



*This part should only be installed by personnel who have the necessary skill, training and tools to do the job correctly and safely. Incorrect installation can result in personal injury, vehicle damage and / or loss of vehicle control.*

**Plan Ahead - Read All Instructions BEFORE installing part.**

Check for loose or worn parts, proper tire pressure, and odd tire wear patterns before beginning alignment.

1. Raise vehicle and support by frame. Remove front tire and wheel assembly. Remove OE upper control arm including any cross-shaft spacers. Support knuckle to avoid straining brake lines.
2. Adjust SPC adjustable control arm to approximate OE dimensions. Control arm leg with ball joint housing should be trailing leg and clamping leg of control arm should be leading. Loosely install all hardware per figure 1. Ensure equal thread is visible beyond both large and small jam nuts when seated.

**NOTE: To allow for proper thread engagement, there should never be more than 1.0" of thread showing past jam nuts on either side of adjusters.**

3. Install adjustable control arm into vehicle and torque cross-shaft to chassis mounting hardware to manufacturer's specification. See vehicle specific orientation notes below. Nuts at outer ends of cross-shaft should be tight enough to remove play, yet loose enough to rotate pivot brackets by hand.

**NOTE: Tightening cross-shaft nuts with vehicle in raised position may cause premature bushing failure.**

4. Install ball joint stud into knuckle tapered hole. Install castle nut onto ball joint stud and torque to 40-46 lb-ft [54-63 Nm]. Tighten more only as necessary to install provided cotter pin.

**Tech Tip:** Due to variance in knuckle conditions, a washer may be required to affix ball joint stud properly into your vehicle. If ball joint stud thread is too long and cotter pin hole is above castle nut completely, or you can see the taper protruding below knuckle face where castle nut will ride, use a hardened washer to space castle nut enough to ensure proper clamping of knuckle flange and allow sufficient engagement of cotter pin between castle features.

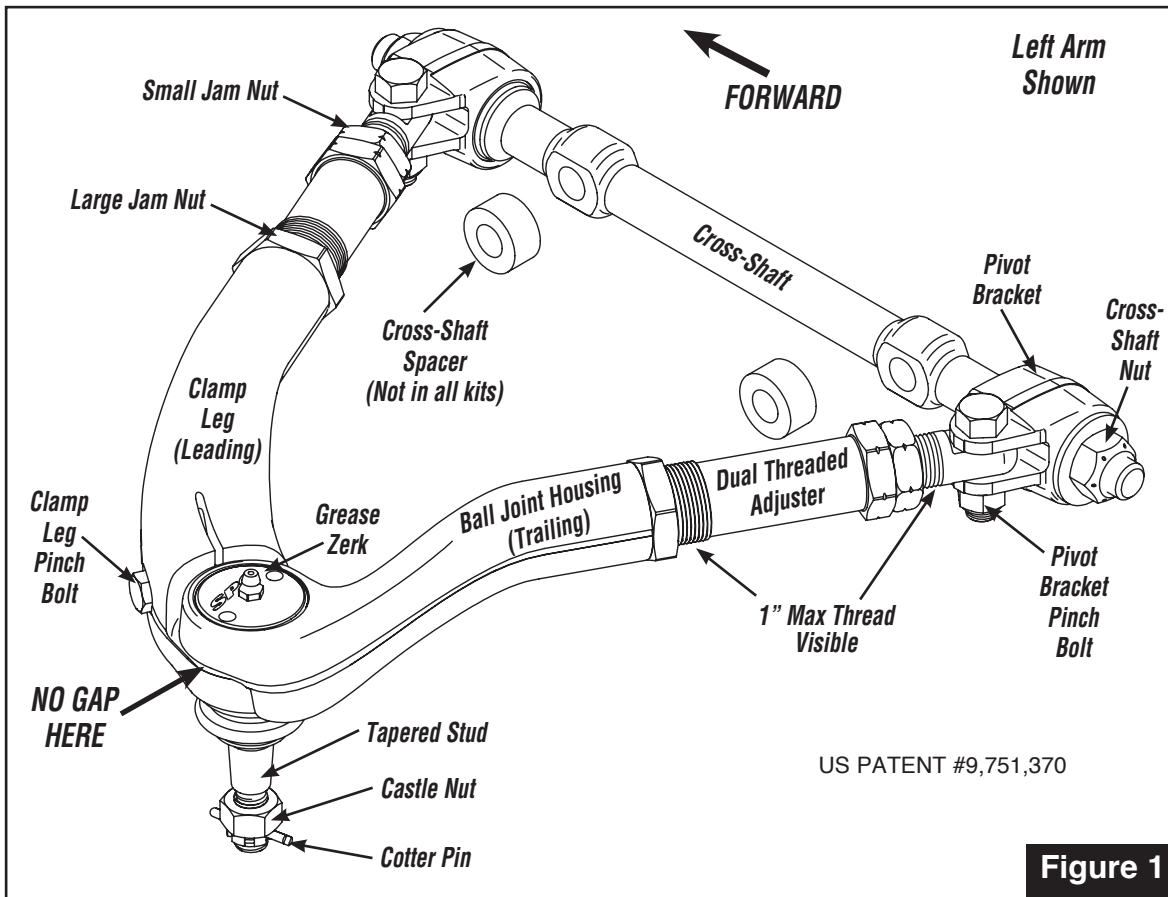
5. Verify there is no gap between ball joint housing and clamp leg, then snug pinch bolt on clamp leg to keep both halves together. (See Figure 1)

**NOTE: Use pry bar between lower ball joint and knuckle to push clamp leg up until there is no gap between two halves. Use care to not damage rubber boot.**

6. Grease ball joint with an NLGi #2, Grade LB with 3%-5% Molybdenum Disulfide grease. 5 to 10 pumps of grease is sufficient at each lubrication. **WARNING: FAILURE TO GREASE AND MAINTAIN THIS BALL JOINT MAY RESULT IN PREMATURE FAILURE.**

7. Reinstall tire and wheel assembly and lower vehicle.

Continued on back



US PATENT #9,751,370

**Figure 1**



## PART NOS. 97110, 97120, 97130, 97140, 97150, 97170 - GM MUSCLE CAR ARMS - CONT.

Continued from front

8. Adjust alignment using center hex features on either leg of control arms. Ensure equal thread is visible beyond both large and small jam nuts when seated.
9. When finished adjusting, tighten hardware in the following order:
  - a. Torque pinch bolts at pivot brackets to 60 lb-ft [81Nm].
  - b. Torque cross-shaft nuts to 80 lb-ft [108Nm].

**NOTE: Cross-shaft nuts should only be tightened after suspension is at normal ride height, and resting fully on tires. (Use slide plates or roll vehicle back and forth a few times to make sure that suspension has settled fully after being lowered to ground.)**

- c. Re-verify there is no gap between ball joint housing and clamp leg from step 5, then torque pinch bolt on clamp leg to 27 lb-ft [36 Nm].

**NOTE: Use pry bar between lower ball joint and knuckle to push clamp leg up until there is no gap between two halves. Use care to not damage rubber boot.**

**NOTE: Under-tightening or over-tightening pinch bolt may result in damage to control arm!**

- d. Adjuster jam nuts small (1-1/8" hex)
    - e. Adjuster jam nuts large (1-3/8" hex)
  10. Complete alignment and road test vehicle.

**Always check for proper clearance between suspension components and other components of vehicle.**

### Maintenance:

*Lubrication Interval - SPC recommends adding 5 to 10 pumps of grease to ball joint at each oil change, or after operating vehicle in wet or dusty conditions.*

### Specific Body Style Notes:

**'A' Body Note:** On some GM A-body cars (mostly 2nd gen) there is a brace extending out from the forward leg of the control arm mounting bracket to the outer edge of the frame. This leg **MUST** be trimmed to resemble the shorter rear leg of the mount in order to mount this control arm properly. Failure to do so will result in extreme difficulty in assembling the suspension, and will likely damage the control arm if driven. Longer adjuster sleeve is intended to be used in rear leg of arm for 0 to 3 degrees of caster, and in forward leg of arm for more than 3 degrees of caster.)

**1st Generation 'F' Body Note:** Longer adjuster sleeve is intended to be used in forward leg of arm. An aftermarket tall knuckle will provide additional wheel clearance at steering limits.

**2nd Gen 'F' Body Lowered Note:** This arm is intended to work best on cars lowered more than 2", or with tall aftermarket knuckles for clearance to the spring bucket area of the frame rail. Longer adjuster sleeve is intended to be used in forward leg of arm.

**'G' Body Note:** Longer adjuster sleeve is intended to be used in forward leg of arm.

**'55-'57 Tri-5 and '58-'64 Belair/Biscayne/Caprice/Impala/'58-'63 El Camino Body Note:** Cross-shaft should be installed so the arm is offset to front of vehicle. Install included spacers to move cross-shaft inboard so it will clear the formed shock mounting tower. A maximum shock length of 13-3/8" will prevent contact between the arms and frame of the vehicle. Longer adjuster sleeve is intended to be used in forward leg of arm. Install included washer (referenced in Step #4 tech tip) to adequately clamp knuckle if needed.

**'58-'72 Impala Body Note:** Install the included spacers to move the cross-shaft inboard so it will clear the formed shock mounting tower.