

**TACOMA 4X4 AND PRE-RUNNER / 4-RUNNER
TUNDRA 4X2 AND 4X4
ADJUSTABLE CAMBER / CASTER UPPER ARMS
(With SpecRide™ Bushings)**

Instruction Sheet

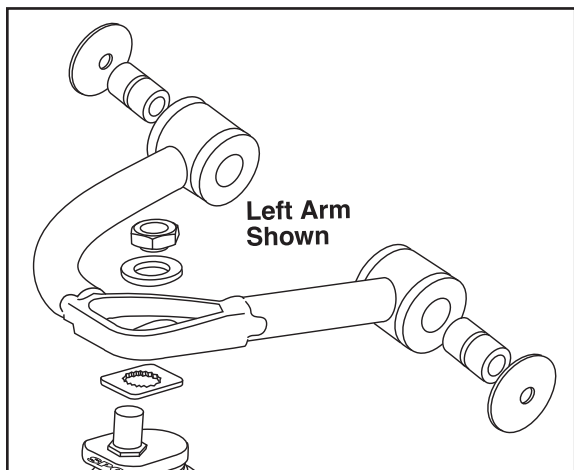
PATENT NO. US 7,513,514 B1

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 any alignment work, always check for loose or worn parts, proper tire pressures, and odd tire wear patterns. Replace any loose or worn parts before setting alignment.
 - Raise vehicle by frame and support with jack stands. Remove front tire and wheel assemblies.
 - Loosen the nut on the upper arm-to-frame mounting bolt and remove bolt holding ABS wiring from upper arm.
 - Remove cotter pin and nut holding OEM balljoint to knuckle. Break the taper between the balljoint stud and knuckle and remove the balljoint from the knuckle.
- Note: Support the knuckle so no strain is applied to ABS wiring or brake lines.**
- Remove the nut and washer from the long arm-to-frame mounting bolt and remove the bolt and arm.
- NOTE: To provide clearance, additional components in the engine compartment may need to be removed.**
- Remove the snap ring retaining the upper ball joint to knuckle. Press out the ball joint using a balljoint press.
 - Press the included insert into the knuckle, with the flange on top. Install the included snap ring on the underside to retain the insert. Be certain that the snap ring is seated in the groove.
 - Using **SUPPLIED GREASE ONLY**, liberally coat the inside of the SpecRide control arm bushings, making sure all small voids are filled with grease. Press a pivot sleeve into each bushing until it is flush with the outside of the bushing. This will push some grease out, which is normal. Use this grease to lightly coat the outer ends of the bushings. Wipe grease off the inner ends of both bushings, as nothing will contact them.
 - Install the new adjustable control arm into the vehicle. Place one large flat washer on the outside of each bushing as the long retaining bolt is slid into place. (The stock dished washers will not be re-used.) After bolt is fully in place and final washer is installed, install nut and torque to 85 ftlb [115Nm]. (The bushings will pivot freely on their sleeves, so there is no need to weight the vehicle first.)
 - Install the star plate over the hex on the balljoint per the chart below to achieve the desired caster change relative to the stock arm. (For most trucks with 2-3" of lift, setting "D" 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 the balljoint up through the bottom of the arm, indexing the star plate in the machined slot, and then install the top washer and nut. Position in the middle of the slot and tighten nut for initial alignment readings.
 - Insert the balljoint stud into the knuckle, install the supplied castle nut and torque to 45 ft-lb [61Nm]. Tighten further until the supplied cotter can be installed.
 - Re-attach the ABS wiring bracket to the adjustable arm using factory bolt.

- Re-install the tire and wheel assembly. Lower the vehicle and take alignment readings. Adjust camber by loosening the top nut and sliding the balljoint in the control arm slot. Adjust caster by loosening the top nut and repositioning the star plate to rotate the balljoint relative to the arm. (It will be necessary to raise the vehicle to make these adjustments.)
- When final Caster/Camber settings are achieved, torque the top balljoint nut to 150 ft-lb [162Nm]. Adjust toe, road test the vehicle.

Camber and caster can be set with the adjustable upper control arm, as well as the OEM lower control arm eccentric bolts. In most cases, it is recommended that the 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 the OEM lower cams, and final alignment achieved with via the adjustable upper balljoint setting, more tire clearance may be obtained at the rear of the wheel opening.



LEFT FRONT CASTER CHANGE							
A	B	C	D	E	F	G	
							FRONT OF VEHICLE
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°	Ball Joint Setting
+4.0°	+3.75°	+3.0°	+2.0°	+1.0°	+0.25°	0.0°	Total Arm + Ball Joint Caster Change

RIGHT FRONT CASTER CHANGE							
A	B	C	D	E	F	G	
							FRONT OF VEHICLE
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°	Ball Joint Setting
+4.0°	+3.75°	+3.0°	+2.0°	+1.0°	+0.25°	0.0°	Total Arm + Ball Joint Caster Change

Note: With logo facing the tire (Position D) this arm will give +2° additional caster. Using the star plate, caster change can be adjusted from +0.0° to +4.0°.