PART NO. 72123 **Instruction Sheet**

FRONT UPPER ARMS AND SHIM SET

US PATENT #7,513,514 B

SPC PERFORMANCE®

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 +.5° to -1.5° of camber change, along with ±1.5° caster change.

If additional camber change is needed, install hub shim kit, which will provide an additional 2.0° of positive camber.

CONTROL ARM INSTALLATION

1. Raise and properly support vehicle so front suspension is unloaded. Remove front tire and wheel assembly.
2. Remove cotter pin and nut from OE upper ball joint and remove ball joint from knuckle. Support knuckle.
3. Remove bushing bolts holding OE upper control arm to body. Remove OE upper control arm.
4. Using a small puller, remove ball joint stud seat from OE ball joint.
5. Install SPC adjustable control arm into vehicle using OE bolts and lightly tighten. Match up new arm with OE arm to verify correct arm is installed on each side.

WARNING: Tightening fasteners with vehicle in raised position may cause premature bushing failure.

6. If caster adjustment is necessary, loosen and remove large adjusting nut and washer from upper ball joint, then remove ball joint assembly from control arm. Separate lock plate from engagement hex and rotate it as illustrated in **Figure 1** for required caster change. Press it back onto engagement hex.
7. Reinstall adjustable ball joint assembly into control arm. Install washer and nut and lightly tighten.
8. Install OE ball joint upper seat onto SPC ball joint stud and install stud into knuckle. Install supplied flat washer and castle nut where stud protrudes from knuckle. Tighten nut to 40-46 ft-lb (54-62 Nm). Install supplied cotter pin.

   NOTE: Make sure to install flat washer under castle nut to prevent control arm separation from knuckle.
9. If shim kit is not required, follow steps 10 through 14 below.

Figure 1

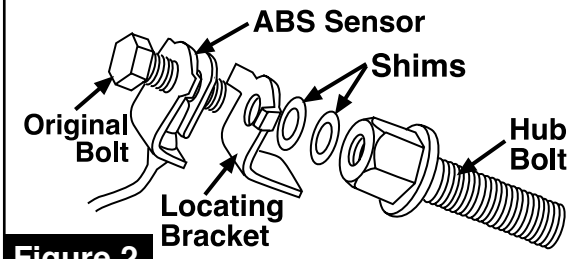

Figure 2

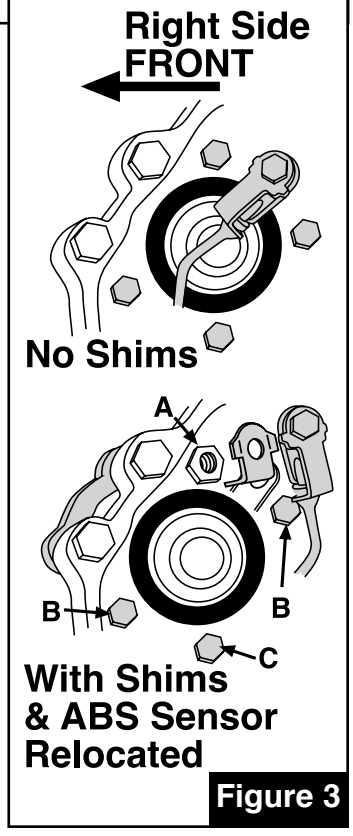

Figure 3

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 on back of hub.
3. Remove 4 bolts holding bearing hub. Remove hub and brake shield from knuckle.

   NOTE: Use caution not to damage back of bearing hub that supplies ABS signal.
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 at right**. 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, two 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 bolts to 112 ft-lb (152Nm). Verify brake rotor turns freely.
10. Replace wheel and tire assembly. Lower vehicle.
11. Torque upper control arm mounting bolts to manufacturer's specifications.
12. Verify caster reading. Raise vehicle far enough to have access to adjusting nut on SPC ball joint.
13. To adjust camber, loosen adjusting nut and move adjustable ball joint in or out in control arm slot to obtain desired camber reading. Once camber adjustment is made, torque adjusting nut to 120 ft-lb (163Nm).

    NOTE: To prevent contact between upper control arm and inner fender, use supplied jounce spacers to limit up-travel (P/N 67300, see supplemental instructions for installation). On lowered vehicles, additional jounce spacers may be required, order P/N 67300 for a set of four.
14. Complete vehicle 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.

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• Form No. 72123INS • Rev. 1/23 ECN# 3264