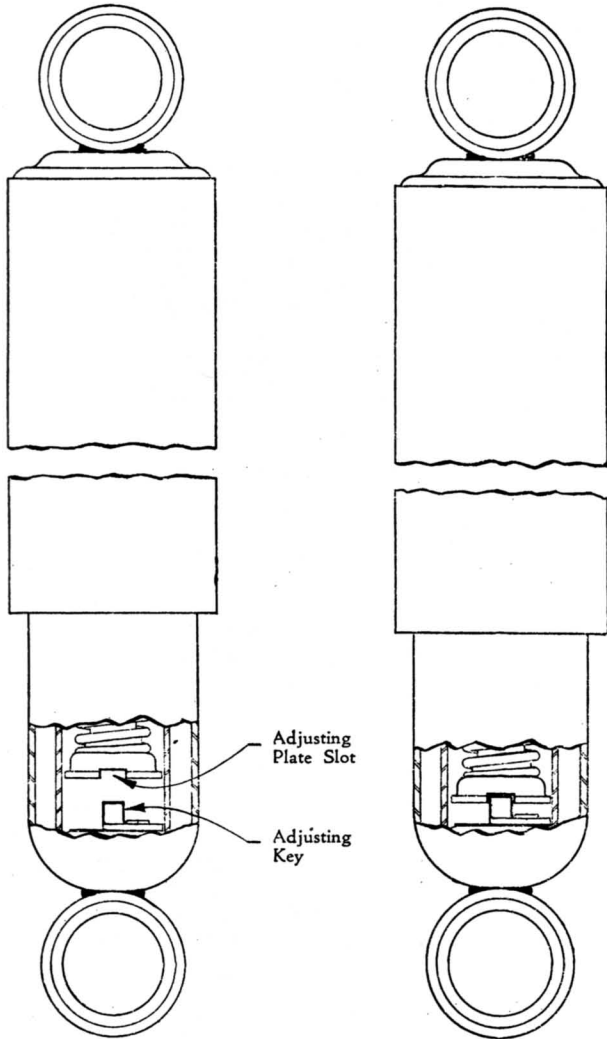


halfway, and then start lower bushing, holding shackle tightly against spring eye and thread bushing in approximately halfway, then alternating from top bushing to lower bushing turn them in until the head of the bushing is snug against the frame bracket, and the bushing in spring eye is $\frac{1}{32}$ " away from spring measured from inside of hexagon head to spring.

Lubricate the bushings with high pressure lubricant and then try the flex of the shackle, which should be free. If shackle is tight it will cause spring breakage and it will be necessary to rethread the bushings on the shackle.



Sketch showing shock absorber before engaging adjusting slot and key.

Sketch showing shock absorber completely collapsed with adjusting key engaged in adjusting plate slot.

FIG. 139—SHOCK ABSORBER

Remove and Replace Spring

To remove a spring raise the vehicle, then place a stand jack under frame side rail, adjusted to a distance so that the load is relieved on the spring and yet the wheels still rest on the floor. Remove the four axle spring clip bolt nuts and lock washers. Remove spring plate and clip bolts. Lower jack at side rail so that the spring is free from axle.

Remove pivot bolt nut and drive out pivot bolt, Fig. 138.

Remove bushing from "U" shackle.

To install spring, replace pivot bolt first and then the "U" shackle bushing. Raise jack and place center bolt in spring saddle and install axle spring clip bolts and nuts. Axle spring clip nut torque wrench reading, 50-55 ft. lbs.; spring pivot bolt nut, 27-30 ft. lbs.

Shock Absorber

The shock absorbers, Fig. 140 provide a much smoother ride by dampening the spring action as the vehicle passes over irregularities in the road.

The shock absorbers are the direct action type, two-way control and adjustable. They may be dismantled for repairs and are refillable.

Adjustment

The range of adjustment is four turns, Fig. 139. To adjust, remove the lower end from the spring plate, push the unit together to engage the adjusting keys and turn in a clockwise direction until the limit of adjustment is reached. Holding adjusting keys in slot, turn lower end anti-clockwise two turns. This is the average adjustment. Turning adjustment to right or clockwise gives a firmer control; turning adjustment to left or anti-clockwise gives a softer control allowing faster spring action.

Lubrication

Should squeaks occur in the rubber mounting bushings, add a flat washer on the mounting pins to place the bushings under greater pressure and prevent movement between the rubber and metal parts.

DO NOT USE mineral oil or rubber lubricant to remove squeaks.

Refilling

When necessary to replenish the fluid, the shock absorber must be removed from the vehicle and dismantled.

Dismantling

Place loop or eye of shock absorber base assembly No. 5, Fig. 140 in bench vise so shock absorber is in an upright position.

Near the lower end of the head assembly (outer shell) No. 22 there are two punchouts. Extend head assembly as far as possible and turn so that these openings are opposite the slots in the piston rod guide and seal assembly No. 21.

With a special spanner wrench, No. 1 inserted thru openings and into two slots of piston rod guide and seal assembly, unscrew guide.

Remove head assembly by pulling it out of the base. The rubber gasket bushing No. 3 and sleeve assembly No. 4 will remain in lower base. Remove base assembly from vise.

Install loop end of head assembly No. 22 in vise so it is in an upright position. Pull up on pressure tube No. 7 as far as possible and remove compression valve assembly No. 6 by placing a drift in the groove around valve and tapping lightly with a hammer. Press tube down to expose piston rod nut No. 8 and remove nut with a $\frac{1}{2}$ " socket wrench. (This nut is staked to piston rod as a means of locking.) Pull up on pressure tube No. 7 until it clears piston rod. All of the parts assembled on piston rod will remain in the pressure tube. Place them on bench. With a rod or long drift, drive out piston rod guide and seal assembly No. 21 from end of pressure tube.

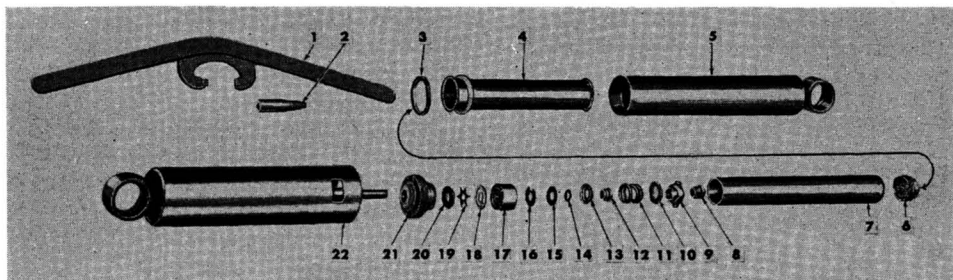


FIG. 140—SHOCK ABSORBER

Wash all parts in cleaning fluid and replace worn or damaged parts.

Assembly

Before assembling make sure that all parts are clean and free of dirt.

Place loop end of head assembly No. 22 in vise in an upright position. Install special tool thimble No. 2 on end of piston rod, down to shoulder. Install piston rod guide and seal assembly No. 21 on piston rod with slots down towards loop end of head assembly. Remove special thimble.

Install piston rod parts in the following order: Piston support washer No. 20 with flat face towards loop end, piston intake valve spring No. 19 with bent ends away from loop end, piston intake valve No. 18, piston No. 17 with skirt away from loop end, metering spacer No. 16, rebound spring disc No. 15 and rebound valve back plate No. 14, spring seat No. 13, with flat seat down, spring seat bushing No. 12 with tapered end towards loop end, rebound valve spring No. 11 and adjusting plate washer No. 10.

Screw piston rod nut No. 8 fully into cupped side of adjusting plate No. 9. Install assembly on piston rod and tighten, after which stake in place. (Make sure all parts correctly positioned before tightening nut.)

Install pressure tube No. 7 over piston rod and center on shoulder of piston rod guide, No. 21. Drive pressure tube in place by using a one-inch tube or pieces of flat stock laid over end.

Measure into a container $5\frac{3}{4}$ oz. (Rear); 5 oz. (Front) of shock absorber fluid.

Extend pressure tube up to the fullest extent and fill with fluid only to within $\frac{3}{8}$ " of top. Hold tube and install compression valve assembly No. 6 with slotted end in tube. Tap lightly into position. Remove assembly from vise.

Place loop end of base assembly No. 5 in vise in an upright position. Pour balance of shock absorber fluid in base.

Install sleeve assembly No. 4 in base with centering indentations towards the loop. Next install sleeve assembly gasket bushing No. 13 (rubber) on top of sleeve.

Pull the pressure tube out of the head assembly.

Insert head assembly in base and start piston rod guide, No. 21 in threads of the base assembly, No. 5 with fingers through windows or slots in outer shield, then tighten securely with special wrench, No. 1.

Check unit for stiffness or bind by operating to full travel by hand. Adjust according to instructions under "Adjustment."

To install shock absorber, install inner mounting rubber bushing on both upper and lower bracket pins, install shock absorber, install outer bushings, flat washer and then compress, inserting cotter key and spreading both ends to hold washer in proper position.

Shock Absorber Tools

The special wrench, No. 1 and thimble, No. 2 shown in Fig. 140 may be secured from the Monroe Automotive Equipment Company, Monroe, Michigan under tool numbers T-317 and T-347 respectively.