

PATENT NO. US 7,513,514 B1

**D-MAX / COLORADO ADJUSTABLE UPPER CONTROL ARM  
(With SpecRide™ Bushings)**

Isuzu D-Max • Chevrolet Colorado

Check out how to install  
this part at:  
<http://www.spc-tv.com>



*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.*

**Before beginning alignment check for loose or worn parts, proper tire pressures, and odd tire wear patterns. Replace any loose or worn parts.**

**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 by frame and support with jack stands. Remove front tire and wheel assemblies.
2. Loosen nuts on upper arm-to-frame mounting bolts. Remove bolts and clips holding ABS wiring and brake line to upper arm.
4. Remove cotter pin and nut holding OEM ball joint to spindle. Break taper between ball joint stud and spindle and remove ball joint from spindle. Support spindle so no strain is applied to axle boot, ABS wiring, or brake lines.
5. Remove bolts holding OEM arm to frame. Remove OEM arm.
6. Using supplied grease only, liberally coat the inside of all four SpecRide control arm bushings, making sure all small voids are filled with grease. Press a pivot sleeve (#B-Figure 1) into each bushing until it is flush with outside of bushing. This will push some grease out, which is normal. Use this grease to lightly coat outboard ends of the SpecRide bushings where they will contact frame of vehicle. (#A-Figure 1)
7. Install SPC control arm to vehicle using OEM hardware. Torque control arm mounting bolts to manufacturer's specifications.
8. Install star plate over hex on ball joint per chart below to achieve desired caster change relative to stock arm. (For most trucks with 2-3" of lift, setting "D" (SPC logo directly facing engine) should return caster to factory specifications, but it may be necessary to use different positions on each side to achieve desired cross-caster setting.) Insert ball joint up through bottom of arm, indexing star plate in the machined slot, and then install top washer and nut. Position in the middle of slot and tighten nut for initial alignment readings.
9. Insert ball joint stud into spindle, install supplied castle nut and torque to 45 ft-lb [61Nm]. Tighten further until the supplied cotter can be installed.
10. Re-attach ABS wiring and brake line to SPC arm using factory clip and hardware.
11. 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**

11. Re-install tire and wheel assembly. Lower vehicle and take alignment readings.

Adjust camber by loosening top nut and sliding ball joint in control arm slot.

Adjust caster by removing top nut and repositioning star plate to rotate ball joint relative to arm. (It will be necessary to raise vehicle to make these adjustments.)

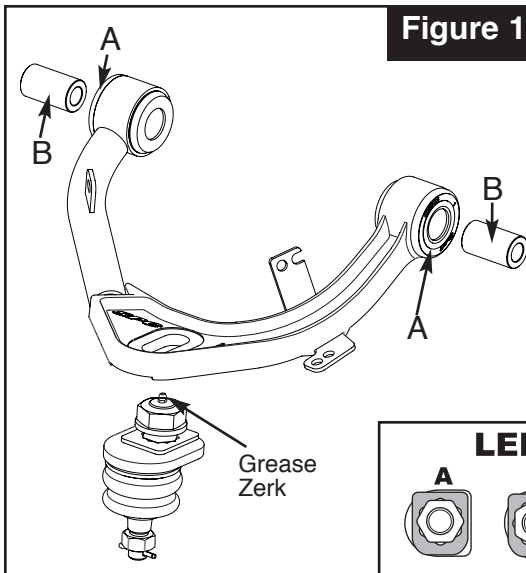
13. When final caster/camber settings are achieved, torque top ball joint nut to 150 ft-lb [162nm], set toe, road test vehicle.

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

**Note: Camber and caster can be set with the SPC upper control arm, as well as OEM lower control arm eccentric bolts. In most cases, it is recommended that lower eccentrics be set to their neutral position. This way they can be used to fine-tune caster. Alternately, if caster is set for max positive by OEM lower cams, and final alignment achieved with via SPC upper ball joint setting, more tire clearance may be obtained at the rear of wheel opening.**

**Maintenance:**

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



**Figure 1**

**Note: With SPC logo facing away from the tire (Position D) this arm will give +1° additional caster. Using the star plate, caster change can be adjusted from -1.0° to +3.0°.**

LEFT FRONT CASTER CHANGE							
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°	Ball Joint Setting
<b>+3.0°</b>	<b>+2.75°</b>	<b>+2.0°</b>	<b>+1.0°</b>	<b>0.0°</b>	<b>-.75°</b>	<b>-1.0°</b>	<b>Total Arm + Ball Joint Caster Change</b>
RIGHT FRONT CASTER CHANGE							
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°	Ball Joint Setting
<b>+3.0°</b>	<b>+2.75°</b>	<b>+2.0°</b>	<b>+1.0°</b>	<b>0.0°</b>	<b>-.75°</b>	<b>-1.0°</b>	<b>Total Arm + Ball Joint Caster Change</b>



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