



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.

Before beginning, take alignment readings and determine amount of caster and/or camber change needed. Installing SPC control arm alone will provide  $\pm 4.0^\circ$  of caster change and  $-4.0^\circ$  to  $+2.0^\circ$  camber change.

If additional positive camber change is needed, install hub shim kit, which will provide an additional  $2.0^\circ$  of positive camber.

### CONTROL ARM INSTALLATION

1. Raise and properly support vehicle by frame. Remove front tire and wheel assembly.
2. Remove cotter pin and nut from OE upper ball joint. Break ball joint taper using SPC part #8370 or equivalent. Save OE ball joint adapter for reuse later. Support knuckle.
3. Remove OE upper control arm per manufacturer's procedure.  
**NOTE: In some cases, it may be necessary to remove strut assembly or compress spring to access control arm bolts.**
4. Adjust SPC control arm to approximately same geometry as OE arm. Longer hex adjuster should be in forward position on each arm. Verify

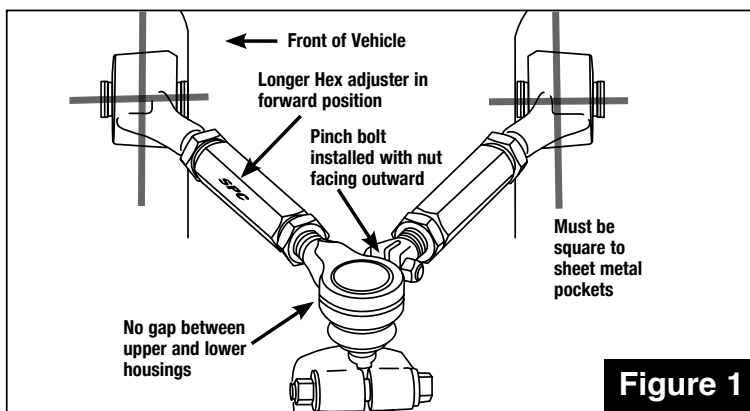


Figure 1

4. Install hub spacer so thickest part of shim is up and all 4 bolt holes line up properly.
5. Install plastic dust shield so ABS sensor opening is pointed up towards top hub retaining bolt hole, "A" in Figure 3. Install bearing hub and brake shield. Install supplied hub bolt (with threaded hole in bolt head) in top bolt hole "A". Install two remaining supplied bolts in middle two hub holes, "B" in Figure 3. Install OE bolt in lower hole, "C" in Figure 3. Torque 4 hub bolts to 58-72 ft-lb (79-98 Nm).
6. Install ABS sensor onto top hub retaining bolt using OE bolt, supplied shims, and supplied locating bracket, as illustrated in Figure 2. Tighten bolt, verifying ABS sensor does not touch rotating bearing hub.
7. Using a non-magnetic feeler gauge, check gap between sensor and back of bearing hub. There should be a 0.01 - 0.02" (0.25 - 0.51mm) gap and nose of sensor should be square with hub. Add or remove supplied shims to achieve proper air gap.  
**WARNING: Sensor must not touch back of hub.**
8. Install brake rotor.
9. Install supplied shim between caliper mount and caliper, with thickest part up, using OE bolts. Torque each bolts to 112 ft-lb (152Nm). Verify brake rotor turns freely.
10. Replace wheel and tire assembly. Lower vehicle.
11. Adjust camber and caster by turning SPC control arm hex adjusters. When desired specifications are achieved,

control arm pinch bolt is arranged with nut facing outward, see Figure 1.

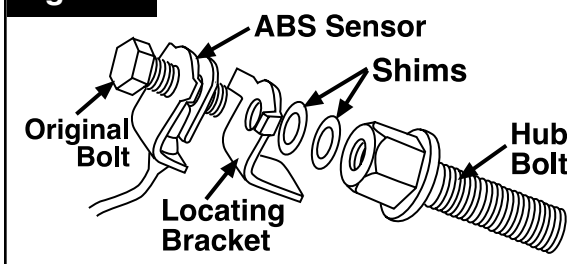
**NOTE: Ensure equal thread is showing on either side of each hex adjuster when pre-setting arm.**

5. Install SPC adjustable control arm using OE bushing hardware. Inboard bushing housings should be aligned square to bushing pockets. Figure 1.  
**NOTE: Lightly tighten hex adjuster jam nuts to prevent inboard forgings from twisting.**
6. Tighten each bushing bolt to manufacturer's specifications.  
**NOTE: Unlike OE rubber bushing, xAxis™ bushings pivot freely and can be fully torqued without placing any weight on suspension.**
7. Install OE ball joint adapter onto SPC ball joint stud and install stud into knuckle. Install supplied castle nut where stud protrudes from knuckle and lightly tighten.
8. Remove any gap that may exist between upper and lower ball joint housings. Use pry bar between lower ball joint housing and knuckle to push lower housing up until there is no gap between two halves. Use care not to damage rubber boot. Lightly tighten control arm pinch bolt to prevent halves from coming apart.
9. Torque ball joint nut to 40-46 ft-lb (54-62 Nm). Tighten more, only as necessary, to install supplied cotter pin.
10. If shim kit is required, continue to "Hub Shim Kit Installation" below. If no shim is needed, proceed to step 10 of "Hub Shim kit Installation" below.

### HUB SHIM KIT INSTALLATION

1. Remove brake caliper and support it so there is no strain on brake line. Remove brake rotor.
2. Remove ABS sensor from back of hub.
3. Remove 4 bolts holding bearing hub. Remove hub and brake shield from knuckle.  
**CAUTION: Take care to not damage back of bearing hub, which supplies ABS signal.**

Figure 2



tighten all 4 jam nuts against hex adjusters.

**WARNING: Do not exceed 1" (24.5mm) of thread showing on any of the four threaded rods.**

12. Reverify that no gap exists between upper and lower ball joint housings, then torque control arm pinch bolt to 27 ft-lb (37 Nm).
13. Complete alignment and road test vehicle. Confirm Anti-Lock Brake and Traction Control systems are working properly. If hub shim kit is installed and ABS or Traction Control light is illuminated, air gap will need to be adjusted per Step 7 above.

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

Right Side  
FRONT

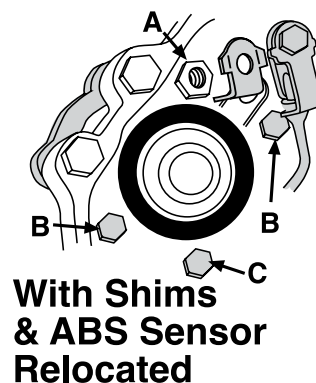


Figure 3



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