ADJUST CASTER AND CAMBER TOE-IN

Both caster and camber are adjusted at the eccentric pin in the outer end of the upper support arm.

Set the car up on a front end stand and check caster, camber and toe-in readings.

Make a note of each reading so as to determine which way the eccentric adjuster should be turned.

Remove the grease fitting from the front bushing and, working through the grease fitting with an Allen wrench, engage the eccentric pin at the front. Loosen the clamp bolt in the top of the knuckle support which will leave the eccentric pin free to turn.

Now turn the eccentric pin (which has a right hand thread) first in the direction which tends to correct caster, that is, the pin would be turned counterclockwise to increase caster or clockwise to decrease caster. If it is necessary to decrease caster, turn the pin clockwise until the correct caster setting is attained and then rock it back and forth until the correct camber reading is obtained. Since both adjustments are made at the same pin it is sometimes absolutely impossible to get exact readings. However, it will be found that with very little error in caster, the correct camber reading can be obtained.

Recheck the caster and camber readings on the front end stand and, once certain they are correct, secure the clamp bolt and reinstall the lubrication fitting.

Toe-in is adjusted either at the tie rod itself or on some models sleeves at the ends of each of tie rods.

Where the tie rod itself is turned, simply loosen the clamp bolt which holds the tie rod to the end assembly and turn the rod. In cases where sleeves are used at the end of the tie rods, loosen the clamp bolts which prevent the sleeve from turning and turn the sleeve until the correct toe-in is obtained.

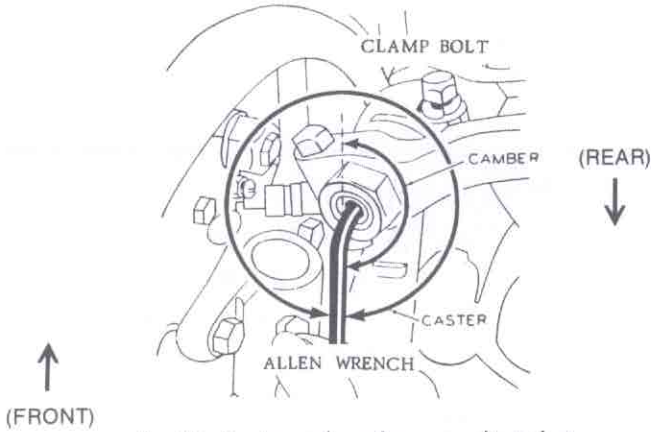

Fig. 27—Caster and camber are adjusted at the same pin. Maximum camber can be obtained in not more than ½ turn from the correct caster setting—Chevrolet shown

FRONT SUSPENSION

Lucy Badenhoop drove her 1958 to Oregon for the 1991 Western Convention and I noticed that she had a problem with the left front wheel that was tilted inward. Once I realized it wasn't the wheel loose, I told her that the Camber adjustment locking bolt must have come loose, and that she should take it to a front end shop up there to have it checked out. Together we both found a shop that Larry told us of and they jacked the Vette up and took the wheel off. Sure enough the bolt came loose, I mentioned that the Hex nut (rear) on the upper A-arm grease fitting had to be removed so that an Allen wrench could fit in the eccentric adjuster. All was OK until he removed the wheel and I realized that the Hex nut having the grease fitting was at the front instead. Well this is the reason I'm writing this article! I have seen this happen many times in the past where some one rebuilds their front suspension and doesn't realize that the ECCENTRIC PIN has a allen hole at one end so that the pin that is egg shaped can be turned to set the camber adjustment when they have the front aligned. Also the allen hole is to point to the rear and the hex nut having the grease fitting is to be installed there also, because the other front Hex nut doesn't use a grease fitting. In Lucy's case, the ECCENTRIC PIN was installed correct but the Hex nut having the fitting wasn't. This caused the guy to remove them and reverse there position. This is not easily done when the front spring is in and you need to keep the knuckle aligned in the middle of the A-arm while you reinstall the Hex nuts. Also be sure to install the rubber seals to keep water from getting into the nut. (Note: if the eccentric pin is in the reverse position you really need not take it out and correct it to the rear, you only need to have the Hex nut with the fitting at the right end so that they can get to the pins hex hole.) GM's location was to the rear, but all is OK if its to the front.

—Editor

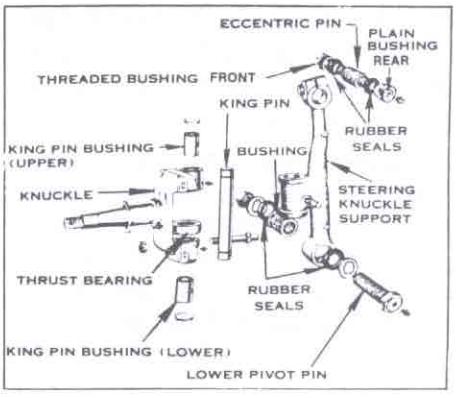

Fig. 9—Upper and Lower Pin and Bushing, shown exploded with the king pin—