

*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 front of vehicle and support by body so front suspension hangs free and remove front tire and wheel assembly.
2. Remove upper ball joint studs from knuckle by removing pinch bolt and using a spreader such as a screw driver or chisel in slot. Support knuckle assembly so it does not strain axle joints or brake lines.
3. With OE control arms free from knuckle and held up in their normal position, note the angle to strut top plate. This will become important to reinstall SPC control arms with bushings at same angle as OE control arms.
4. Check OE control arm articulation angles with respect to strut top plate through entire suspension travel and make sure SPC adjustable arms can reach same angles without contacting strut top plate.

**NOTE: This may require light trimming of strut top plate to allow clearance for SPC upper control arms to reach same angles as OE. If clearance is needed, use an aluminum rotary file (SPC #85137) to grind strut top plate. See Figures 1 and 2.**

5. Remove bolts fastening control arms to strut top plate and remove upper control arms one at a time.

**Tech Tip:** Entire strut top plate, upper control arms, and strut assembly may need to be removed to gain access to remove inboard upper control arm mounting bolts.

6. Set up and adjust new control arms as shown in **Figure 3** to approximately same length as OE arms. Make sure equal thread is visible on either side of hex adjuster.

**CAUTION: Maximum length of arm is reached when milled flat is visible on adjuster at end of aluminum housing. Do not lengthen arm beyond this point.**

7. For part numbers 81351, 81352, 81353 install SPC adjustable control arms to strut top plate one at a time in same relative position that OE arms were installed, as noted in step 3. This will keep bushings centered in a mid-travel position at normal vehicle ride height. For 81358 kit, bolts may be tightened with arms in any position as xAxis™ joints will rotate freely.
8. Tighten bolts fastening control arms to strut top plate to manufacturer's specifications.

**NOTE: Tightening bushing fasteners at an angle different than OE may cause premature bushing failure.**

9. If removed in step 5, now reinstall complete strut assembly in reverse order of removal. Torque fasteners to manufacturer's specifications.
10. Install outer ends of control arms to knuckle. Press ball joint down to keep post seated onto knuckle while tightening supplied pinch bolt to 30 lb-ft [40Nm].
11. Reinstall tire and wheel assembly and attach alignment equipment. With alignment equipment attached, adjust control arms by rotating center hex adjusters to desired camber/caster settings.

**Tech Tip:** For modern electronic alignment machines, use "jack up selected axle" setting to access arms and make adjustments.

**NOTE: At certain alignment settings during suspension travel, outer ball joint may contact metal flange at inner fender. Check flange clearance when wheels are turned and when straight. If contact is noted you may either limit positive camber adjustment or trim problematic flange at inner fender.**

**NOTE: Lowered vehicles may introduce contact between control arms and wiring harness at inner fender. If contact appears possible, re-route wires away from control arms.**

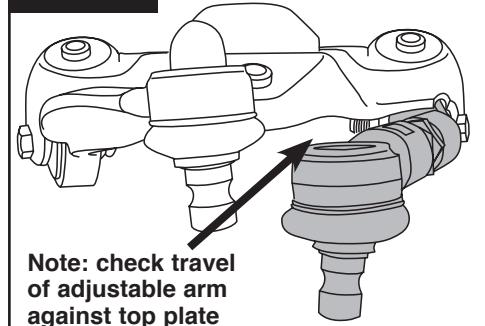
**CAUTION: Because of the "Virtual Steering Axis" suspension on these vehicles, Audi does not publish a specification for caster angle. SPC suggests caster between 5° and 6° as measured by normal alignment procedure. After alignment is set, turn steering to full lock both directions to check clearance between upper arms. Visit [spcalignment.com/FAQ](http://spcalignment.com/FAQ) for more information.**

12. After adjustment is complete, tighten lock nuts on each hex adjuster. Make sure ball joints remain centered in housings to ensure adequate articulation throughout suspension and steering travel.
13. Repeat for opposite side of vehicle. Reset toe and road test vehicle.

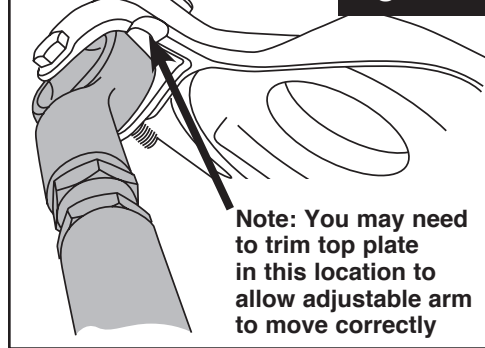
**Always check for proper clearance between suspension components and other components of vehicle.**



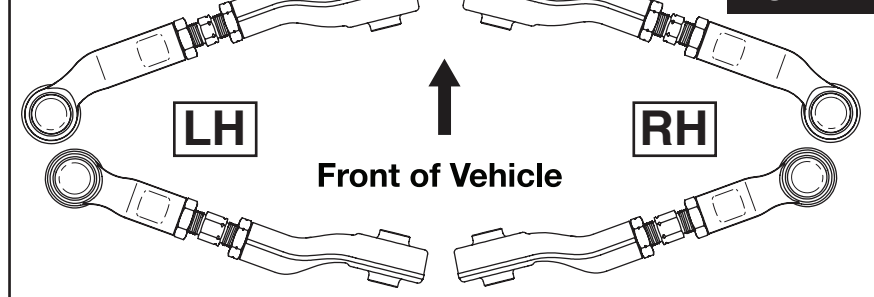
#### Figure 1



#### Figure 2



#### Figure 3



## Specialty Products Company®

4045 Specialty Place • Longmont, CO 80504 • (303) 772-2103 • Fax: (303) 772-1918 • [www.specprod.com](http://www.specprod.com) • [www.spcperformance.com](http://www.spcperformance.com) • Email: [info@specprod.com](mailto:info@specprod.com)  
Toll Free Technical Hot Line: 1-800-525-6505 • For warranty information go to: [www.specprod.com/warranties](http://www.specprod.com/warranties)