

JEEP ADJUSTABLE BALL JOINT

Instructions for combination caster/camber adjustment

- 1)..... Check for worn or damaged parts, determine amount of camber and/or caster change needed.
- 2)..... Raise and support vehicle by frame rails, just behind lower suspension arms.
- 3)..... Remove wheel, brake caliper and rotor. Support caliper.
- 4)..... Using 13mm, 12 point socket, remove three hub and bearing bolts from back side of knuckle.
- 5)..... Use slide hammer to loosen hub.
Remove hub/bearing/axle assembly as a unit (**Fig. 2**) using care not to damage inner axle seal.
- 6)..... Break tapers at ball joints and remove knuckle. Support knuckle and ABS wiring, if so equipped.
- 7)..... Press out lower ball joint using press and **optional adapter set** or equivalent. (**Fig. 3**)
- 8)..... Before installing new adjustable ball joint;
Align the strikemarks on the bottom of the ball stud 180 degrees from the strikemark on the ball joint housing. *Be sure these marks stay in this position during installation.*
- 9)..... To make a combination change, first determine if **camber** is to be **increased** or **decreased** and find proper chart (**Figs. 4A & 4B**). Next, choose amount of **caster** change desired from appropriate chart and locate proper column (driver's side or passenger's side) and determine setting number from chart. This setting number will correspond to numbers on the template furnished with ball joint.

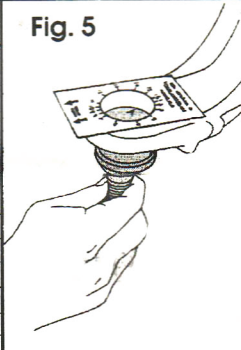
Example:.....(Passenger Side)

Camber correction is to be positive (+)

-3/4° caster adjustment is needed

=Adjustment No. 6

- 10)..... Place paper template on axle yoke with arrows pointed directly outward toward wheel.
Place the offset ball joint in the correct position by aligning the stamped "V" notch mark on the ball joint housing with the chosen adjustment number on the template. (**Fig. 5**)
- 11)..... Press ball joint part way in and recheck position of "V" notch mark,
press in ball joint until fully seated and install boot
- 12)..... Reposition knuckle onto ball joints and install & tighten upper nut (75 ft/lbs). *Do not install lower nut at this time*
- 13)..... Reinstall hub/bearing/axle assembly using care not to damage inner axle seal.
- 14)..... Reinstall hub bolts (75 ft/lbs), rotor, caliper and wheel.
- 15)..... Install and compensate alignment equipment then gently lower vehicle.
- 16)..... To adjust camber, insert "cotter key puller" or "scratch awl" into cotter key hole and rotate ball stud according to illustration below.
- 17)..... Jounce vehicle to initially seat ball stud into steering knuckle, install lower nut and torque to 80 ft/lbs.
- 18)..... Recheck caster/camber readings, adjust toe and road test.

Fig. 4A Caster Adjustment chart for camber increase (+)			Fig. 4B Caster Adjustment chart for camber decrease (-)			Fig. 5
Driver's side caster Adj. needed	Setting	Pass. side caster Adj. needed	Driver's side caster Adj. needed	Setting	Pass. side caster Adj. needed	
+1°	5	-1°	+1°	5	-1°	
+3/4°	6	-3/4°	+3/4°	4	-3/4°	
+1/2°	7	-1/2°	+1/2°	3	-1/2°	
+1/4°	8	-1/4°	+1/4°	2	-1/4°	
0°	9	0°	0°	1	0°	
-1/4°	10	+1/4°	-1/4°	16	+1/4°	
-1/2°	11	+1/2°	-1/2°	15	+1/2°	
-3/4°	12	+3/4°	-3/4°	14	+3/4°	
-1°	13	+1°	-1°	13	+1°	

Caution!

On some models, using this adjustable balljoint to adjust camber over 1.5 degrees **positive**, may cause interference between the knuckle and the lower ball joint yoke.

JEEP ADJUSTABLE BALL JOINT

Instructions for **camber only** adjustment

- 1)..... Check for worn or damaged parts, determine amount of camber and/or caster needed.
- 2)..... Raise and support vehicle by frame rails, just behind lower suspension arms.
- 3)..... Remove wheel, remove and support brake caliper, remove rotor.
- 4)..... Using 13mm, 12 point socket, remove three hub and bearing bolts from back side of knuckle.
- 5)..... Use slide hammer to loosen hub.
Remove hub/bearing/axle assembly as a unit (**Fig. 1**) using care not to damage inner axle seal.
- 6)..... Break tapers at ball joints and remove knuckle. Support knuckle and ABS wiring, if so equipped.
- 7)..... Press out lower ball joint using press and **optional adapter set** or equivalent. (**Fig. 2**)
- 8)..... Press in offset ball joint with stamped "V" notch on ball joint base pointing towards the wheel for positive (+) camber - or toward the engine for negative (-) camber
- 9)..... Reposition knuckle onto ball joints and install & tighten upper nut. (75 ft/lbs)
-Do not install lower nut at this time-
- 10)..... Reinstall hub/bearing/axle assembly using care not to damage inner axle seal.
- 11)..... Reinstall hub bolts (75 ft/lbs), rotor, caliper and wheel.
- 12)..... Install and compensate alignment equipment then gently lower vehicle.
- 13)..... Insert "cotter key puller" or "scratch awl" into cotter key hole.
Rotate ball stud to adjust camber as needed.
- 14)..... Jounce vehicle to initially seat ball stud into steering knuckle, install lower nut and torque to 80 ft/lbs.
- 15)..... Recheck camber readings, adjust toe and road test.

Fig. 1

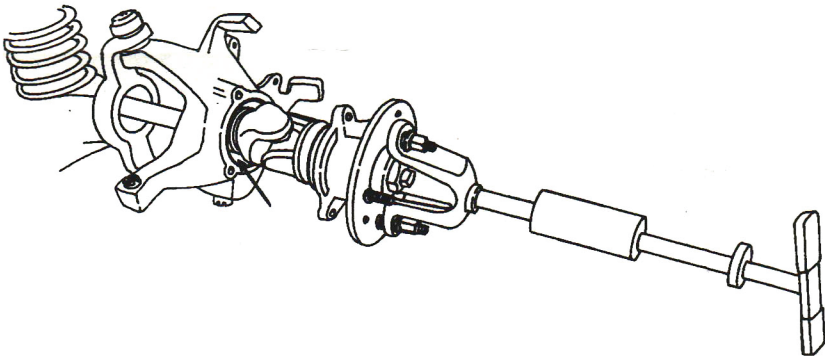
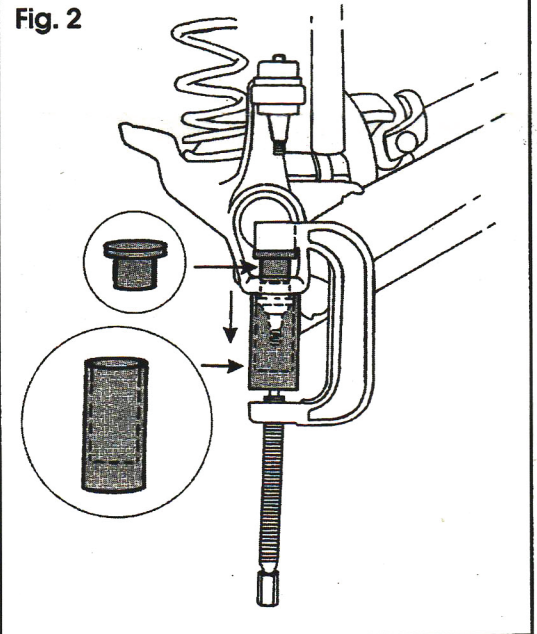


Fig. 2



Caution!

On some models, using this adjustable balljoint to adjust camber over 1.5 degrees **positive**, may cause interference between the knuckle and the lower ball joint yoke.