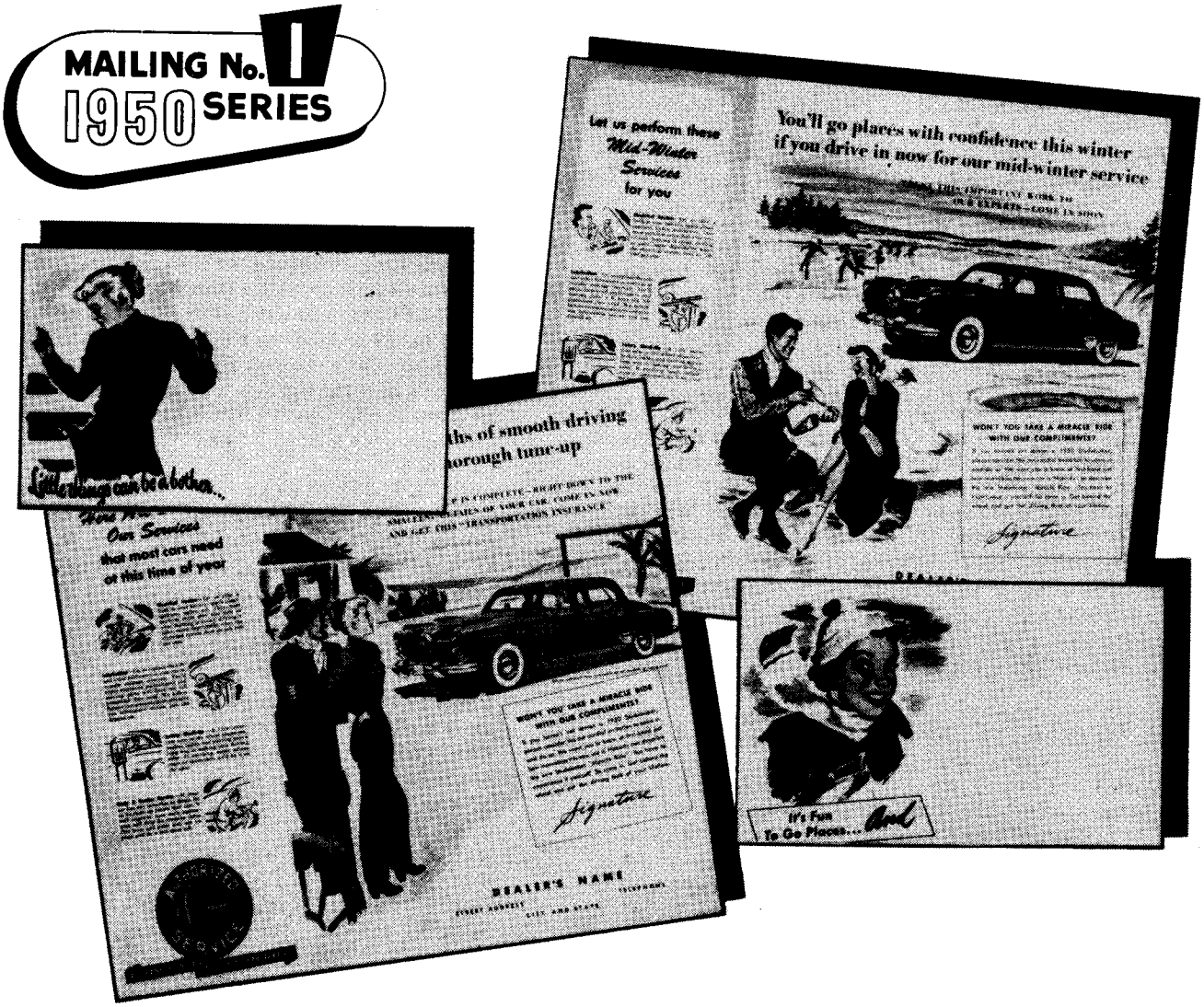
Studebaker

SERVICE BULLETIN

FEBRUARY NO. 236 STUDEBAKER 1950



MID-WINTER SERVICE TUNE-UP STRESSED IN TWO MAILINGS

Two colorful mailing pieces are being sent to Studebaker service customers and prospects all over the United States. One is designed to carry a mid-winter theme, while the other, for mild climates, stresses the importance of thorough tune-up work. Both pieces highlight four important services you offer your customers: electrical, lubrication, safety check-up and body-and-fender refinishing.

Emphasize these four services in your local newspaper, radio, and point-of-sale advertising during the next couple of weeks. Keep the association of your service department with mid-winter service alive by planning your other advertising to tie-in with your direct mail campaign.

Stay ahead of publication and mailing dates by preparing during February and early March for a concentrated campaign on Spring conditioning service -- the theme of the next mailing in the 1950 Sales and Service Direct-by-Mail program.

FIVE-BLADE FAN - CHAMPION MODELS - 2R5,2R10,2R15

Please record this article on page 46 of your 1947 Shop Manual and on page 58 of your 2R series Trucks Shop Manual.

To reduce the type of fan noise encountered when the six-blade fan (Part No. 516076) was installed on Champion model engines, a five-blade fan, Part No. 679622, is now available through your parts depot. The new fan gives quiet operation and its use is recommended wherever greater air cooling than that supplied by the standard production (4-blade) fan is required.

CLIMATIZER HOSE INSTALLATION

Please record this article on page 30 of your 1947 Shop Manual.

To avoid any possibility of coolant loss at Climatizer hose connections, it is important that the fitting and the inside of the clamp ends of the hose are coated with shellac, Permatex, or a similar adhesive before the clamps are tightened. It is likewise important that the clamps are tightened securely and that their tightness is checked periodically.

Some of the early production 9G and 17A models had fittings which were produced with a polished, smooth finish. It is possible that, if hose clamps become loose, the hose might slip off the fitting at these points with resultant coolant loss. Therefore, investigation of coolant loss should begin with inspection of all hose connections and fittings. If loose connections are found, cement as suggested above before retightening the clamps.

INSTRUMENT PANEL NOISE - 9G,17A

The following is a list of causes and corrections for abnormal noise originating in the instrument panel of 1950 Champion and Commander models. No attempt is made to describe the exact type of rattle, since variations are too great. It is necessary for the service man to hear the noise and locate its source before proceeding with any of the corrections given below. There is no connection between the order of the listing below and the frequency with which the various conditions described might be encountered.

NOISE COMMON TO BOTH 9G AND 17A MODELS:

1. **CAUSE:** No anti-squeak material between the instrument board mounting bracket and the body at either the sides or the center.
   CORRECTION: Install anti-squeak (1162xG1-1/2 front or 1162xE2-1/2 sides).
2. **CAUSE:** Accessory mounting hole plugs loose in the hole.
   CORRECTION: Bend out lips of plug.
3. **CAUSE:** Glove compartment door check striking side of glove compartment box.
   CORRECTION: Bend the door check away from the box.
4. **CAUSE:** Instrument panel mounting studs or nuts loose.
   CORRECTION: Tighten as required.
5. **CAUSE:** Plastic cable connector.
   CORRECTION: Replace the connector or push cables firmly into the connectors, then tape the two cables together so as to form a tight loop with the connector in the loop.
6. **CAUSE:** Ash receiver loose in its retainer.
   CORRECTION: Bend up flange of the receiver which slides in the retainer so as to cause a bind. This bend can be made with a pair of pliers and need only be the width of the plier jaws.

RATTLES FOUND IN 17A COMMANDERS ONLY:

1. **CAUSE:** Glove compartment door loose at hinges.
   CORRECTION: Use two No. 291968 fiber washers. Install one washer at each end of the door to properly space the door in the opening..
2. **CAUSE:** Glove compartment door lock.
   CORRECTION: Adjust latch plate or if this is insufficient, carefully bend the door to obtain proper tension.

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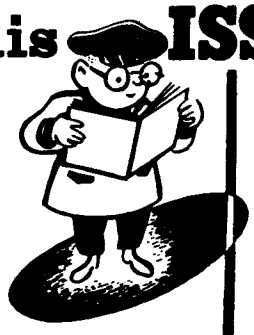


3. **CAUSE:** Cardboard cover at back of radio grille on cars not equipped with radio.
CORRECTION: Remove and discard cover and attaching clips.
4. **CAUSE:** Ornamental spike at center of instrument clusters hits the glass cover.
CORRECTION: Replace the instrument.

RATTLES FOUND IN 9G CHAMPION ONLY:

1. **CAUSE:** Glove compartment door loose on hinges.
CORRECTION: Move the door hinge moulding inward toward the door. These are the chrome plated mouldings on each side of the door which are held against the instrument board with two screws.
2. **CAUSE:** Folded metal at corner of glove compartment door rubbing against the instrument board.
CORRECTION: Flatten the metal at the point of interference.
3. **CAUSE:** Chrome trim moulding around the radio grille loose, especially at the bottom.
CORRECTION: Remove radio grille and pound in the nails that hold the trim moulding.

IF RATTLES ARE IN 9G CHAMPION INSTRUMENTS MOUNTING PANEL, REMOVE THE MOUNTING PANEL WITH INSTRUMENTS AND CORRECT AS FOLLOWS:

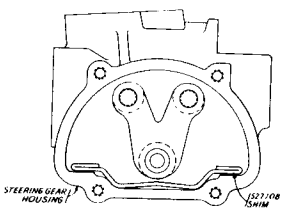
1. **CAUSE:** Glass infra red filters rattle against face of panel.
CORRECTION: Remove the filters, place small pieces of masking tape on the end of the glass and replace.
2. **CAUSE:** Heat indicator and gasoline gage.
CORRECTION: Remove from panel, carefully bend out face of instrument and place pieces of masking tape against the back of face where it rests against the backing cup.
3. **CAUSE:** Speedometer.
CORRECTION: Remove speedometer from the panel, carefully bend out the face and place three pieces of tape on the back face where it contacts the back plate of the panel. Reinstall speedometer.
4. **CAUSE:** Front or back plates of panel housing loose.
CORRECTION: Bend the ten tabs that hold the front to the back.
5. **CAUSE:** Screws used to mount instruments to panel are loose or stripped.
CORRECTION: Tighten or replace stripped screws with 596-#10-6 self-tapping screws.

STEERING GEAR STOP - 9G

Below is reprinted Passenger Car Service Letter No. 820, which may now be discarded from your files.

To prevent bending of the brake backing plate which might result in brake drag at the front wheels on extreme turns, a shim, Part No. 527708, has been released to limit the travel of the steering gear cam lever shaft. This shim, when installed in the steering gear box, acts as a positive steering stop. The steering stop shim started in production with car Serial No. G-518461.

The installation of the steering stop shim, Part No.527708, is made in the following manner:



1. Disconnect the horn wire at connector.
2. Remove the four cap screws holding the steering box housing cover. Remove cover.
3. Install shim between steering gear cam lever shaft and steering gear housing as shown in the illustration.
4. Reinstall steering gear housing cover and cap screws. Connect horn wire.
5. Check steering gear box for lubricant and fill as required with Kendall No. 400.

These shims will be supplied on a "no charge" basis from your local Parts Depot.

If, after installation of the shim, on full turns one of the tie rods contacts the engine oil pan or the brake backing plate is distorted to the point of poor brake operation, this would indicate that the steering gear, tie rods, or the steering knuckle stop screws were not correctly adjusted. These factors should be checked and adjusted as outlined in the 1950 Passenger Car Shop Manual.

Steering knuckle stop screws can be readjusted as follows:

A steering knuckle stop screw is located in each lower knuckle support. On a full right turn, the screw in the right knuckle support contacts the brake backing plate, thus limiting the turning angle of the front wheels to the right. On a full left turn, the screw in the left knuckle support limits the turning angle to the left. Measuring from the top of the head of the screw to the boss on the knuckle support, the screw should extend 5/8" (15,88 mm) on the Champion and 1" (25,4 mm) on the Commander.

To adjust the stop screw, loosen the lock nut and turn the screw in or out as required. Then tighten the lock nut securely.

A stop screw which does not extend out far enough will allow too great a turning angle and may result in interference of the steering linkage with engine or chassis parts, while a stop screw which extends out too far will decrease the turning angle and may cause a strain on the steering linkage on full turns because the screw comes in contact with the brake backing plate before full travel of the steering gear is reached.

NOTE.--*Export dealers see Service Letter F-545.*

TRUCK SERVICE Information

ADJUSTABLE CAB SEAT FOR 2R TRUCKS

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

An adjustable seat assembly similar to that used in passenger cars entered production in 2R Series trucks, Serial Nos. R5-42501, 410-20101, R15-10801, R16A-24401, and R17A-13501

Adoption of the new type adjustable seat affects the cab in that the old type floor pan seat dowels and the seat adjusting hinge body halves are eliminated. Ten additional holes for the new seat track mounting bolts are provided in the new cab.

The new type adjustable seat, Part No. 653050 (LHC) or 653051 (RHC), can be installed in 2R Series cabs produced prior to the above serials (see Fig.1), by drilling ten holes in the floor pan, and bolting the new assembly in place. Location of the bolt holes is shown in Fig.2.

The following parts are required:

Qty.	Part No.	Part Name
1	653050	Seat assembly - LHC
1	653051	Seat assembly - RHC
1	650305	Seat cushion assembly - complete
1	650307	Seat cushion back assembly - complete
10	31-0512G	Bolt
10	251-05G	Nut
14	41x184G	Plain washer
10	380-05G	Lock washer

The two latches which lock the seat assembly in position must engage fully, to prevent possible rattles. An operating rod adjusted too loosely will cause a rattle between the rod and the seat frame, while a rod adjusted too tightly will prevent one latch from engaging fully, causing a rattle between the latch and tooth track. The adjustment is made at the point indicated in the accompanying illustration (Fig.8).

Should it be desired, the old type, three-position adjustable seat can be installed in 1950 production 2R Series trucks by addition of the dowels and the body halves of the hinges on the strainer as shown in Figs.2,3,5,6, and 7. Parts required, in addition to the seat cushion and back assemblies, are:

Qty.	Part No.	Part Name
2	648611	Hinge body half
2	648643	Dowel
8	1/4x5/8	Screw
8	1/4	Lock washer
8	1/4	Plain washer
8	1/4	Nut
2	652937	Seat back hinge pin

INSTRUCTION FOR INSTALLING ADJUSTABLE TUBE SEAT ON CAB ASSY 652873-REMOVE OR FLATTEN LEFT SIDE SEAT DOWEL 648643 AND PLACE TUBE SEAT ASS'Y (WITH SEAT TRACKS ADJUSTED TO REAR POSITION) IN CAB IN FURTHEST BACK POSITION & DRILL 10-11/32 HOLES IN FLOOR PAN THRU SEAT TRACK SUPPORT HOLES BOLT IN PLACE WITH ATTACHING PARTS AS SHOWN IN BILL OF MATERIAL.

INSTRUCTIONS FOR INSTALLING CONVENTIONAL SEAT & BACK ON CAB ASS'Y-653014-ASSEMBLE 648643 SEAT DOWELS & 648611 SEAT BACK HINGES TO DIMENSIONS & ATTACHING PARTS AS SHOWN ON DRAWING & BILL OF MATERIAL. COVER ALL TUBE SEAT ATTACHING HOLES IN FLOOR WITH TAPE TO BLOCK OFF DUST LEAKAGE.

FIG. 1

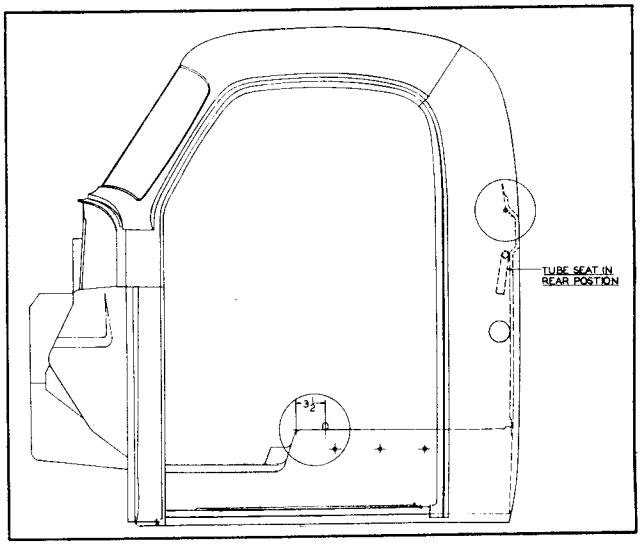


FIG. 2

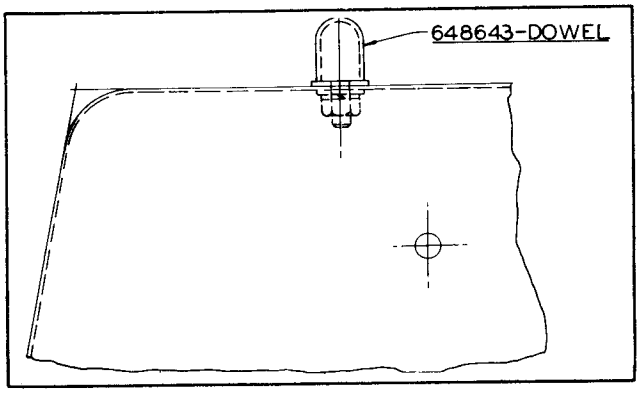


FIG. 3

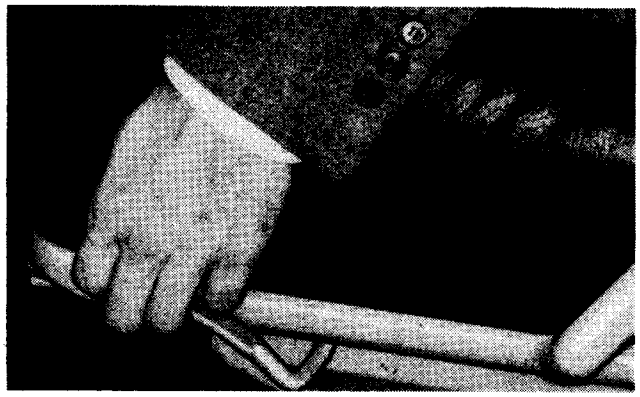


FIG. 4

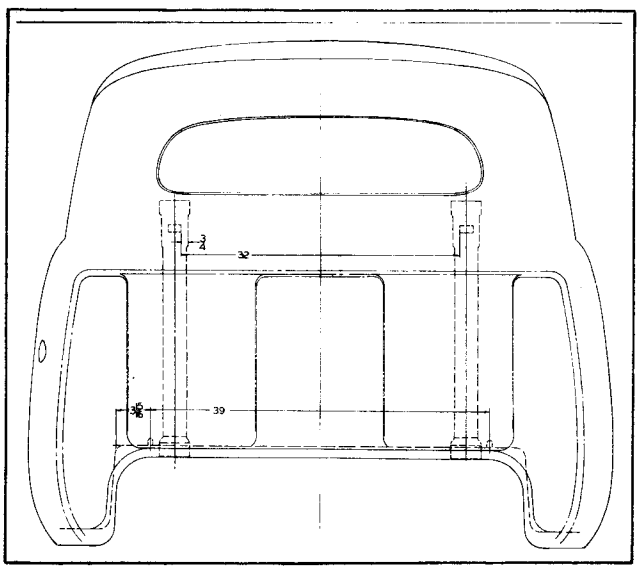


FIG. 5

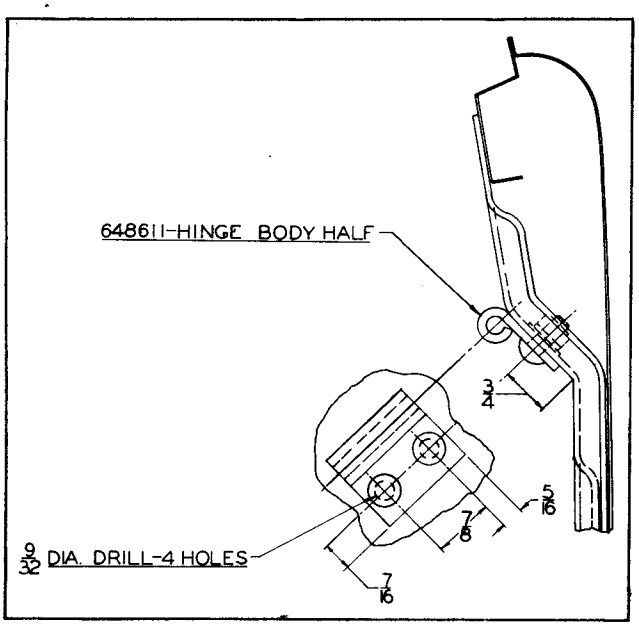


FIG. 6

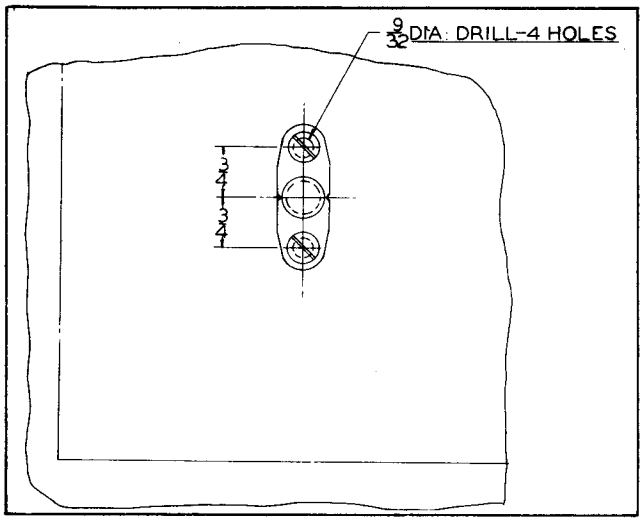


FIG. 7

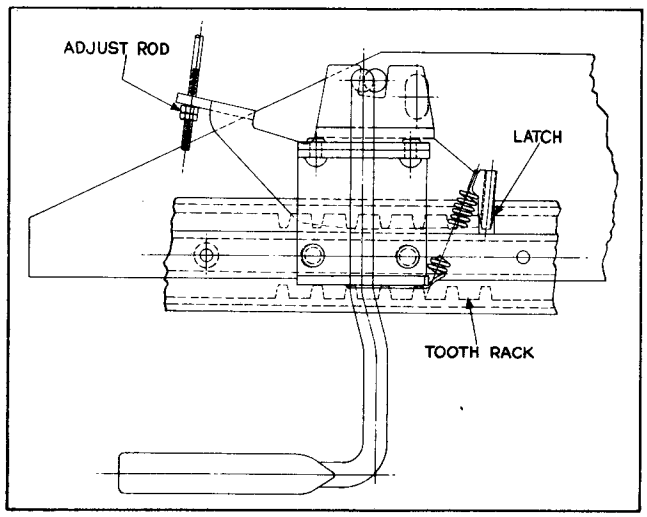


FIG. 8

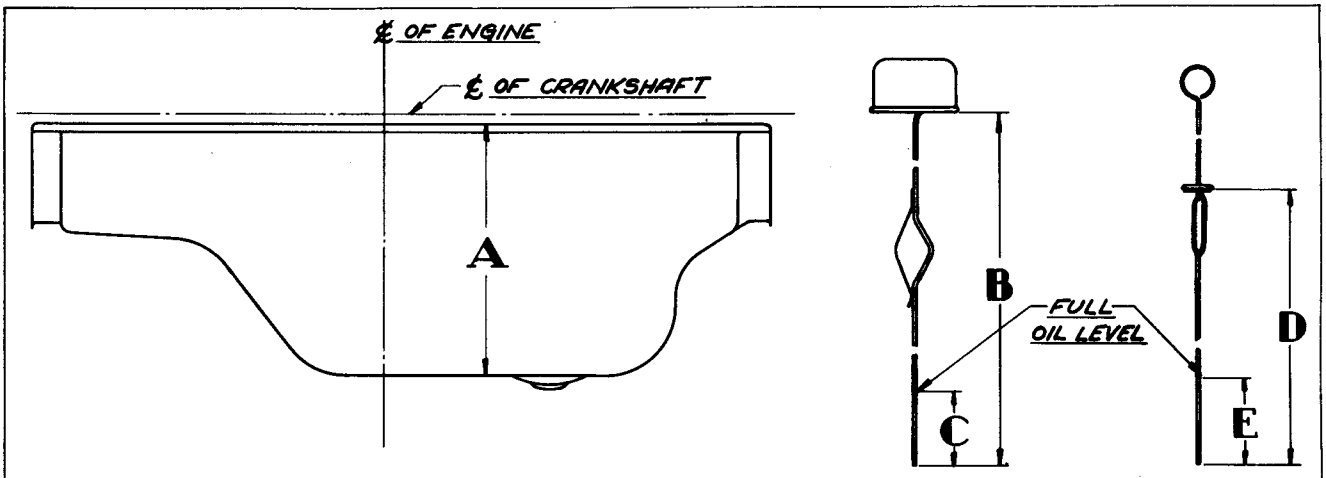
SPEEDOMETER DRIVE GEAR-2R SERIES

Please record this article on page 221 of your 2R Series Trucks Shop Manual.

Should you be called upon to replace speedometer pinion gears repeatedly on a truck, it is suggested you inspect the speedometer drive gear (Part No. 636131) since approximately 5500 "soft" gears got into production prior to truck Serial Nos. R5-41060, R10-19519, R15-10639, R16A-24087, and R17A-24087. These gears can be identified by the symbol W-90-105 stamped on the side of the gear.

These gears may fail prematurely and, if pinion gears are replaced without inspection of the drive gear, failure may repeat. Before installing a new pinion gear, lubricate with Lubriplate or a similar lubricant.

Correctly hardened gears entered production with the above serial numbers.



MODEL	OIL PAN	A	OIL LEVEL GAUGE	B	C	D	E
M5-M15-2R5-2R10-2R15	198824	7 15/64	512582	17 3/4	2 7/32		
M16-M17	199300	6 3/16	512848			8 7/16	2 15/16
M16-M17-2R16-2R17	519017	6 7/16	520225			8 7/16	2 11/16
2R16-2R17-16A	523943	6 7/16	523184			10 1/32	3 7/32
2R5-2R10-2R15	525978	7 55/64	678770	17 3/4	1 7/8		
2R6-2R11-2R16-2R17-17A	524883	6 25/32	525331			10 15/32	3 19/32
2R5-2R10-2R15	524860	7 55/64	678770	17 3/4	1 7/8		
2R5-2R10-2R15	524860	7 55/64	678770	17 3/4	2 1/16		

OIL LEVEL GAGES FOR VARIOUS MODEL OIL PANS - M AND 2R SERIES

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

From time to time as truck models change, dimensions of the engine oil pan and also of the oil level gage are changed. This makes it possible in service replacement of the pan or the gage to have the wrong gage for the pan on the truck. As a result, inaccurate oil level readings may be taken.

The accompanying illustration and chart show how measurements of the gage and pan indicate whether the correct gage is being used. Likewise, the chart should be consulted whenever there is any doubt as to which pan or gage is desired in any individual installation.

When taking measurements to check oil pan depth ("A" in the illustration) hold a straight edge flat against the bottom of the pan and extending out beyond one side of the pan. Hold a scale (graduated to 64ths of an inch) against the side of the pan with the end of the scale snug against the underside of the mounting flange. With the scale perpendicular to the straight edge, read the dimension between the straight edge and the underside of the mounting flange. Locate this figure under Column A in the chart. On the same line will be found the correct part number of the pan as well as the part number of the oil level gage which should be used in conjunction with that pan. Conversely, taking measurements B-C or D-E, depending upon the type of gage used, will tell you the part number and depth of the correct oil pan for that gage.

NOROL (HILL HOLDER) VALVE AND LEVER ASSEMBLY - 2R SERIES

Please record this article on page 30 of your 2R Series Trucks Shop Manual.

It occasionally happens that on trucks equipped with NoRol (Hill Holder) units the brakes are held applied not only on up grades but also on level ground or slight down grades, even though the operating rod has been properly adjusted.

To correct such a condition, it is necessary to install a new NoRol (Hill Holder) assembly, Part No. 679753. This assembly is included in kits, Part No. AC-1654, AC-1656, and AC-2043.

MIDLAND TWO-SPEED AXLE CONTROL VALVE SERVICE DATA

Please record this article on page 177 of your 2R Series Trucks Shop Manual.

Starting with truck Serial Nos. R16A-21302 and R17A-11862, approximately 2000 Midland Two-

speed axle vacuum shift units were installed on 2R16A and 2R17A trucks.

Below is printed maintenance and service information relating to the Midland two-speed axle control valve as well as the hair-filled air cleaner of the vacuum control assembly.

Control Valve

Double-faced poppet type valves are used in the construction of the control valve along with a cam (1) which is spring loaded. Movement of the control valve lever causes the cam roller to travel along the cam. The spring tension on the lever springs (3) maintains a pressure on the valves closing one side of the valve to the vacuum port and opening the other side to atmospheric pressure.

Moving the control lever from one position to the other changes the vacuum from one side of the shift chamber on the rear axle to the other side.

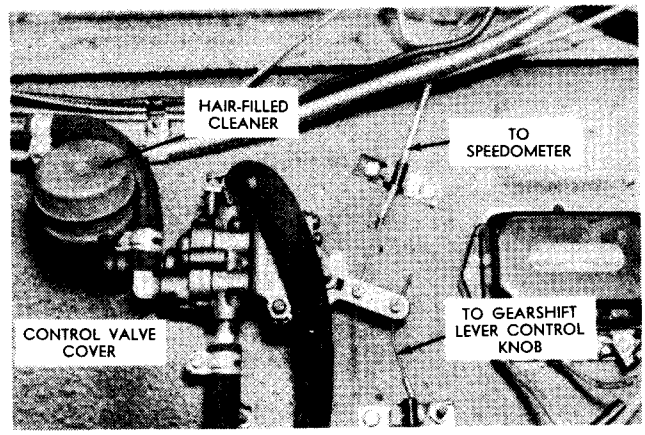
Improper functioning of the valve in some cases will be due to dirt or other foreign material entering the valve or, in extremely cold weather, it may be due to failure of the cam to function properly due to the lubricant becoming sticky. If the cam does not operate properly in cold weather the valve will not shift the rear axle from one ratio to the other. Poor operation of the cam can usually be corrected by lubricating the cam mechanism with penetrating oil.

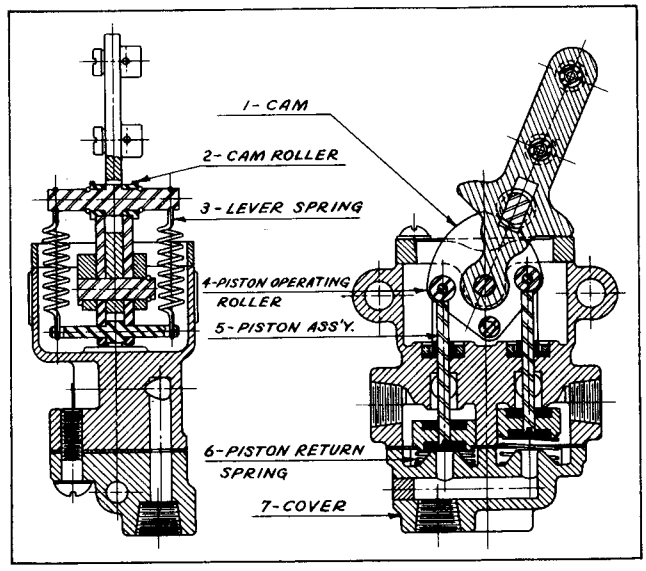
If dirt has entered the valve and lodged on the valve seats, causing leaks, it will be necessary to remove the cover (7) and clean the valves and seats. If the valves are damaged it will be necessary to replace them, using repair kit, Part No. 679902. The kit consists of the following parts:

2 - Control valve piston assembly
2 - Control valve lever spring
2 - Control valve piston return spring
1 - Control valve body end cover gasket
2 - Control valve piston rod seal
2 - Control valve piston rod seal retainer

Control Air Cleaner

The hair-filled sealed cleaner should be serviced as operating conditions require. Under severe dust conditions it may be necessary to service the unit frequently. Remove the cleaner and wash in cleaning solvent. Allow time for the solvent to drain, then dip cleaner in light engine oil; allow excess oil to drain before replacing. Excess oil left in cleaner may affect valve operation.





WASHMOBILE REQUIRES SMALL FLOOR AREA

Mailed with this issue of the Service Bulletin is a descriptive folder on Washmobile, a machine which eliminates the old hose and bucket method of car washing, but does not require extensive floor area for operation. Washmobile moves on tracks the full length of

the car, but the car stands still, thus requiring an area approximately 8' by 21', no larger than the average wash rack.

Water and soap (or detergent cleansing agents) are metered through the machine at the correct pressure and in the correct proportions to clean any average automobile of road film and dirt. For badly "mudded up" or "iced up" cars, special high pressure hoses are available to force such muck off the undercarriage, wheels, or hard-to-get-at places, using both water and air under high pressures.

The Washmobile cleaning process is broken down into four operations: spraying, soaping, mitting, and rinsing. Each step is performed at the will of the operator (mitting is, of course, done by hand) and all on-off, soap, water, and pressure regulation controls are placed on the Washmobile; the operator need not leave the machine between steps. It is claimed an experienced operator should produce at least five completed jobs per hour.

Should you be interested in a mechanical washing apparatus such as Washmobile, you may get more complete details by filling in and mailing the coupon for that purpose included in the folder.

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

STRAIGHT TALK ABOUT PISTON RINGS

Mailed with this issue of the Service Bulletin is a folder entitled "Some Straight Talk About Ring Jobs."

This folder contains some interesting ideas about the importance of re-ring sales to dealers and especially how the factory-recommended ring sets are the "best bet" for the service customer as well as leading to increased service revenue and the elimination of comebacks which result from use of cheaply designed and poorly constructed piston rings.

With three out of every five cars on the road today a pre-war model, the opportunities for substantially increased re-ring volume are knocking loud upon the service door. Good rings carefully installed more than pay their way in the extra service they provide owners who are not yet ready to trade their older models.

Refresher Questions and Answers

1. Chassis springs on 1947-48 model passenger cars should be lubricated with

   _____ chassis lube

   _____ sprayed with oil — See Answer in: 1947 Shop Manual, p. 135

   _____ graphite lubricant

2. The recommended fuel pump pressure on 1947 models is

   _____ 4-5 pounds

   _____ 1-3 pounds — See Answer in: 1947 Shop Manual, p. 115

   _____ 2-4 pounds

3. When adjusting the Wagner Hi-Tork brake, which adjustment must be moved first?

   _____ reverse swivel anchor

   See Answer in: 2R Series Trucks Shop Manual, p. 14

   _____ star wheel

4. What is the minimum vacuum necessary in the two-speed rear axle to insure proper shifting?

   _____ 5 inches

   _____ 15 inches — See Answer in: M Series Shop Manual, p. 124B

   _____ 12 inches

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