

Studebaker

SERVICE BULLETIN

NOVEMBER

NO. 257



1951

VALVE LIFTER IDENTIFICATION - H ENGINES

Please record this article on the Service Bulletin reference page at the end of the Engine section of your 1951 Passenger Car Shop Manual.

Effective with Commander V-8 Engine No. V-110189, the 30" radius valve lifters can be visually identified by one or the other of the following marks:

1. By an annular groove turned in the outside diameter immediately below the top or open end.
2. By a single notch ground across the upper edge of the open end of the lifter.

WINTER ANTIFREEZE

Beginning approximately November 1st, anti-freeze mixture (to give protection down to 10° below zero Fahrenheit) was injected in all cars and trucks leaving the factory. The amount injected in the various models is as follows:

- Champion passenger cars - 5 quarts
- V-8 Commanders and Land Cruisers - 6-1/2 quarts
- 2R Series trucks equipped with Economizer engines - 5 quarts
- 2R Series trucks equipped with Power Plus engines - 6 quarts

Cars and trucks containing these amounts of antifreeze will bear windshield stickers indicating that they are protected to a temperature of 10° below zero Fahrenheit.

Antifreeze is injected to afford protection to dealers against freeze-up and resultant damage to vehicles while in transit. In instances where cars are delivered in colder areas it is suggested that the radiator solution be checked and where necessary additional antifreeze injected. Where warmer temperatures are encountered it may be necessary to add water to the cooling system.

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Any Methanol base antifreeze will mix satisfactorily with Studebaker antifreeze which may be checked with a standard Methanol tester. Ethyl base alcohols will also mix satisfactorily with Studebaker antifreeze. However, such mixtures cannot be checked with standard antifreeze testers.

CANADIAN DEALERS NOTE.--Pure glycol type anti-freeze installed in Canadian production vehicles (produced without Climatizers) as follows:

- Champion - 5 Imperial Quarts
- Commander V-8 - 8 Imperial Quarts
- 2R5 Trucks - 5 Imperial Quarts

This protects vehicles to 30° below zero Fahrenheit.

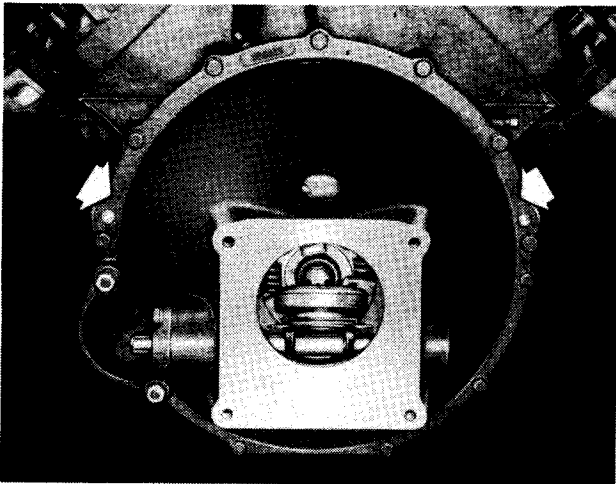
Vehicles shipped by rail freight from Canadian plant are "dry", i.e., no antifreeze or coolant is installed. Export units are protected as above while in storage, but are drained and shipped dry to destination.

The pure glycol type antifreeze cannot be read on same scale as propylene glycol antifreezes (such as Prestone) but must use special scale for pure glycol base compounds.

CLUTCH OR TORQUE CONVERTER HOUSING DOWEL HOLES - COMMANDER H MODELS AND CHAMPION MODELS WITH AUTOMATIC DRIVE

Please record this article on the Service Bulletin reference page at the end of the Clutch section of your 1951 Passenger Car Shop Manual.

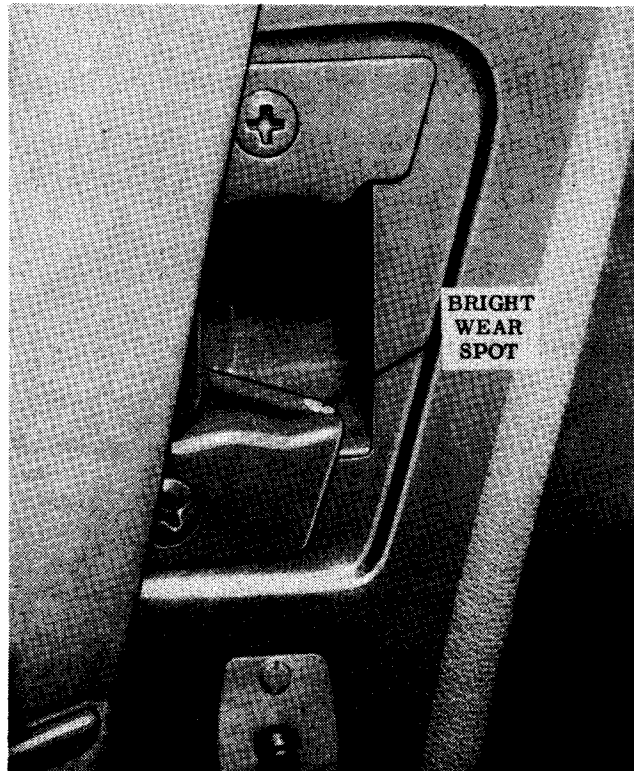
When drilling new dowel holes in torque converter housings on Commander H models and Champion models equipped with Studebaker Automatic Drive, use an 11/32" drill, (see illustration below for location), then ream the holes to .376" - .377" (9.55 - 9.58 mm.) and install service dowel pins.



FRONT DOOR RATTLE - IOG, H

Please record this article on the Service Bulletin reference page at the end of the Body section of your 1951 Passenger Car Shop Manual.

An unusual noise may occur at the front door of some 1951 models. The noise resembles a creak or groan and is sometimes more apparent under a brake application. This noise is



traceable to slight misalignment of the hinge mounting holes. It can be identified by a bright wear spot on the mounting bracket (see illustration above).

This condition can be corrected by filing off either the hinge bar or the bracket at the point of interference.

ELECTRICAL SYSTEM 1951 MODELS

The following revisions should be made as indicated in the Electrical System section of your 1951 Passenger Car Shop Manual:

Page 1 -- The Champion current-and-voltage regulator model number should read "VRP6005A."

The Champion "cut-out relay voltage at closing" should read "6.4-6.9."

Page 2 -- The parking lamp bulb for all models equipped with directional signals is 6-8 volt Mazda No. 1158. The tail-and-stop lamp bulb is 6-8 volt Mazda No. 1154 with 21 candlepower from the stop lamp filament and 3 candlepower from the tail lamp filament.

**CORRECTION TO OIL LEVEL GAGE
DATA IN BULLETIN 254**

On page 7, Service Bulletin 254, in the Note immediately beneath the chart under the drawing of the oil level gages and oil pan, the dimension given as 6-7/8" should read 6-7/16". Please correct your copy accordingly by marking out the dimension as printed and writing in ink above it the dimension 6-7/16".

**TORQUE SPECIFICATION
REVISIONS - IOG, H**

Please turn to the second and third pages of the Torque Specification section of your 1951 Passenger Car Shop Manual and change the specification data as indicated below:

**FUEL PUMP STRAINER -
H MODEL**

Please record this article on the Service Bulletin reference page at the end of the Gasoline System section of your 1951 Passenger Car Shop Manual.

In a few cases it has been found that the two nuts holding the disc-type fuel pump strainer pack (Part No. 531219) properly compressed were loose to a degree that affected the efficiency of the strainer.

It is suggested that this point be checked for tightness of the nuts on Commander H models equipped at the factory with the disc-type fuel pump strainer, Part No. 531219.

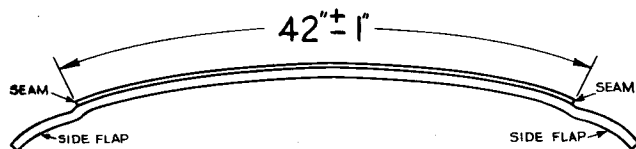
	<u>CHAMPION</u>	<u>COMMANDER</u>
ENGINE		
Rocker arm cover nuts - torque required		18-20 in-lb (2,6-2,8 kg-m)
FRONT SUSPENSION AND STEERING		
Control arm threaded bushings - size (upper inner)	1"	1"
(upper & lower outer)	1-1/8"	1-1/8"
(lower inner)	1-3/16"	1-3/16"
Steering bell crank bracket bolt nut - torque required . .	30-33 ft-lb (4,1-4,6 kg-m)	30-33 ft-lb (4,1-4,6 kg-m)
Steering cam lever nut - size and thread	3/4"-16	3/4"-16
- torque required	90-100 ft-lb (12,4-13,8 kg-m)	90-100 ft-lb (12,3-13,8 kg-m)
Steering gear mounting bolt nut - size and thread.	3/8"-24	No Change
- torque required.	25-30 ft-lb (3,5-4,1 kg-m)	25-30 ft-lb (3,5-4,1 kg-m)
REAR AXLE		
Housing cover screw - size and thread.	No Change	5/16"-18
- torque required.	20-30 ft-lb (2,8-4,1 kg-m)	20-30 ft-lb (2,8-4,1 kg-m)
Shaft-to-hub nut - size and thread	7/8"-14 NF-3	7/8"-14 NF-3
- torque required*.	175-250 ft-lb	175-250 ft-lb
* - after alignment of cotter holes	(24,1-34,5 kg-m)	(24,1-34,5 kg-m)
TRANSMISSION		
Transmission case-to-clutch housing screw		
- size and thread	9/16"-12	No Change
- torque required	70-80 ft-lb (9,7-11,0 kg-m)	No change

CONVERTIBLE TOP CLAIM DATA

Please record this article on the Service Bulletin reference page at the end of the Body section of your 1951 Shop Manual.

Convertible top fabrics are made of two-ply textile materials with a water-repellent treated rayon-and-cotton facing and a cotton backing, the two being held together with rubber. Because of this construction, the material itself is waterproof and, in processing, the fabrics are preshrunk for minimum shrinkage. Sealer tape is used to close needle holes at seams.

In production, the top cover is fashioned to fit the bows and top frame parts with just enough looseness to allow for slight, normal shrinkage. A properly fitted and fastened top



cover should measure 42" plus or minus 1" from seam to seam across the No. 1 bow (see drawing), after having been exposed to the elements. A new top (before car is put into operation) that measures slightly more than this should not be condemned until after it has been put into use. Normal shrinkage will usually bring the top cover within limits.

A top cover that measures less than 41" from seam to seam across the No. 1 bow will be too tight and should be returned, properly tagged, and reported as such on a B865 Claim Form, for claims credit consideration.

Before returning any top cover for claim, therefore, measure the width of the top cover across the No. 1 bow while it is fastened and be sure that the measurement is outside the 42" plus or minus 1" limits. Also, be sure the top has not been abused by any of the practices listed below.

Cleaning and Bleaching

Do not attempt to clean convertible fabric tops with laundry bleaches or strong solvents. These chemicals are injurious to the fabrics and rubber. Owners are cautioned against such practices on page 47 of the Owner's Guide and tops so treated cannot be considered for claims credit.

The only recommended method for cleaning a convertible fabric top is to wash it with a sudsy mixture of mild soap and warm water,

using a soft brush or wash rag. Some individual spots may be removed with an Art Gum rubber and a suede brush. Mud splashed on the top can easily be removed by dousing with cool water.

Another cause of damage to the top fabric is the practice of lowering the top after it has been wet without allowing sufficient time for it to dry thoroughly. This invites mildew and rot, which are natural results of this form of abuse, and top covers thus damaged are not subject to claims consideration.

Owner Education Dealers are urged to discuss with owners the care of the top at time of delivery of convertible models and to recommend (1) that no chemical preparations, dressings, or cleaners other than mild soap suds, etc. listed above be used to clean the top; (2) that the top be lowered only when it is thoroughly dry; and (3) that the top motor never be operated while the car is in motion.

Owners should be advised that every time the top is raised to stretch it (by pulling on it by hand) from side to side at the locations of the side fasteners. Owners should always fasten the top cover with fasteners provided (see paragraph 4, p. 26 of the Owner's Guide).

ENGINE NOISE - H ENGINES

Please record this article on the Service Bulletin reference page at the end of the Engine section of your 1951 Passenger Car Shop Manual.

There is a noise occasionally found in Commander V-8 engines which may best be described as a sharp rap or click and which, by use of a sounding rod or stethoscope, can be distinctly traced to the distributor support area.

Possible causes and corrections of the noise are listed below:

1. **Oil Pump Drive Gear:** There may be interference between the oil pump and distributor drive gear and the oil gallery plug in the forward side of the distributor support bore of the block. **To Correct:** Loosen the distributor support and raise it slightly. If this eliminates the noise, install an additional gasket at the support base.
2. **Oil Pump Alignment:** It is possible that the oil pump mounting pad on the rear main bearing cap is not flat. This is generally due to tight threads raising the metal around the stud holes and permitting the mating surface of the pump to rock. Drawing up on the stud nuts can then result in misalignment of the pump with the drive shaft. **To Correct:** Loosen the oil pump, remove gasket, and check for rocking. If the pump rocks, chamfer the oil pump mount-

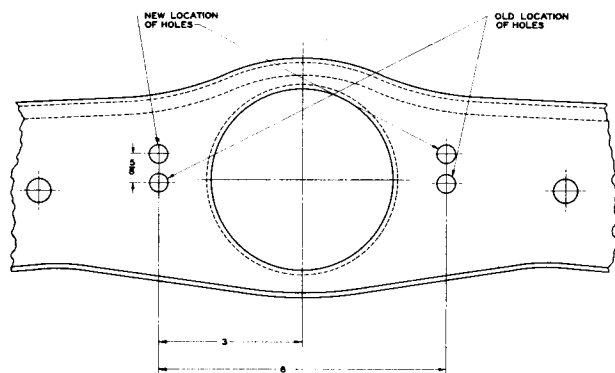
ing holes and recheck. If this does not result in a square contact, it will be necessary to remove the studs, file the surface flat, chamfer the stud holes slightly, and reassemble.

PROPELLER SHAFT SUPPORT BEARING HOLES RELOCATED ON FRAMES - 10G, H

Please record this article on the Service Bulletin reference page at the end of the Propeller Shafts and Universal Joints section of your 1951 Passenger Car Shop Manual.

In production of frames, Part Nos. 529160, 529161, 529162, 529163, 529164, and 529165, used on 1951 passenger car models, the 13/32" diameter mounting holes for the propeller shaft support bearing have been located 1/2" higher on the crossmember than before. This change provides a more ideal angularity of the propeller shaft members under severe operating conditions and should reduce the vibration sometimes experienced in rapid acceleration or open-throttle hill-climbing.

In service, where this condition of excessive vibration is encountered and all other factors



have been found normal, it may be possible to minimize it by relocating the support bearing 1/2" to 5/8" above their present position. (See drawing.) If this correction is made, it is of extreme importance that the holes be exactly above the original holes in the cross-

member. Any deviation sideways, inequality of the height of either hole, or improper spread between the holes can result in misalignment of the propeller shaft support insulators and introduce other drive line disturbances. A check should be made for possible interference at the universal joint spline lubricant fitting. If an angular fitting results in interference it can be replaced with a straight fitting.

REAR MAIN BEARING (BRUMMER) OIL SEAL - 6G-10G, 16A, 17A, 2R SERIES TRUCKS

Record this article on p. 107 of 2R Series Trucks Shop Manual and Bulletin reference page, Engine Section, 1951 Shop Manual.

A new design of Brummer rear main bearing oil seal is now available for service installation. The new seal is in two pieces, similar to that used in the 1951 Commander V-8 engine. The two-piece seal simplifies installation and should result in a better and longer lasting seal.

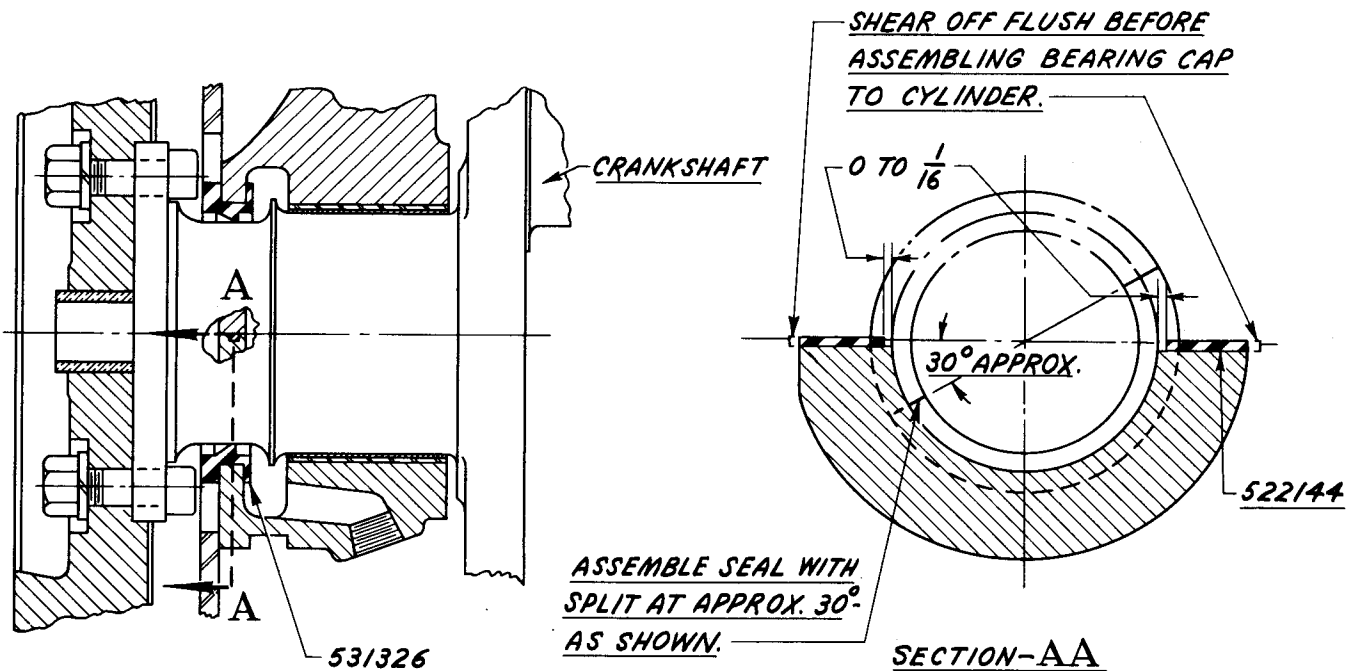
This seal entered production with the following Engine Nos.: 903445 (10G), 1R-117995 (2R5, 2R10), 2R-12915 (2R15); in Canada, C36722 (10G) and H1R-4801 (2R5). You will be advised at a later date when this type seal enters production of the 245.6 cu. in. 6-cylinder truck engine. It is now available for service of this engine as shown below.

In the installation of the new type seal, the Neoprene "spaghetti" seals are now cut flush with the outside of the bearing cap and from 0 to 1/16" in from the inner surface of the cap. See drawings on page 6.

Installation of the two-piece Brummer seal is made as described on page 34 of the Engine section of the 1951 Passenger Car Shop Manual. Wood filler blocks are installed as in the past on Champion- and Commander-type six cylinder engines. The new parts are listed at the bottom of the page.

The drawings on the next page show the location and arrangement of the seals in both Champion- and Commander-type six cylinder engines.

PART NO.	PART NAME	NO. REQ'D	FOR MODEL
531326	Crankshaft rear bearing oil seal	2	6G-10G; 2R5, 2R10, 2R15
522144	Neoprene seal ("spaghetti")	2	6G-10G; 16A, 17A, 2R5, 2R10, 2R15, 2R6, 2R11, 2R14, 2R16A, 2R17A
531328	Crankshaft rear bearing oil seal	2	16A, 17A; 2R6, 2R11, 2R16A, 2R17A



ABOVE: CHAMPION-TYPE INSTALLATION

BELOW: COMMANDER-SIX TYPE INSTALLATION

