

Studebaker

# SERVICE BULLETIN

FEBRUARY

NO. 216



1949

**Why Take Less Power Than Your Car Can Give?**

*For Quicker Starts and Better Open-Highway Performance  
Get Our Mid-winter Tune-Up Now*

You need a well-tuned-up engine for quick easy starting these chilly mornings. You need it for sustained speeds on the open highway, too. You must have it if you are to have at your command all the performance you're entitled to... so drive in and let our motor tune-up experts restore your engine's get-up-and-go. You'll appreciate the prompt starting and slight performance of your engine... and your driving will be smoother, safer, far more satisfying. You'll get that new-car thrill all over again!

**HERE ARE SOME OF THE ITEMS INCLUDED IN OUR TUNE-UP SERVICE**

- Carburetor and fuel pump serviced
- Spark plugs cleaned and regapped
- Engine checked—timing adjusted
- Engine compression checked
- Distributor serviced including points spaced
- Complete electrical system checked

**Need Expert Bo...**

Slotted out by Crum (over) Wash (oil) or? beauty is marred by dents or... to fix it up like new.

REGARDLESS OF MAKE  
You'll LIKE Our

**DEALER'S NAME**

STREET ADDRESS TELEPHONE  
CITY AND STATE

**AUTHORIZED SERVICE**

Studebaker

MAILING No. **1**  
**1949** SERIES

**CAN YOU USE More Power?**

MAILED JANUARY

## MORE POWER TO YOU, MR. DEALER

There's a colorful, powerful story in the first mailing piece of the 1949 Studebaker Sales and Service Promotion Campaign.

Engine tune-up for quick, easy starting and peak highway performance is stressed in this mailing. Some of the tune-up items are illustrated and others are mentioned in the convincing sales message.

While these folders are going out to more than 1,500,000 service prospects and customers of Studebaker dealers who subscribed to the current series, all Studebaker dealers will want to check their inventories of mid-winter service supplies and parts -- be sure to have enough anti-freeze, fan belts, water pump repair kits on hand. Service equipment should

also be in efficient operating condition -- battery chargers should be ready for use, hydrometers should be checked for accuracy of readings, and all engine tune-up and analysis equipment should be cleaned and checked.

Whether you have subscribed to the 1949 all-year series of service promotion mailings or use some other direct mail advertising, support your mail campaign for mid-winter tune-up in all your advertising. Don't overlook the telephone -- a personal call to inactive service customers is a potent sales tool.

Your prospects and customers will appreciate the helpful selling found in your mid-winter tune-up service. Give their cars more power, Mr. Dealer, and they'll say, "More power to you!"

## CRANKSHAFT REAR BEARING OIL SEAL

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

This article is a reprint of Passenger Car Service Letter No. 790 which may now be discarded from your files.

### Installation Procedures of Crankshaft Rear Bearing Oil Seal - All Models

The following instructions cover the correct procedure to be used on cars and trucks when replacing the Brummer crankshaft rear bearing oil seal. These seals entered production in Champion-type engines starting with production of 6G Champion Engine No. 284200 and Truck Engine Nos. 1M-17838 (M5), 2M-12091 (M15A), and all 2R5, 2R10, and 2R15 models. The Brummer oil seal entered production in Commander-type engines starting with 15A Commander Engine No. H-269723 and in all 2R16 and 2R17 trucks.

Three oil seals are used at the rear main bearing. Wood filler blocks are used between the sides of the cap and block. Neoprene seals are used between the cap face and the block. The Brummer oil seal is installed around the crankshaft journal.

### Installation in Engines Originally Equipped in Production with Brummer Oil Seal

Remove the clutch, flywheel, engine rear plate, and oil pan in preparation for the replacement of a Brummer seal. In order to remove the engine rear plate, it is necessary to remove the engine on both passenger cars and trucks.

Remove *all* of the old gasket and thoroughly clean oil pan. Since the Floto is now exposed we recommend that the screen be removed and the screen and Floto cleaned. Assemble and install Floto using a new cotter pin.

Remove the crankshaft rear bearing cap and old oil seals. Wash bearing, blow dry, and wipe clean. Loosen the intermediate (Nos. 2 and 3) bearing cap screws approximately two turns to give additional clearance between the rear journal and the block.

Insert the Neoprene seals in the cross grooves of the rear bearing cap so that the inner end of each seal is inset  $11/64" \pm 1/64"$  from the inner end of the groove. (See Fig. 1.) Press the seals uniformly and firmly into the grooves. Place the cap with the seals downward on a flat surface and, while pressing on the cap, use a sharp knife to cut the protruding ends of the seals flush with the side of the cap.

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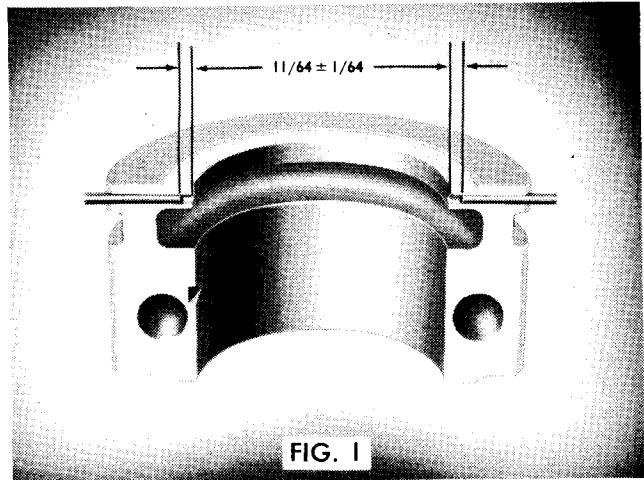
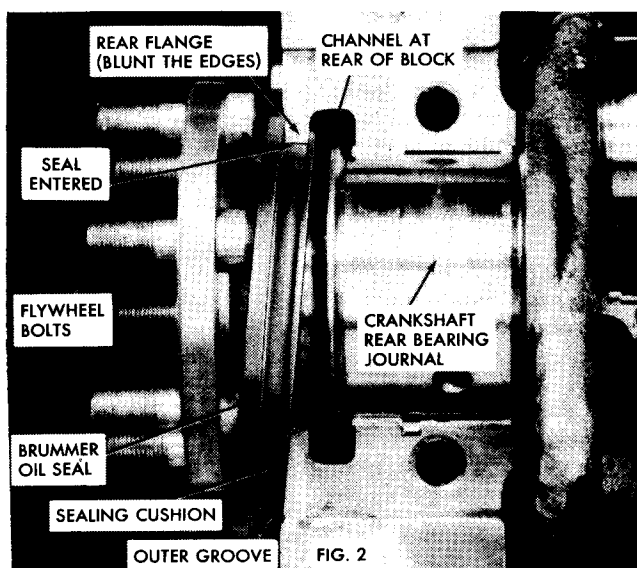


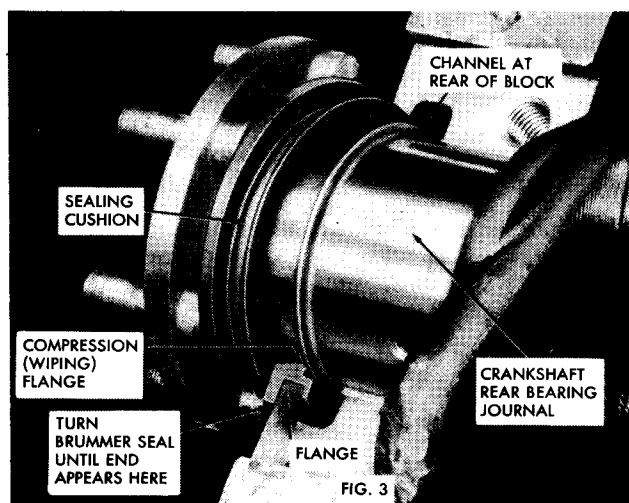
FIG. 1

Using the flat side of a screw driver or a similar tool, blunt the sharp edge of the flange at the rear of the block on which the seal is to be mounted. The edge referred to is on the bottom face of the cylinder block adjacent to the cap and is the one over which the seal is first pushed on each side. It is not necessary to remove any material from this edge but only to blunt it so that it does not scuff the soft center sealing cushion at the bottom of the groove since this cushion is as important a part of the seal as the compression flange which wipes the crankshaft. (See Fig. 2.)

Before installing the Brummer oil seal, thoroughly clean the channel just forward of the crankcase rear flange. This can be done by pulling a swab saturated with alcohol or a similar solvent through the channel several times, then drying the channel thoroughly.



Dip the ends of the seal in liquid soap and spread the liquid soap throughout the inside of the outer groove. Spread the seal just enough to permit aligning one end of it with the crankcase rear flange and insert the seal as shown in Fig. 2. Carefully work the seal around the crankshaft until the end emerges on the opposite side. (See Fig. 3.) Now align the seal, reverse the direction of rotation and insert the other end of the seal. Continue to turn the seal until the joint is approximately  $45^{\circ}$  from the lower surface of the block. During the installation procedure, great care must be used to avoid scuffing the soft center sealing cushion at the bottom of the outer groove of the seal.



Apply oil between the compression flange of the seal and the crankshaft journal. Install the bearing cap and the two Neoprene seals. Be sure that the exposed half of the Brummer oil seal smoothly straddles the rear flange of the bearing cap, and that end edges of flange have been blunted if required. Install the bearing

cap screws and tighten to specified torque. Tighten the intermediate (Nos. 2 and 3) bearing cap screws to proper torque and wire all cap screws securely.

Then install the two new wood filler blocks, being sure that the blocks are not damaged or split during the installation. Replace the oil pan. Run engine for approximately 45 minutes and check for oil leaks.

### Installation in Engines not Originally Equipped with Brummer Oil Seal

The following instructions apply:

1. When a new service crankshaft kit is installed in engines not originally equipped with the Brummer seal.

Blunt all edges of the rear flange on the bearing cap (See Fig. 1.) and the corresponding edges of the rear flange in the block. Be sure no abrasive matter gets in the engine.

Install the crankshaft in the engine, then install the Brummer oil seal as previously described.

Use wood type bearing cap oil seals and discard the two Neoprene seals, Part No. 522144.

Use a squirt can and apply oil between the compression flange of the new seal and the crankshaft journal. Apply a film of oil to the bearing shell of the bearing cap and install the cap. Be sure that the new seal (exposed lower half) smoothly straddles the rear flange of the bearing cap. Install the bearing cap screws and adjust the cap screw tension. Securely lock adjustment with lacing wire. Install new bearing cap oil seal filler blocks. Assemble engine and install in chassis. Fill oil pan and cooling system. Run engine for approximately 45 minutes and test for oil and water leaks.

2. When subsequently replacing Brummer seals in engines which were not originally equipped with the Brummer seal.

Follow instructions as for engines originally equipped with Brummer seals except disregard those parts pertaining to Neoprene cap face seals.

## REPLACEMENT PROCEDURE FOR ONE-PIECE WINDSHIELD - 6G, 7G, 8G, 14A, 15A, 16A

Please record this article on Page 18 of your 1947 Shop Manual.

Mailed with this issue of the Service Bulletin are two pages of instructions covering the replacement of one-piece curved windshield glass, Part No. 284387, in 6G, 7G, 8G; 14A, 15A, and 16A models so equipped. This procedure was prepared by the Pittsburgh Plate Glass Company and has been approved by the General Service Department.

Please insert the pages referred to between pages 10 and 11 of your 1947 Shop Manual so that they will be in a permanent, easily referred to place.

## REPLACING LOCK HANDLE SHAFT ON CONVERTIBLE 7G, 15A

Please record on p. 18L of 1947 Passenger Car Shop Manual.

Effective with Body Nos. 7GS-8723 and 15AS-7732, a new type header bar entered production making it possible to replace damaged or broken locking handle shafts without the necessity of replacing the entire header bar assembly.

The new type header bar has a larger shaft hole through the back panel. A retainer which fits around the shaft beneath the handle has been added and is attached to the header with two screws.

To replace a damaged or broken shaft on convertible models produced after the above body numbers, remove the center locking handle and retainer, unscrew the shaft with a pair of long-nosed pliers, and screw in the new shaft.

Parts required are available on order through your nearest Studebaker parts depot and are as follows:

Part No.	No. Required	Part Name
287394	1	Folding top locking knob shaft
289377-P	2	Folding top locking knob shaft retainer
145-#10-7G	2	Folding top locking knob shaft retainer screw
385-#10G	2	Folding top locking knob shaft retainer screw lock washer

## Shaft Replacement on Earlier Convertible Models

The center top locking handle shaft on convertibles produced before Body Nos. 7GS-8723 and 15AS-7732 cannot be replaced individually. It is necessary to replace the entire header bar assembly, of which the locking handle and mechanism are integral parts.

*Caution.*--If the header locking shaft is damaged so that the lock cannot be operated and the header bar is locked to the windshield, it is necessary to cut out a section of the back panel of the header around the locking shaft so that the locking action can be released. Any attempt to pry the header from the windshield or to force the lock may result in breakage of the windshield glass.

## TRUCK SERVICE ITEMS

### CLUTCH DRIVEN PLATE ASSEMBLY - 2R5, 2R10 (3-Speed Transmission)

Please record this article on page 49 of 2R Series Trucks Shop Manual.

A new clutch driven plate entered production with Engine No. 1R-15641. This new plate incorporates a change in the friction lag and is designed to eliminate possibility of gear rattle or propeller shaft ring on deceleration.

The new plate, Part No. 678905, should be used for service replacements of clutch driven plate assemblies when truck is equipped with the 3-speed transmission. It can be readily identified by the two white and four blue springs; the original plate had six green springs.

The new plate is now available on order through your nearest Studebaker parts depot.

Clutch driven plate assembly on 2R5 and 2R10 4-speed transmission (special order) and 2R15, Clutch Plate, Part No. 666385, with the six green springs will be used.

### POWER TAKE-OFF DATA FOR 2R16, 2R17 TRUCKS

Power take-offs designed for use on 2R16 and 2R17 trucks with either band-type or Tru-Stop parking brakes are listed in the table on page 5.

For specific requirements of special gaskets or adapters in the installation of take-off units, please refer to the last column of the table, headed "Remarks."

POWER TAKE-OFF DATA - 2R16-2R17 MODELS

Using Warner T9 Transmission with Band Brake or Tru-Stop Brake

Manufacturer	P.T.O. Make and Model	Spacer	Ratio or Type of P.T.O.	Direction of Rotation	Remarks
Anthony Company	4306211 Plain Brg. or 4306212 Roller Brg.	18425	Single Speed 2 Gear Type 1-1/3 to 1 Ratio	Opp. Eng. Rot.	No Adapter
Braden Winch Company	SF 7B	23-P-3 or 23-P-13	380 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Adapter 33H3
	SF 7B	23-P-3	380 Rev. to 1000 Eng. Rev.	Eng. Rot.	None
	TF 7	23-P-3 or 23-P-20	593 Rev. to 1000 Eng. Rev.	Eng. Rot.	Adapter 33H3
Chelsea Prod. Inc.	14M2R	7A-300	680 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Two Gaskets
	Model 15	None	890 Rev. to 1000 Eng. Rev.	Eng. Rot.	One Gasket
	Model 25	7A-300	680 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Two Gaskets
Edwards Iron Works for GarWood Hoists for Hercules Hoists	Gar Wood S81-7017-RR2	One 7/16" Spacer	Single Speed	Opp. Eng. Rot.	Two Gaskets No Adapter
	Chelsea #18D	One 5/16" Spacer	680 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	No Adapter Three Gaskets
Hercules Steel Prod. Co.  (Uses Chelsea P.T.O.'s)	Chelsea 14M2R	Chelsea 7A300	680 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Two Gaskets
	Chelsea 18D	One 5/16"	" "	Opp. Eng. Rot.	No Adapter
	Chelsea 1BW	Chelsea 7A300 or 7A900	590 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Chelsea Adapter 33H3
Marion Metal Prod. Co.	Chelsea 14M2R	Chelsea 7A-300	680 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Two Gaskets
Perfection Body Co.	A-250	2274		Opp. Eng. Rot.	Adapter A-1243-8
St. Paul Hydraulic Hoist Company	2570 Plain Brg. 400-1LR Roller Brg.	2000B	Single Speed 2 Gear Type	Opp. Eng. Rot.	No Adapter
Spicer Manufacturing	Model GF 7 Assy. - 002149	23-P-3	619 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	
	Model GF 7 Assy. - 002149	23-P-26	619 Rev. to 1000 Eng. Rev.	Eng. Rot.	Use Adapter 5068X
	Model HF 7 Assy. - 002151	23-P-26	1017 Rev. to 1000 Eng. Rev.	Eng. Rot.	Use Adapter 5068X
	Model RF 7 Assy. - 001576	23-P-27	720 Rev. to 1000 Eng. Rev.	Eng. Rot.	
	Model RF 7 Assy. - 001576	23-P-4	720 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Use Adapter 4919X
	Model XF 7 Assy. - 001560	23-P-3	889 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	2 Speed Forward 1 Reverse
	Model XF 7 Assy. - 001560	23-P-26	889 Rev. to 1000 Eng. Rev.	Eng. Rot.	Use Adapter 5068X
	Model XF 7T Assy. - 001523	23-P-4	872 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Use Adapter 4919X
	Tulsa Winch  (Uses Spicer P.T.O.'s) *Drum Brake Only *Disc Brake Only	Spicer RF 7	Spicer 23-P-16	720 Rev. to 1000 Eng. Rev.	Eng. Rot.
Spicer XF 7		Spicer 23-P-3	889 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Three 1/32 gaskets One 1/64 gasket
Spicer XF 7*		Spicer 26-P-14	1062 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	Two 1/32 gaskets
Spicer XF 7S*		Spicer 23-P-12	872 Rev. to 1000 Eng. Rev.	Eng. Rot.	Two 1/32 gaskets
Spicer YRF-7S*		Spicer 23-P-12	872 Rev. to 1000 Eng. Rev.	Eng. Rot.	Two 1/32 gaskets
H. S. Watson Co.  (Uses Spicer P.T.O.'s and Adapters)	Kit 1G7½-309 Spicer "G"	Spicer 23-P-16	740 Rev. to 1000 Eng. Rev.	Opp. Eng. Rot.	One 1/64 gasket One 1/32 gasket
	Kit 3G7½-308X Spicer "G"	Spicer 23-P-26	620 Rev. to 1000 Eng. Rev.	Eng. Rot.	5068X adapter Two 1/32 gaskets One 1/64 gasket



## EUTECTIC WELDING CABINETS

We are mailing with this issue of the Service Bulletin a folder describing the Eutectic Welding Specialist's Cabinet and a copy of the applications and use of the various Eutectic welding alloys especially adapted to automotive repair welding.

Eutectic alloys weld at much lower temperatures than do the usual welding alloys. The range of alloys and fluxes supplied in the cabinet covers virtually every requirement found in the service department -- zinc die castings, cast iron, steels, copper, brass, bronze, aluminum, and hard overlays.

An order blank is included in the folder mailed with this issue. Orders for the Eutectic welding cabinet should be mailed direct to the Eutectic Welding Alloys Corporation, 40 Worth Street, New York 13, N. Y.

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

## ALLEN ELECTRIC SERVICE EQUIPMENT

Two insert sheets are included with this issue of the Service Bulletin describing three items of the Allen line of precision automotive analysis service department equipment.

The equipment described are the latest models of the E-318 Allen Motor Analyzer, E-319

Allen Syncrograph, and the E-323 Power Timing Light.

For purchasers of the two major units, the Analyzer and the Syncrograph, the Allen organization offers personal instruction by a factory-trained representative. Complete instruction manuals, illustrated, are also provided.

The equipment is manufactured by the Allen Electric and Equipment Co., Kalamazoo, Michigan and is sold only through jobbers.

*NOTE.--Export dealers may order from The Studebaker Export Corporation. Instruction by Allen representatives is limited to the U.S.A.*

## BULLETIN BOARD HAS MANY USES

An attractive, useful bulletin board is described in the announcement sheet mailed with this issue of the Service Bulletin.

The board is cork faced to take thumb tacks easily and without damage to the board. It is surrounded by an attractive chromaloy frame to add to the board's rigidity and appearance.

A bulletin board has many uses in the service department such as the posting of general information notices, Service Bulletin articles, truck and passenger car service letters, etc. As many as eight standard 8 $\frac{1}{2}$  x 11 sheets can be tacked to the board without crowding or overlapping.

Other uses of the board are to place notices regarding seasonal service in a conspicuous place, such as above the write-up desk; to hang in the parts department to feature special sales on accessories, parts, or supplies; to use in the sales rooms for any point of sale advertising or for the posting of specification-type information for the benefit of prospects and customers.

These bulletin boards should be ordered direct from Van Houten-Rankins, Inc., 1020 Dime Building, Detroit 26, Michigan, on the order blank provided in the announcement sheets.

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

## 26 -- DIAL INDICATORS FOR SALE -- 26

We are offering to our dealers, subject to prior sale, 26 sets of the Starrett Model 196-A Dial Indicator, complete with extension rods and boxed in partitioned wooden case.

Orders filled in order of receipt at the General Service Department, The Studebaker Corporation, South Bend 27, Indiana.

SET COMPLETE IN WOOD CASE - - - \$15.00  
F.O.B. South Bend, Indiana