Section I

FRONT WHEEL SUSPENSION

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ESSENTIAL TOOLS

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TIGHTENING REFERENCE

	Foot-Pounds
Threaded Bushings on Lower Control Arm	180
Threaded Bushings on Upper Control Arm	130
Upper and Lower Control Arm to Steering Knuckle Support Pin Nut	100
Upper Shock Absorber Piston Rod Mounting Nut	35
Upper Control Arm Pivot Bars to Frame Crossmember Bolts C-71, C-72 (Except Town and Country)	80
Upper Control Arm Pivot Bars to Frame Crossmember Bolts C-73, C-70 (Also C-71 and C-72 Town and Country)	110
Lower Control Arm Pivot Bars to Frame Crossmember Bolts	60
Threaded Bushing in Lower End of Steering Knuckle Support	180
Steering Knuckle Support to Eccentric Bushing Clamp Bolt	40

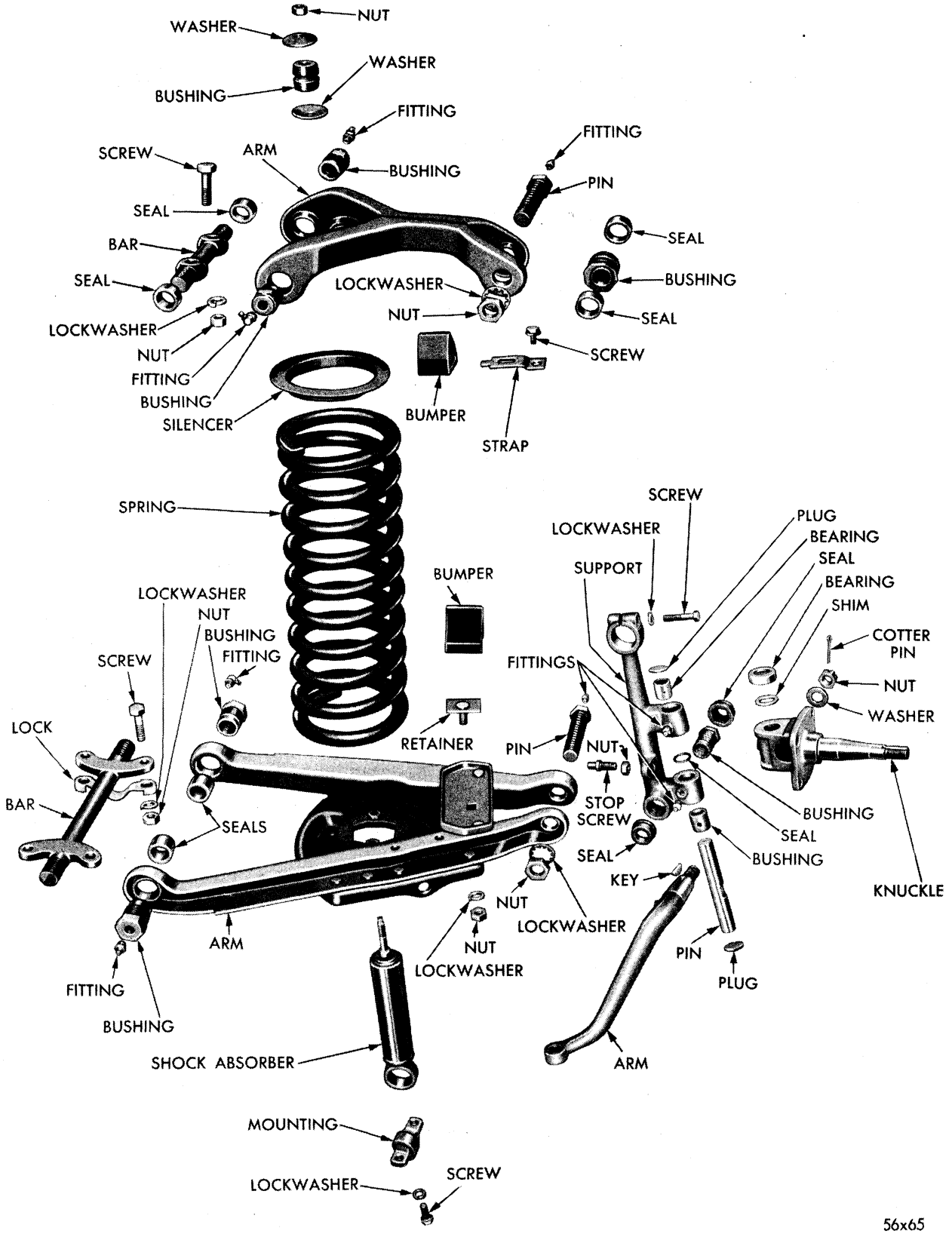

Fig. 1—Front Wheel Suspension

Section I

FRONT WHEEL SUSPENSION

1752-Chrysler-Jack Sec.1 Front Wheel Gal. 1

The front shock absorbers are mounted within the coil spring with the lower end attached to the lower control arm. The upper end is attached to the frame with a rubber-isolated mounting.

This location allows the shock absorber to work through a greater distance with softer dampening action for smoother and more complete car control.

Also incorporated in the suspension system is the sway bar to modify spring action for proper roll control.

Replaceable bushings are used in the control arms at various wear points, and should be properly centered to facilitate adjustment and lubrication whenever they are replaced.

The caster, camber, and front wheel toe-in should be checked and readjusted whenever the control arms or knuckle supports are removed for servicing to assure ease of control and stability of steering.

NOTE

Proper adjustment of the front wheel bearings has a definite bearing on car safety. Improperly adjusted front wheel bearings, will cause the vehicle to wander or shimmy, and create excessive tire wear.

Figure 1 shows the disassembled view of the front suspension system when replacing suspension parts.

SERVICE PROCEDURES

1. REMOVAL AND INSTALLATION OF THE FRONT SHOCK ABSORBERS

a. Removal

Shock absorbers which are found to be noisy should be replaced. The shock absorbers are of the "spun over" Oriflow type and are not serviceable.

Should it become necessary to remove the front shock absorbers for installation of new shock absorbers or bushings, refer to Figure 2, and proceed as follows:

Remove dirt or grease from around the shock absorber upper mounting area. With a ¼ inch open end wrench on flats of the shock absorber piston rod, (to keep rod from turning), remove nut and cup washer. Remove two lower shock absorbers mounting bolts, and withdraw shock absorber through opening in bottom of spring seat.

To remove upper shock absorber bushing, use suitable drift to force the inner steel sleeve out of bushing, then remove bushing from frame opening.

Before installing new bushing, dip bushing in soapy water, insert in position in frame, using a twisting motion. Force steel sleeve through opening in bushing and down into position. When the bushing is properly installed the groove in bushing will index with frame.

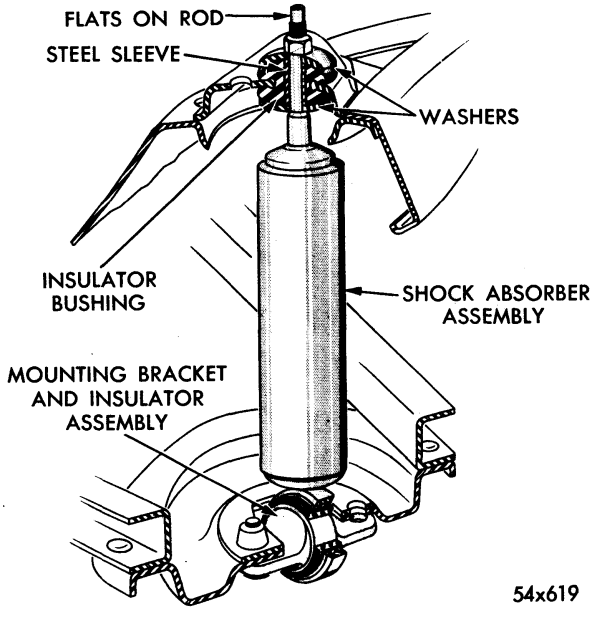

Fig. 2—Front Shock Absorber Installed

Remove the mounting bracket from the shock absorber eye using Tool C-3413. Press mounting bracket and bushing out of eye. The mounting bracket and bushing are serviced as an assembly only.

To install a new mounting bracket and bushing, refer to Figure 2 and 3, and proceed as follows:

Position the new mounting bracket so that mounting holes are at a right angle to shock absorber. Using Tool C-3413, press mounting bracket into eye until centered.

CAUTION

Always press against steel sleeve to avoid damage to the assembly, as shown in Figure 3.

b. Installation

Extend shock absorber piston rod to its full travel, and slide lower cup washer (concave side up) over rod and down into position.

Slide shock absorber up through opening in spring seat into position, (being sure the extended piston rod enters steel sleeve through upper bushing).

Install two mounting bracket bolts to lower control arm and tighten 35 foot-pounds torque.

Install cup washer (concave side down) over piston rod and down on bushing. Install nut, tighten to 35 foot-pounds torque, with upper and lower concave washers bottom against steel sleeve.

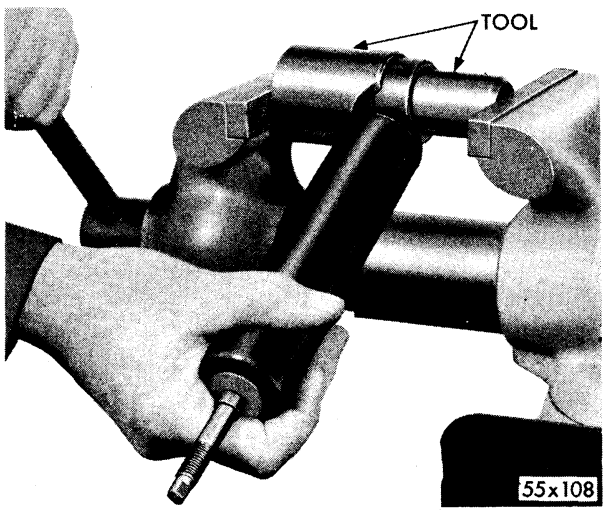

Fig. 3—Removing or Installing Mounting Bracket

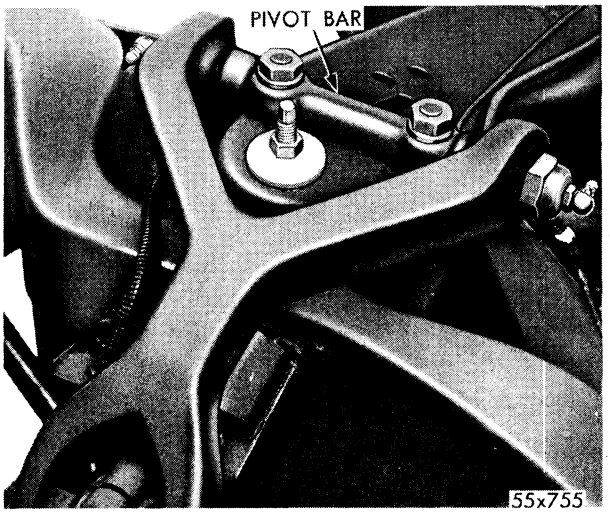

Fig. 4—Upper Control Arm Pivot Bar Installed

2. REMOVAL AND DISASSEMBLY OF UPPER CONTROL ARM (REFER TO FIG. 1 AND 4)

If the upper or lower control arm, or pivot bars are severely damaged, a complete upper or lower control arm assembly should be installed.

Basically, the upper control arm remains the same as those used in previous models, however, the 1956 arm is approximately ¼ inch wider and is mounted to the frame with two bolts instead of four. Due to these changes, the method of centering pivot bar is somewhat different in that we can no longer use Tool C-608 for locating center. It can be used to maintain the set dimension of upper control arm when new pivot bar bushings are installed.

Remove dirt or grease around shock absorber upper mounting area. Raise car by placing a jack or support under lower control arm and remove front wheel and tire assembly.

Loosen locking screw and remove upper control arm to steering knuckle support pin. Remove pivot bar to frame attaching bolts and remove bar and upper control arm.

Clean parts thoroughly in a suitable solvent and blow dry with compressed air. Pivot bar, bushings, pin seal and threaded section of control arm must be thoroughly inspected for wear. Replace parts as necessary.

3. INSTALLATION OF UPPER CONTROL ARM, PIVOT BARS, BUSHINGS AND DUST SEALS (REFER TO FIG. 4 AND 5)

Center the pivot bar with dust seals installed

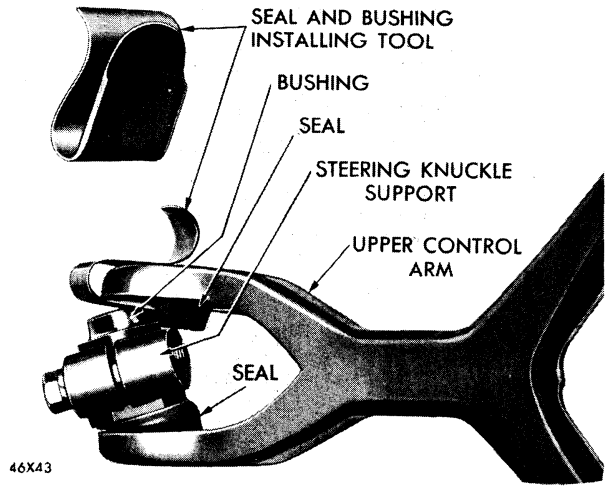

Fig. 5—Installing Upper Control Arm Bushing Seals

in control arm (as it should be when installed in vehicle). With the pivot bar centered in upper control arm, lubricate and start bushings evenly on both ends of the pivot bar. Place Tool C-708 on the pivot bar and expand two jaws of the tool by tightening the expanded wedge nut until jaws of the tool are just snug against the inside of control arm.

CAUTION

Make sure jaws of tool are seating fully on inside face and not binding against control arm flange.

Clamp tool and control arm assembly in vise making sure pivot bar remains centered. Thread the bushings into each side of the control arm until shoulder of bushings contact the surface of control arm. Tighten to 130 foot-pounds torque.

Remove tool and check operation of pivot bar for free movement (only a moderate grip should be required to turn pivot bar).

NOTE

Pivot bar may, if necessary, be rotated one turn in either direction to correct a slight centering error.

4. INSTALLATION OF UPPER CONTROL ARM KNUCKLE SUPPORT PIN, BUSHING AND DUST SEALS

Install a new eccentric bushing in steering knuckle support and place one seal on the bush-

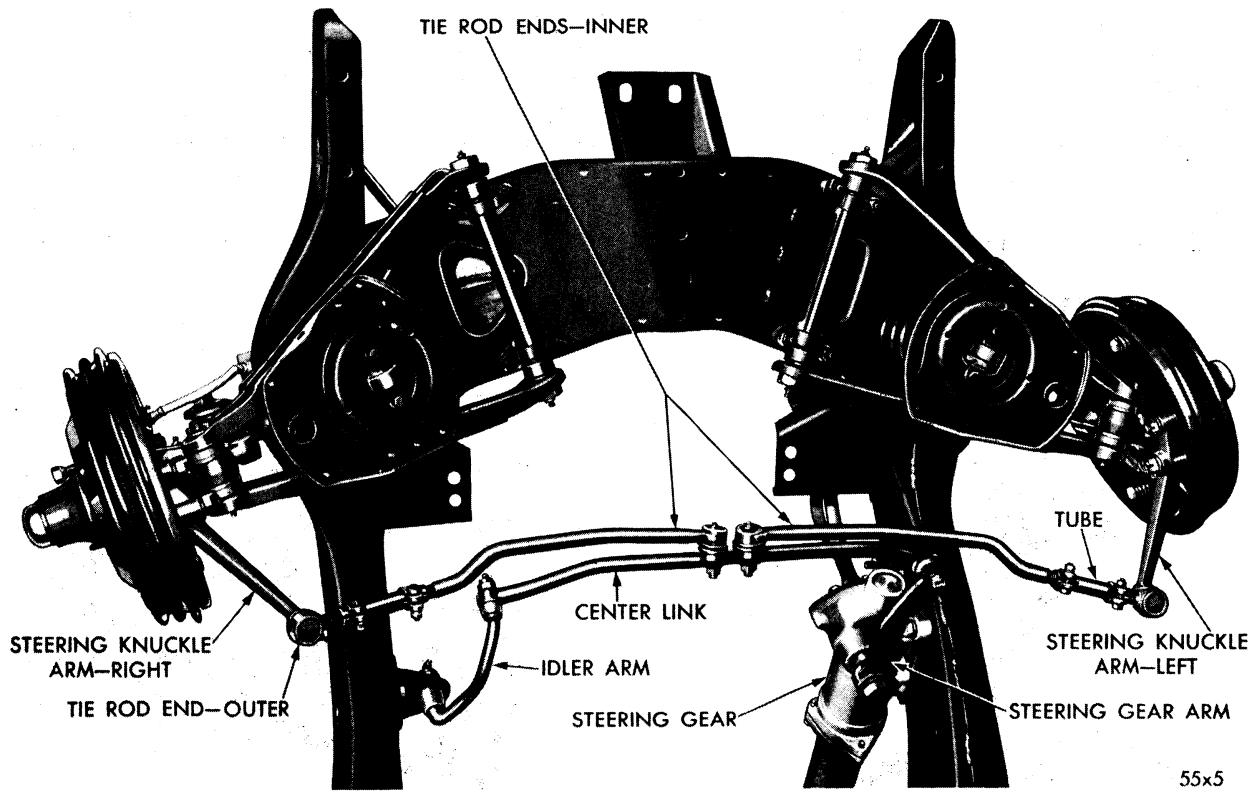

Fig. 6—Lower Control Arm Installed

ing at the hexagonal end of the bushing, and the other seal on the round boss of the support arm bushings.

Using Tool C-736, depress the outer edge or lip of the seal, as shown in Figure 5. Slide control arm and seal onto the steering knuckles support unit until the seal fits properly over bushing and the pin hole is in proper alignment with bushing and control arm.

Remove tool, lubricate pin and install control arm pin washer and nut, tighten to 100 foot-pounds torque. Position upper control arm pivot on frame. Use a drift to line up pivot bar holes with frame crossmember holes. Install attaching bolts and tighten to the proper torque. Install front wheels and tire assembly. Inspect or replace damaged grease fittings. Lower car, remove jack, check front wheel caster and camber and front wheel alignment. Tighten support arm locking screw.

5. REMOVAL OF LOWER CONTROL ARM AND FRONT COIL SPRING (FIG. 6)

The lower control arm basically and appearance-wise remains the same, as the previous models. The spring seat is mounted to the lower side of the control arm. The lower control arm pivot bar mounting bolt locations are changed. For this reason the method of centering the lower pivot bar is changed. Due to location of these mounting holes, Tool C-594 cannot be used to maintain set dimension of control arm when installing new pivot bar or bushings.

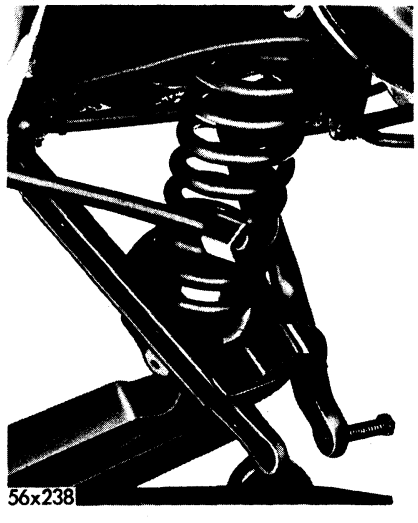

Fig. 7—Removing Lower Control Arm

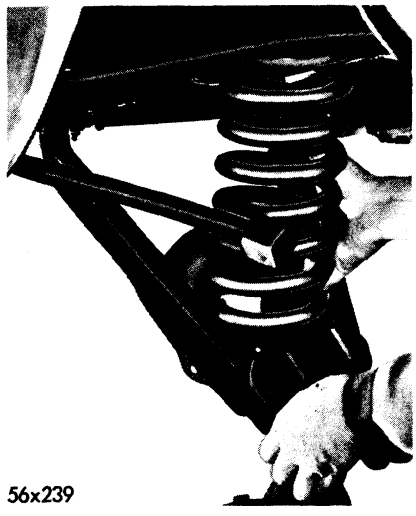

Fig. 8—Installing Lower Control Arm

a. Removal

Remove dirt or grease around the shock absorber upper mounting area. Remove shock absorber piston rod attaching nut. Raise front of car and place supports under frame side members behind suspension unit. Remove front wheel and hub and drum assembly. Remove lower attaching nuts and remove shock absorber. Remove sway eliminator retainer clamp. Place jack under center of lower control arm spring seat, as shown in Figure 7. Loosen lower support to control arm pin nut. (See Fig. 1). Raise jack to relieve pressure on lower control arm. Remove knuckle support arm pin and seals. Lower jack slowly and remove coil spring, as shown in Figure 8. Remove pivot bar to frame attaching bolts, as shown in Figure 6, and remove lower support arm.

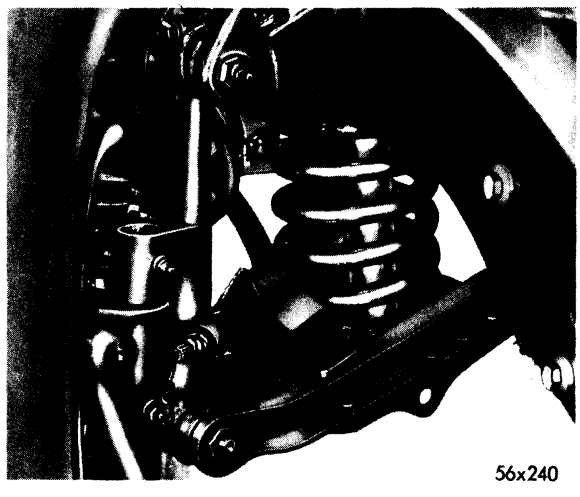

Fig. 9—Front Coil Spring Installed

6. INSTALLATION OF LOWER CONTROL ARM PIVOT BAR, BUSHINGS AND DUST SEALS (FIG. 9)

To center a replacement pivot bar on bushings, proceed as follows:

Install dust seal on pivot bar and clamp in vise (flat mounting surface down).

Center lower control arm on pivot bar (bottom of spring seat up and steering knuckle support end resting on bench). While in this centered position, start bushings evenly on both ends of pivot bar and lubricate with a suitable lubricant.

Modify Tool C-594 by removing locating studs (save studs for use on previous models) and place in position on pivot bar (open ends of tool down). Making sure tool remains in place, thread bushing (one to your right) into control arm until shoulder of the bushing contacts machined surface of control arm. Tighten to 180 foot-pounds torque.

Remove tool from assembly and reverse position of assembly in vise (top of spring seat up with assembly resting on bench).

Repositioning Tool C-594 on pivot bar and thread remaining bushing into control arm. Tighten to 180 foot-pounds torque. Remove tool and assembly from vise and check pivot bar for free movement. Remove tool. **Pivot bar may be rotated one turn in either direction to correct a slight centering error.**

7. INSTALLATION OF LOWER CONTROL ARM AND FRONT COIL SPRING

Mount lower control arm bar to front crossmember and install crossmember to bar bolts, locks, washers and nuts. Tighten to 60 foot-pounds torque. Install knuckle support dust seals.

Place coil spring on end (flat end up). Lay upper silencer on top of the spring. Install lower spacer, (if so equipped) in the lower control arm spring seat. Install spring and upper silencer in frame crossmember, as shown in Figure 8. Turn spring until it indexes with the lower spring seat and raise lower control arm to hold it in position.

NOTE

Using a bright light, look up through the spring to see if the upper end of the spring is in position. Also determine (by feel) if the lower end of the spring is in position.

Place jack under lower control arm and raise until lower control arm indexes with support arm, as shown in Figure 7. Align lower control arm and steering knuckle support and install pin, washer and nut. Tighten to 100 foot-pounds torque. Install front shock absorber as described in Paragraph 1. Install sway bar, hub and drum assembly and wheel. Lower car.

NOTE

It is recommended in the event of damage to upper or lower control arm or replacement of a steering knuckle support arm, that caster and camber be checked and brought up to specified limits listed in Specifications of the Steering Section.

8. REMOVAL AND INSTALLATION OF FRONT COIL SPRING (FIGS. 7 AND 8)

Place jack under lower control arm, raise wheel off floor, and remove wheel and tire assembly.

Disconnect stabilizer link from lower control arm and disconnect outer end of the rod from steering arm. Remove shock absorber; lower knuckle support, pivot pin nut, lockwasher, bushing, pin and dust seals. Support car frame by another jack, then slowly lower the jack under lower control arm. This will allow lower control arm to drop low enough to remove the spring.

Before installation of front spring, check part number which is stamped on one end of coil to make sure that spring is correct for the car model.

Make sure that the spring insulator is in place around the spring centering flange on frame and is in good condition. Place one end of spring over the centering flange, and as lower control arm is raised, position lower end of spring so that end coil seats in recess provided in spring seat. Support lower control arm on a jack.

Slip the lower pivot pin dust seals over outer ends of knuckle support. Centralize lower end of knuckle support between outer ends of lower

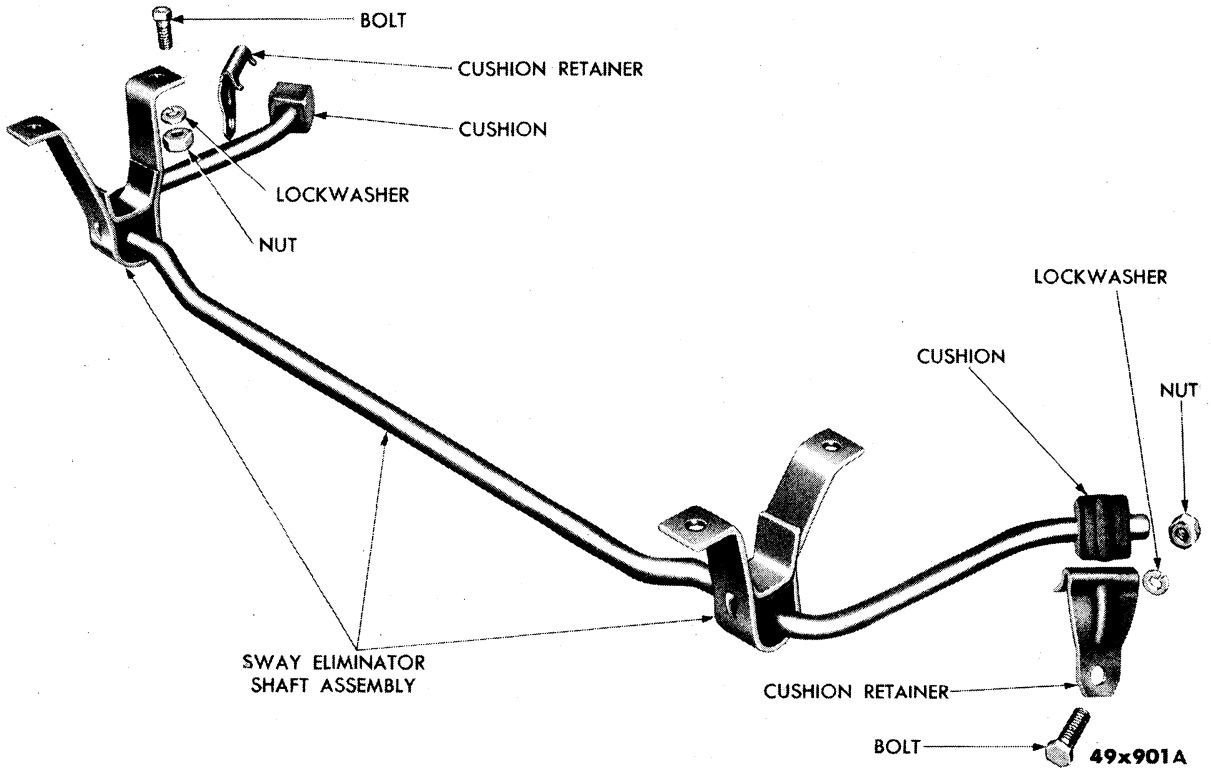

Fig. 10—Sway Bar (Disassembled View)

control arm and install lower pivot pin bushing, and lockwasher from the back side. (Fig. 9) Install pivot pin and nut and tighten to 100 foot-pounds torque. Connect rod outer end to steering arm, and connect stablizer link to lower control arm. Reinstall shock absorber. Install wheel and tire assembly, check and adjust caster, camber, toe-in and front wheel alignment.

9. SWAY ELIMINATOR

The sway eliminator, as shown in Figure 10, requires no adjusting other than periodical tightening of fastening bolts.

The rubber bushings on the springs, shock absorbers and sway eliminator must not be lubricated or allowed to come in contact with any form of mineral oil. Mineral base oils will cause rapid deterioration of natural rubber. The sway eliminator shaft cushion retainer clamp bolt, and clamp, should be removed before removal of lower control arm.

10. CHECKING FRONT SPRING HEIGHT (FIG. 11)

With equal pressure in each tire and car on a level floor, with only weight of car on springs (no passengers in car), measure with a steel rule from floor to center of grease fitting in forward bushing of lower control arm bar, as shown in Figure 11, "A."

Measure from floor to center of lower control arm pin, as indicated by "B." The measurement "A" may be either higher or lower than "B." In the following table, a "plus" means that "A"

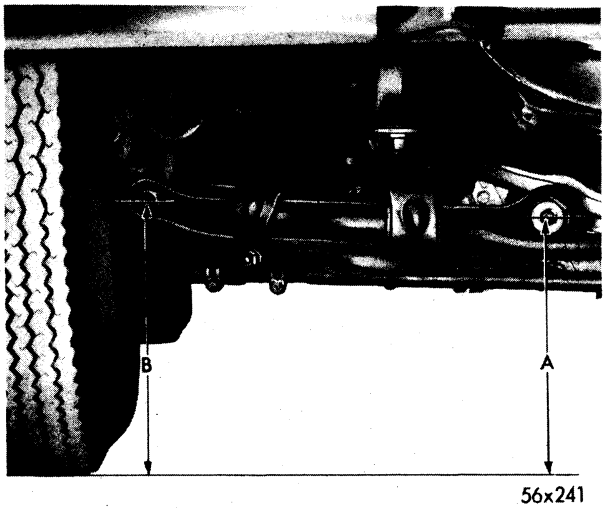

Fig. 11—Checking Front Spring Height

is higher than "B" and a "minus" means that "A" is lower than "B." The table shows the limits for satisfactory spring heights between which "A" may be either higher or lower than "B" for the various models.

C-71 Sedans and Coupes
1 inch to — inch

C-71 Town and Country Wagon
1¼ inch to ¼ inch

C-72 Sedans and Coupes
1 inch to — 0 inch

C-72 Town and Country Wagon
1¼ inch to— 0 inch

C-73 Sedans and Coupes
1 inch to — 0 inch

C-70 Sedans Passenger Sedans
1¼ inch to — ¼ inch

C-70 Limousine
1¼ inch to — ¼ inch

Obtain these "plus" figures, as the case may be, on both right and left sides of the car and compare them with each other. If the two figures differ by more than ¼ inch, check both springs for correct installation at top and bottom. Look up into the center of each spring to make sure that the top coil completely surrounds the pilot flange in the frame crossmember. Also feel along the bottom coil to the end of the coil and make sure that it indexes correctly with the lowest point of the spring seat ramp. If the two springs are correctly installed and yet the "plus" figures on right and left sides are still different from each other by more than ¼ inch, correction can be made by use of spacers which should be placed between spring seat and silencer at top of spring. **No more than two such spacers should be used with any one spring.** If more than two spacers are required, replace the spring.

Whenever front spring heights are changed, either by spring replacement or by spacer installation, the front wheel alignment of the car must be rechecked. Front spring heights may be affected if the rear spring height varies more than ¾ inch on one side as compared with the other side. To check this, measure the vertical distance from top of the rear spring main leaf to underside of frame side rail on both sides of the car. If these distances differ more than ¾ inch, this is an indication that one of the rear springs should be replaced. (It should be remembered that on current models, it is perfectly normal for rear springs to show some reverse arch, even with no load, so appearance alone should not be cause for rejection of spring).

Front and rear springs are expected to "bottom" under normal conditions particularly when road dips, railroad crossings and the like, are encountered at high speeds.

NOTE

Whenever the front or rear springs are replaced the headlights should always be refocussed.

11. INSTALLATION OF SPRING SEAT SPACERS

If after checking front spring height, and springs do not meet the required specifications, spring seat spacers should be installed to return the front springs to specified height. Spring spacers are available in ⅜ and ½ inch thicknesses through MOPAR.

To install spring seat spacer, refer to Figures 12 and 13, and proceed as follows:

Raise front of car until upper control arm contacts rebound bumper.

Install trunion plate (part of Tool C-3460) in the lowest position (between the coils) in coil spring that will permit enagement of lift arm (See Fig. 14). Position fork over lift arm with the sliding extension on the leg of the fork that will rest on inner or widest part of lower control arm. Engage yoke on fork and install a three ton or greater capacity hydraulic jack in

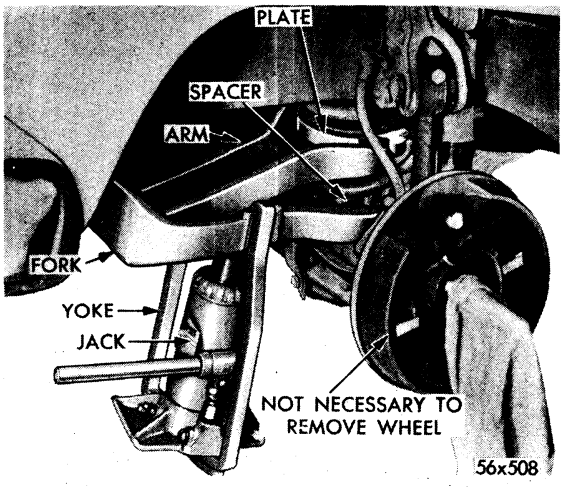

Fig. 12—Installing Spring Seat Spacer

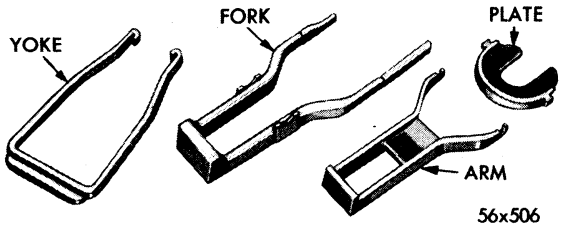

Fig. 13—Component Parts of Tool C-3460

position, as shown in Figure 14. It is not necessary to remove front wheel when installing spacers. After spacer has been installed, release jack and remove tool. Follow same procedures as described above for the opposite side, being sure to change position of sliding extension to opposite leg of fork.

Whenever spring heights have been changed, either by spring replacement or spacer installation, front wheel alignment should be checked and corrected.

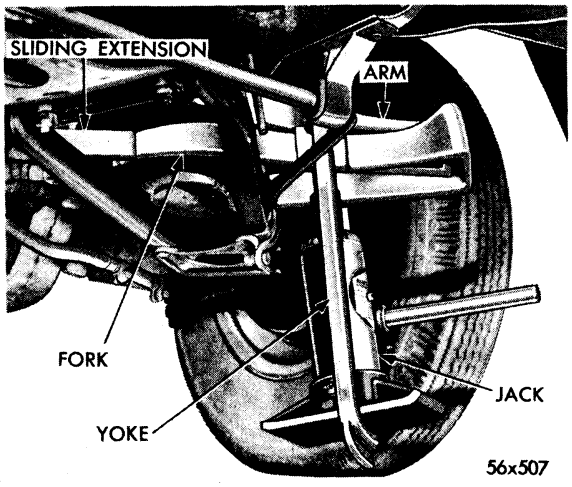

Fig. 14—Tool C-3460 and Jack Installed

SERVICE DIAGNOSIS

12. FRONT END NOISY

A certain amount of looseness is designed into the threaded bushings of front suspension linkage to prevent binding of joints under deflection. Unless they cause noise or unstable steering, these parts should not be replaced. Proper lubrication, however, is essential. It should be remembered that threaded bushings require more clearance than a smooth pin and bushing type joint; actually only the knife-edge of the threaded pin operates in the "V" shaped thread cut in the bushing, as shown in Figure 1. With the weight of the car on the bushings, the knife-edge bears against the "V" until there is sufficient wear to permit endwise movement of the threaded pin in the bushing. This condition will cause no harmful effect except an increase in noise on rough roads.

13. TIRE WEAR

Certain types of tire wear are caused by improper adjustments or condition of the vehicle while other irregular tire wear is due to poor driving habits or improper tire inflation. Rapid acceleration, sudden severe brake application, turning corners, rounding curves too fast, or sharply; along with high speed driving will contribute to increased and uneven tire wear. Other types of tire wear due to improper adjustment of the front suspension or other conditions of the vehicle can be corrected by checking and correcting front suspension alignment.