products, where applicable (such as in the choices of various grits of sanding papers) to give the service man some basis for comparing results and time requirements involved in doing certain selected body jobs mechanically and manually.

The jobs selected for comparison are representative of those encountered in the average service or used car reconditioning department. For each job are shown comparable times consumed to perform the job either with different methods or with different 3M materials. Also is given the company's consensus of the quality of the jobs as completed by these different means and materials. The times shown are averages of a great number of similar jobs.

KENT-MOORE SERVICE TOOL GUIDE

Mailed with this issue of the Service Bulletin is a copy of the 1950 Kent-Moore Service Tool Guide.

This Guide makes it easy for servicemen to find tools used in service of Studebaker, Buick, Cadillac, Chevrolet, Hudson, Nash, Oldsmobile, Packard, and Pontiac with the least amount of inconvenience.

Tools are grouped in the main body of the book alphabetically by sections of the automobile. In this grouping every tool is illustrated and all those recommended for use on Studebaker products are flagged by the red Studebaker Authorized Service Symbol.

If the tool number is known, reference to the green price list sheet will disclose the tool name and page number. If the section of the car for which tool is to be used is known, reference to the index of sections on page 4 will guide the reader to the part of the book wherein the tool is illustrated and described.

GRIT IS ABRASIVE - - - -
 ABRASIVES ARE DESTRUCTIVE - - -
 SERVICE AIR CLEANERS - - -
 KEEP OUT ABRASIVE GRIT