NISSAN PATHFINDER / XTERRA / FRONTIER
FRONT ADJUSTABLE CONTROL ARM

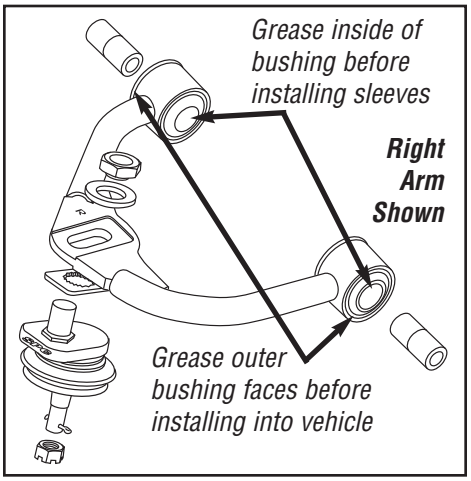
Instruction Sheet

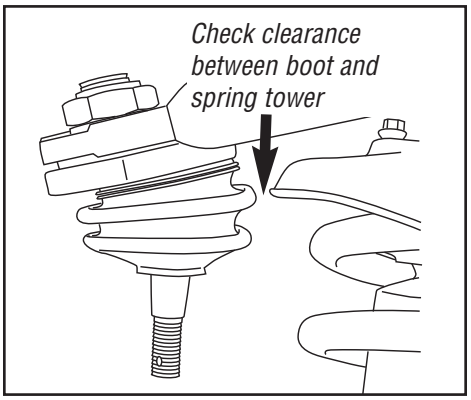
PATENT NO. US 7,513,514 B1

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.

1. 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.
2. Raise vehicle by frame and support with jack stands. Remove front tire and wheel assemblies.
3. Remove cotter pin and nut holding OEM balljoint to spindle. Break the taper between the balljoint stud and spindle.
4. Loosen and remove control arm bushing bolts. Remove the control arm, taking care to support the spindle so the ABS and brake lines are not damaged.

NOTE: To remove the driver's side rear bolt, it will be necessary to remove the pinch bolt holding the steering shaft to the rack and pull the shaft upward, partially off the splines, and inboard until the bolt can be removed. Be sure to mark it for spline alignment in case it becomes completely separated. Once the bolt is removed, re-assemble the steering shaft, being sure to maintain proper spline alignment.





5. Using ***SUPPLIED GREASE ONLY***, liberally coat the inside of all four 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. Apply grease also to the outboard end of each bushing. The inboard surface of the bushing will not contact the frame mounting pocket, and should be left dry so it doesn't attract dirt.
6. Insert the new adjustable control arm into the frame pockets and re-install the OEM control arm bolts.

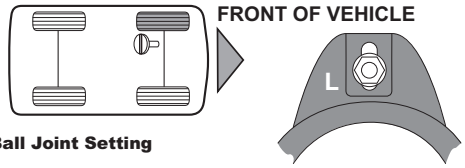
   NOTE: The driver's side rear bolt will be installed from the rear so it does not interfere with the steering shaft.

   The left arm should have a visible "L" on the balljoint mounting plate, while the right arm will show "R". Tighten control arm mounting bolts to 65 lb-ft.
7. 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.) Insert the balljoint up through the bottom of the arm, indexing the star plate in the machined slot, and then install the washer and nut.
8. Slide the balljoint to the midpoint of its travel in the arm slot and tighten the nut. Swing the arm down to check that the balljoint boot clears the spring tower by about ¼" [5mm]. On some vehicles, it may be necessary to slightly modify the flange of the tower to assure clearance of the ball joint boot.
9. Once adequate clearance has been verified, install the ball joint stud into the spindle with provided castle nut. Tighten castle nut to 45 lb-ft, then tighten until cotter can be installed.
10. Reinstall the tire and wheel assembly. Lower the vehicle, verify proper caster. Set camber by loosening the upper ball joint nut and sliding the ball joint in the arm. Then set toe. Once camber setting is as desired, torque top balljoint nut to 150 lb-ft. Road test the vehicle.

Note: Camber and caster can be set with the adjustable upper control arm, as well as the OEM lower control arm eccentric bolts if equipped. 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 lowers, 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

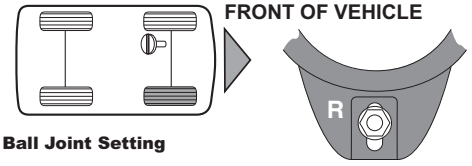
A	B	C	D	E	F	G
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°
+3.0°	**+2.75°**	**+2.0°**	**+1.0°**	**0°**	**-.75°**	**-1.0°**



Total Arm + Ball Joint Caster Change

RIGHT FRONT CASTER CHANGE

A	B	C	D	E	F	G
+2.0°	+1.75°	+1.0°	0°	-1.0°	-1.75°	-2.0°
+3.0°	**+2.75°**	**+2.0°**	**+1.0°**	**0°**	**-.75°**	**-1.0°**



Total Arm + Ball Joint Caster Change

Printed in U.S.A. • Form No. 985403GEN • Rev. 10/14