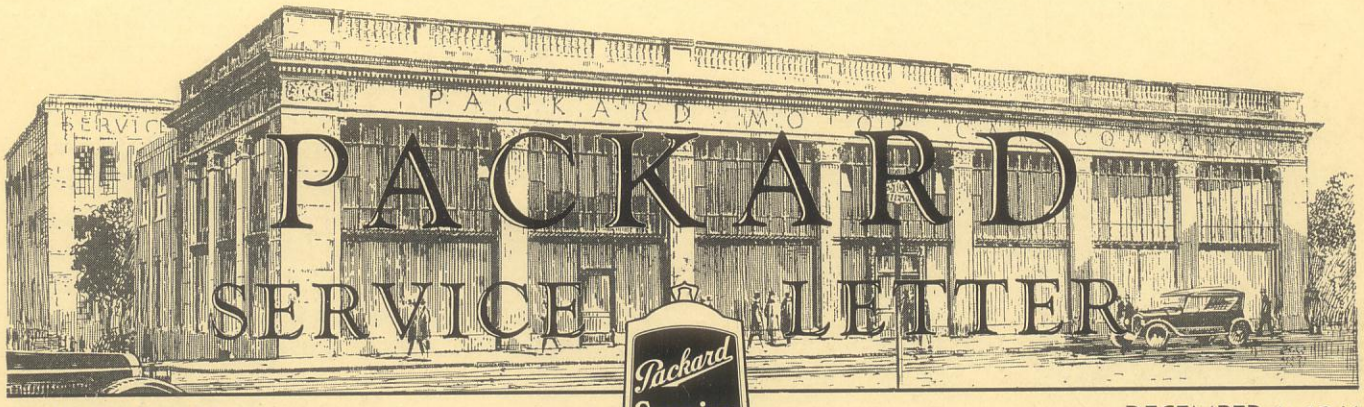


VOL. 15 No. 23 DECEMBER 1, 1941

SHOCK ABSORBER SERVICING

We have had a number of ride complaints come to our attention and we believe there are two reasons for this condition: Improper servicing of the shock absorbers and perhaps a misunderstanding of the insert combination in the leaf springs.

FRONT SHOCK ABSORBER

Discontinue the use of washers placed behind the springs in the valve of the front shocks to secure a more rigid ride. Placing washers behind the springs only produces results for a short time. The overload is too much for the spring and fatigue of the metal returns the shock action to where you started. If you are sure a stiffer ride is what is wanted, use a heavier spring. Always use a heavier spring both in compression and rebound valve.

On shocks more care should be exercised regarding the dirt around the valve opening. This should always be washed clean. Clean fluid should always be used when refilling or bringing up to level. Use only clean tools, bench, vise and hands.

REAR SHOCK ABSORBER

To Dismantle

Wash off all external dirt and place lower eye of shock in vise. Pull free end of shock up until ST-10047 spanner wrench can be placed through the outer shield opening and engaged in the piston rod seal housing. Make sure the wrench fits notches in the piston rod seal to prevent wrench slipping. Place small wedge in opening after wrench is in place or hold outer dust shield down against wrench to keep wrench from slipping up.

Pour all liquid from both halves of shock into waste oil container. Do not attempt to use again. Always renew rubber composition gasket. Remove compression valve No. 18 from end of cylinder by tapping lightly with a blunt screwdriver or chisel against the groove in the edge of valve body. Do not place cylinder in vise as this would squeeze the thin wall of the cylinder out of round. Wash compression valve with clean gas or naphtha and dry with compressed air. Do not use cloth because of lint. Shake this valve hard. If you hear a rattle of any kind, it is either dirt or the fingers of the spring may be bent. In this case the valve assembly will have to be replaced.

The illustration shows a complete shock absorber dismantled with the different parts in their respective position as they would be if the shock were assembled and on the car.

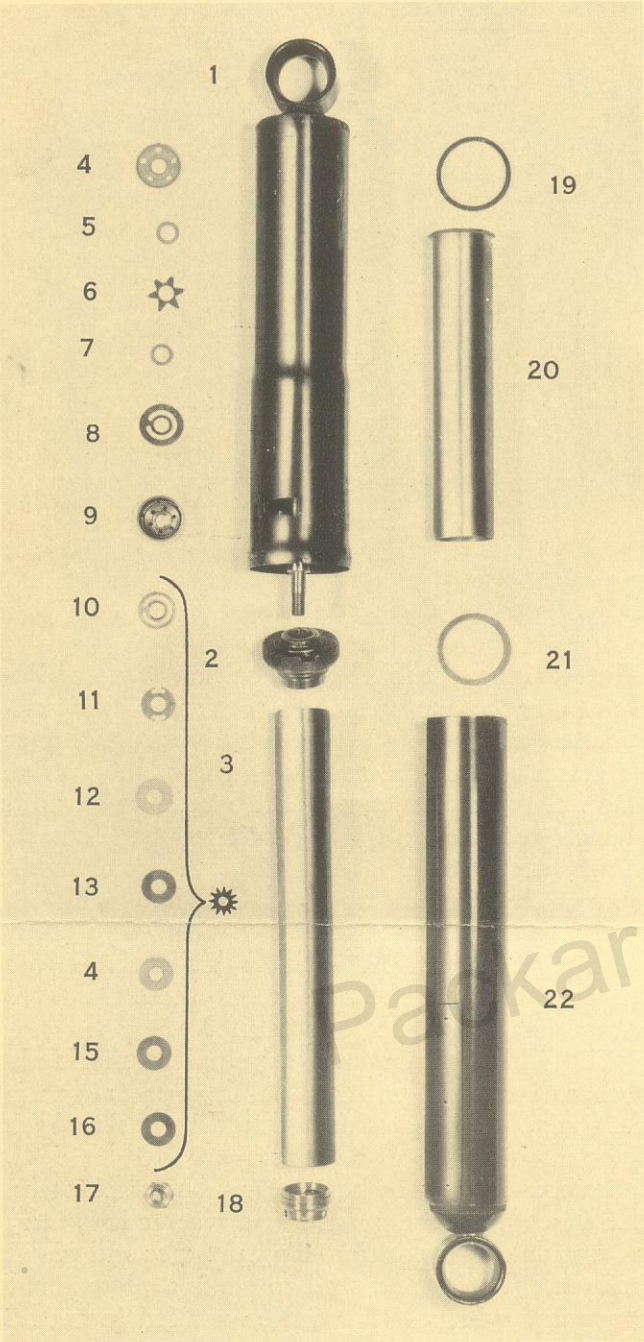
It should be remembered that when working on the shock absorber, placed in a vise, it is held in an upside down position. To keep disc and plates in order, it might be well to make a plate about 3″ square with a $\frac{5}{16}$″ spindle installed in center. Thread spindle $\frac{1}{2}$″ down, using $\frac{5}{16}$″ S.A.E. thread. As parts are removed they can be put in place on spindle and held in position by the piston rod nut. This will keep all parts in order while they are being washed and cleaned by air.

REAR SHOCK ABSORBER

To Assemble

After all parts have been cleaned and inspected be sure that dust shield is clean so that any leakage of fluid can be determined after assembling.

1. Press rod guide and seal assembly on to the cylinder. Always press on threaded part of seal.
2. Place thimble ST-10049 over threaded end of piston rod to prevent damage to seal.



**Parts in bracket to be ordered under one part number as plate and disc assembly.*

3. Slide cylinder and seal assembly into piston rod. Install plate spacers, spring washers and piston in order as shown. The prongs of the piston intake valve plate spider spring No. 6 should face the piston intake valve plate. Make certain the proper side of all parts face in the correct direction and tighten the nut on the end of the piston rod.

4. Move the tube up and down several times, also rotate. If a tight spot is found, loosen nut and rotate with loose nut, relocating piston to a different position. Tighten nut and try again. If tight place cannot be eliminated, a new piston may be necessary.

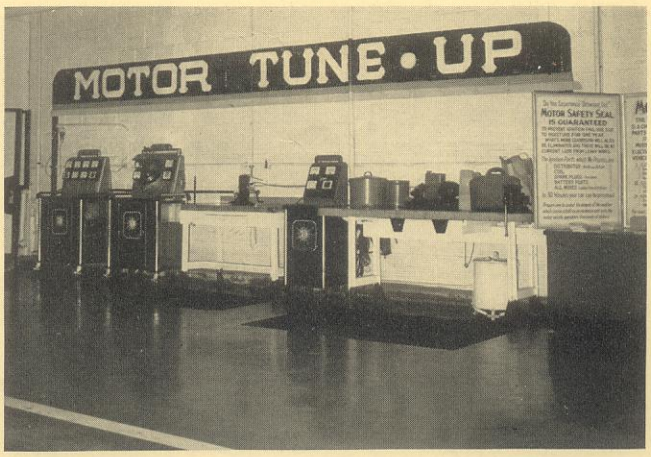
5. Measure the required amount of fluid, using ST-10046 Filler Cup (always filter new fluid using a paint filter). Pull up the inner cylinder until it stops against the piston. Pour enough of the fluid measured to fill cylinder. Install compression valve in open end of cylinder. Tap in place with clean hammer or fiber mallet. Pour remainder of fluid into outer chamber. Assemble using new gasket and tighten piston rod seal tight.

Place shock in vise and work up and down in the same position as if on the car. This works the air out of the compression cylinder.

No. 1		Dust Shield Tube and Piston Rod
No. 2	378527	Piston Rod Guide and Seal
No. 3	378529	Cylinder Pressure Tube
No. 4	378528	Piston Washer
No. 5		Piston Washer Spacer .032″
No. 6		Piston Intake Valve Plate Spider Spring
No. 7		Piston Intake Valve Spacer .008″
No. 8		Piston Intake Valve Plate
No. 9	378526	Piston
No. 10		Rebound Anti-Swish Plate
No. 11		Rebound Valve Orifice Plate
No. 12		Rebound Valve Spring Disc
No. 13	379356	Rebound Valve Spring Discs
No. 14		to be changed as found nec-
No. 15		essary. Usually 4 or 5 are
No. 16		used and are .004″ thick
No. 17	378523	Piston Rod Nut
No. 18	379357	Compression Valve Assembly
No. 19	378530	Gasket
No. 20		Baffle Tube
No. 21	378522	Retainer Washer
No. 22		Reserve Chamber

See S.M.P. Bulletin for Repair Kits.

MILWAUKEE, WIS.



INSTRUMENT PANEL SQUEAKS

NEW INSULATION BEING USED

During the early run of the 1942 Clippers, the field has reported squeaks in the instrument board assembly as well as a very annoying rattle coming from the two sun visors where they are fastened to the body.

The visor rattle can be found by placing a finger on the inside end of visor. Snap the finger away making the visor vibrate. The noise will travel down the body post to the instrument panel. To correct this, add a thick shim placed under the plate where it is screwed to the body.

About November 1 a correction was made in the instrument panel board assembly in regard to the insulation material used, and its location for the best results. The illustrations show where this material is used. The description given will make this operation easier and complete.

First, remove all instrument panel lights and speedometer lights, disconnect wires necessary to allow speedometer and instrument cluster to be handled. Remove 4 screws at Letter A holding the speedometer and instrument cluster. As it is difficult to replace these screws, procure 4 - 10 x 24 x ¾″ machine screws and nuts, flat washers, and lock washers. Cut off the head of the screws and smooth up thread so nuts will start easier.

Place a piece of insulation material, No. 380447, between panel assembly and instrument board at

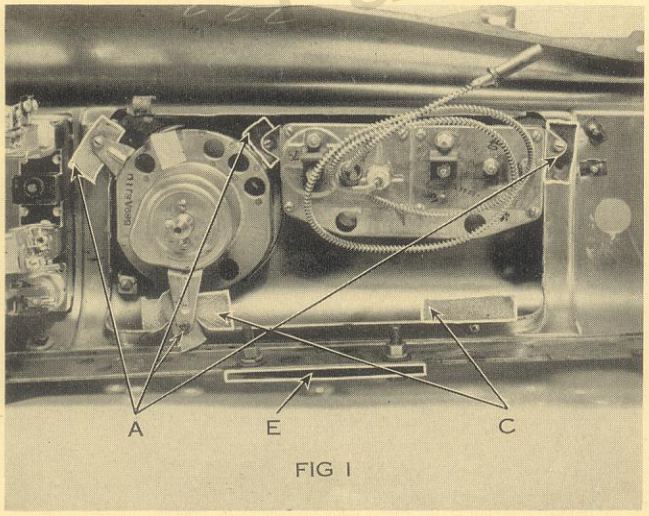


FIG 1

top three places of contact, Fig. 1, Letter A. At A points install 4 screws that have had heads cut off. Cut two pieces of friction tape and place around instrument cluster edge as shown in Fig. 2, Letter G. Also cut small block 3″ x ½″ x ¼″ and cover with tape, cement to face of cluster as shown in Fig. 2, Letter B.

Place another piece of insulation material over screws or studs between instrument cluster and panel. Install paper gasket Piece No. 379674 over instrument cluster, Letter F. Replace instruments and install washers and nuts to hold instruments in place. Place a piece of insulation material be-

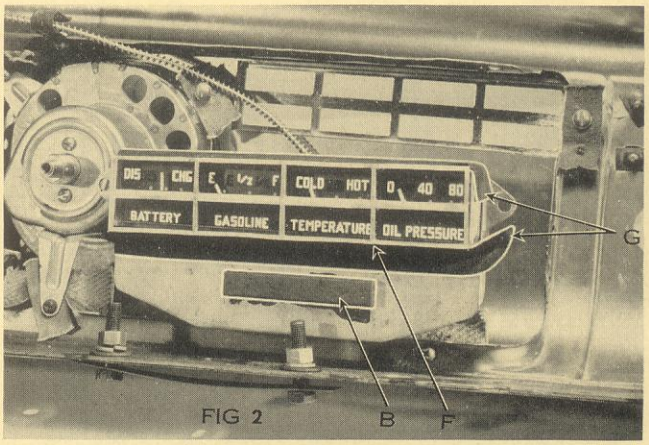


FIG 2

tween instrument cluster panel and instrument board at screw C, Piece No. 380551. Remove 4 - $\frac{5}{16}$″ cap screws holding radio face plate to instrument board, Fig. 3, Letter H. Install one piece of material between face plate and board at all 4 points, Piece No. 380551.

Check the ash tray for small piece of felt between tray and center strip, Letter D, also two strips of thin felt 4″ x ¾″ x ⅛″ between plastic ash tray retainer and panel at Letter J.

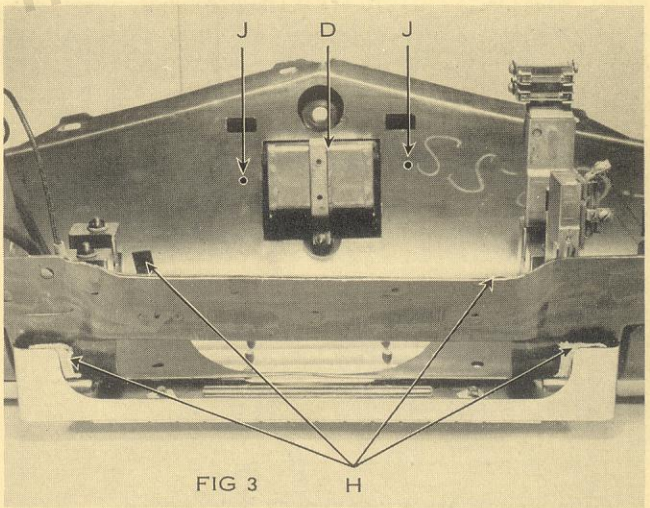


FIG 3

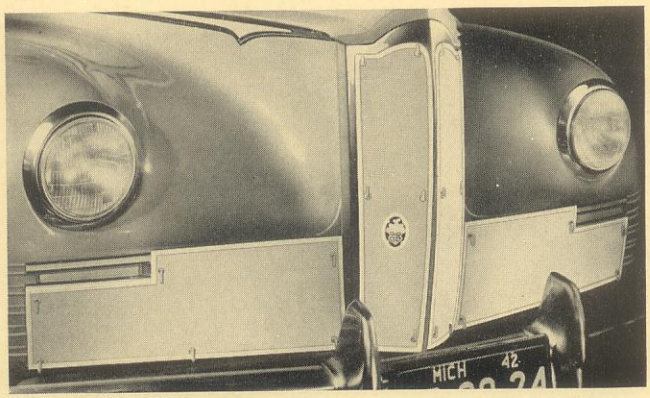
Be sure a thin piece of fiber gasket material is placed between steering column bracket and instrument panel lower flange, Fig. 1, Letter E.

Make sure a piece of friction tape or heavy gasket paper or insulation material is at the point on each end of panel where it is fastened to door pillar if a squeak comes from this point. Also, make sure these screws are tight.

Piece No. 379674 gasket—1 required
Piece No. 380551 webbing—6 required
Piece No. 380447 webbing—7 required

Note: Radio unit will have to be removed.

RADIATOR AND FENDER GRILLE COVERS



The radiator and fender grille covers assure a quick motor warm-up in the coldest weather. This enables the motor to reach an economical operating temperature quickly and to furnish hot water for the car heaters.

Install the two covers on the radiator first and then as the weather becomes colder, add the fender grille covers.

Sell radiator and fender grille covers now to owners of 18th, 19th, and 20th series cars.

CORRECT OPERATION OF THE HEATER AND FRESH AIR INTAKE

Many owners do not obtain the maximum benefit from their Fresh Air Intake because they have not been instructed in the proper use of the controls.

FOR ORDINARY WINTER DRIVING

1st. PUSH the Fresh Air Control Knob all the way IN. This OPENS the fresh air control valve permitting the outside air to enter car through the defroster outlets.

2nd. To obtain fresh, warm air, open the small foot warmer door on the side of the defroster on front of the De Luxe Heater.
If the weather is severe, admit only the quantity of fresh air desired by PULLING the control knob PART WAY OUT.

3rd. PULL the control knob all the way OUT to close the fresh air valve.

4th. The electric fan will increase the air flow when standing or driving in slow traffic. It is not necessary at high car speeds.

TO DEFROST THE WINDSHIELD

1st. PULL the fresh air control knob OUT. This closes the fresh air valve.

2nd. CLOSE the foot warmer door on the defroster.

3rd. PULL the motor switch knob OUT to run the defroster fan.

FOR SUMMER USE

1st. CLOSE the water control valve on the motor cylinder head.

2nd. PUSH the fresh air control knob IN. This permits fresh air to enter the car through the defroster. This is very helpful during a hard summer rainstorm when the car windows are closed.

INSTALLING DOOR RUBBER SEALS—CLIPPER

The doors and old seals should be removed and all cement should be thoroughly cleaned from metal so that the surfaces for new seals will be absolutely clean.

In applying the new door seals the following is very important:

a. The cement applied to door surfaces and rubber seals requires sufficient time to allow cement to become tacky before assembling rubber seals to doors.

b. In assembling rubber seals to doors it is imperative that the seals are located tight against face of door inside panel, so that the rubber seal is as far back from end of door flange as possible. By assembling the door seals in this manner, it will prevent them from hitting the front fender when the door is opened, which is one of the main causes for door seals coming loose.

c. It will also prevent door seals from hitting front fender by loosening all screws which fasten front door hinges to front pillars and moving door a trifle outward until door seals swing free over fender.

We recommend removing the doors when replacing door seals, as it is more accessible for all operations required for installation of new seals.

MANILA, P. I.