

**FORD RANGER T6 FRONT ADJUSTABLE UPPER CONTROL ARM**

***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.**

**How to install this part:**

*Check for loose or worn parts, proper tire pressure, and odd tire wear patterns before beginning alignment.*

1. Take initial alignment readings and determine caster change needed.
2. Raise front of vehicle by frame and securely support.
3. Remove front tire and wheel assembly.
4. Set lower control arm cam bolts to center, neutral position and lightly tighten.
5. Loosen and remove brackets holding ABS wire to factory upper control arm. Retain hardware for later.
6. Remove cotter pin and nut holding OE ball joint to knuckle and discard both. Break taper between OE ball joint stud and knuckle and remove ball joint.

**NOTE: Support knuckle so no strain is applied to ABS wiring or brake lines.**

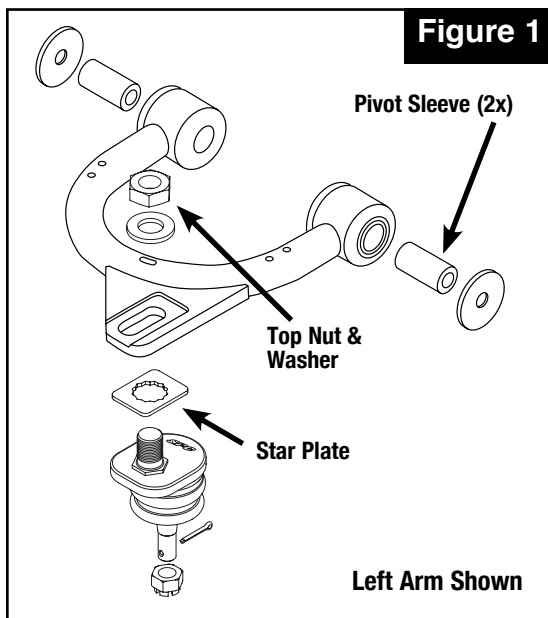
7. Loosen and remove upper control arm bolt. Discard OE washers. Remove OE upper control arm.

**NOTE: To provide clearance, additional components in the engine compartment may need to be removed.**

8. Using SUPPLIED GREASE ONLY, liberally coat inside of all four 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 outside of bushing. This will push some grease out, which is normal. Use this grease to lightly coat outboard ends of SpecRide™ bushings where they will contact washers, see **Figure 1**.
9. Place one supplied washer on OE bolt. Using OE bolt, install SPC control arm onto vehicle. The left arm (driver's side) should have a visible "L" facing up on ball joint mounting plate, while right arm will show "R". Add second supplied washer just before the nut and torque to manufacturer's specifications.

**NOTES: Unlike OE rubber bushings, SpecRide™ bushings pivot freely and can be torqued without applying vehicle weight.**

10. Install star plate over hex on SPC ball joint per chart below to achieve desired caster change determined in Step 1.



**NOTE: For most trucks with 2-3" of lift, setting "D" should return caster to manufacturer's specifications, but it may be necessary to use different positions on each side to achieve desired cross-caster setting.**

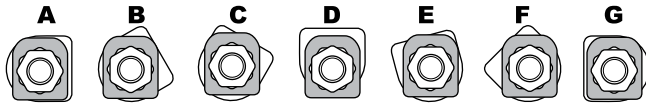
11. Insert SPC ball joint up through the bottom of the arm, indexing star plate in machined slot, and then install supplied top washer and nut. Position ball joint in middle of slot and snugly tighten nut.
12. Insert SPC ball joint stud into knuckle, install supplied castle nut, and torque nut to **45 ft-lb [61 Nm]**. Tighten further, but only until cotter pin can be installed. Install supplied cotter pin.
13. Re-attach ABS wiring bracket to SPC arm using OE hardware.
14. Re-install tire and wheel assembly. Lower vehicle.
15. Take alignment readings. If additional caster adjustment is necessary, loosen top nut and reposition star plate to rotate ball joint relative to arm. Adjust camber by loosening top nut and sliding ball joint in control arm slot.

**NOTE: It will be necessary to raise vehicle to make camber/caster adjustments with SPC arm.**

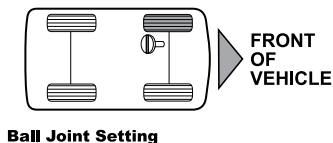
16. With full vehicle weight on suspension, fine-tune alignment using OE lower control arm cam bolts.

**NOTE: Camber and caster can be set with SPC upper control arm, as well as lower control arm cam bolts. In most cases, it is recommended that lower cam bolts be set to their neutral position. This way they can be used to fine-tune caster setting. Alternately, if caster is set to max positive with lower cam bolts, and final alignment is achieved with SPC upper ball joint setting, more tire clearance may be obtained at rear of wheel opening. To do this, push rear lower adjuster outward, towards tire, and pull front lower adjuster inward, towards center of vehicle. The lower control arm adjusters are far more efficient at creating clearance. This typically requires using ball joint position "E".**

17. When final camber/caster settings are achieved, torque top ball joint nut to **200 ft-lb [271 Nm]**. Torque lower cams to manufacturer's specifications.
18. Adjust toe and road test vehicle.

**LEFT FRONT CASTER CHANGE**

**+3.0° +2.75° +2.0° +1.0° 0.0° -.75° -1.0°**



**Total Arm + Ball Joint Caster Change**

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

**NOTE: With flat face of ball joint facing the tire (Position D), this arm will give +1.0° additional caster. Using star plate, caster change can be adjusted from -1.0° to +3.0°.**

**Maintenance:**

This ball joint is fully sealed and features a lifetime grease. No maintenance is required after installation.



**Specialty Products Company®**

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