

BALL JOINT CHECKING

FACTORY RECOMMENDED METHOD

CHRYSLER CORP.

Lower Ball Joint — Ball joints are preloaded (zero axial end play). If any axial end play (up and down movement) in excess of .020" is observed, ball joint requires replacement.

FORD MOTOR CO.

All Models - Manufacture gives no method for checking ball joints. See *Alternate Method*.

GENERAL MOTORS

"K" Models — Raise vehicle on hoist and place jack stands just inside front springs. Disconnect connecting rod and tie rod to allow independent movement of each steering knuckle. Apply fish scale to tie rod mounting hole of steering knuckle arm. With knuckle assembly in straight ahead position, determine right angle pull required to keep knuckle assembly turning after initial breakaway. Effort must not exceed 25 lbs. in either direction.

All Other Models Upper Ball Joint — Raise and support vehicle under frame, allowing control arms to hang free. Remove wheel and disconnect upper ball joint stud from steering knuckle. Attempt to twist and shake ball joint stud. If ball joint stud has any perceptible lateral shake, or if stud can be twisted in its socket, ball joint assembly should be replaced.

All Other Models Lower Ball Joint — Lower ball joints are a loose fit when not connected to steering knuckle and wear may be checked without removing ball stud from steering knuckle. Raise and support vehicle under lower control arms, as close to ball joint as possible. Measure distance between upper tip of ball joint stud and tip of grease fitting mounted to bottom of ball joint. Move vehicle supports to a position under frame, allowing lower control arms to hang free. Again measure distance between ball joint stud and grease fitting. If difference between two measurements exceeds $\frac{3}{32}$ ", replace ball joint assembly.

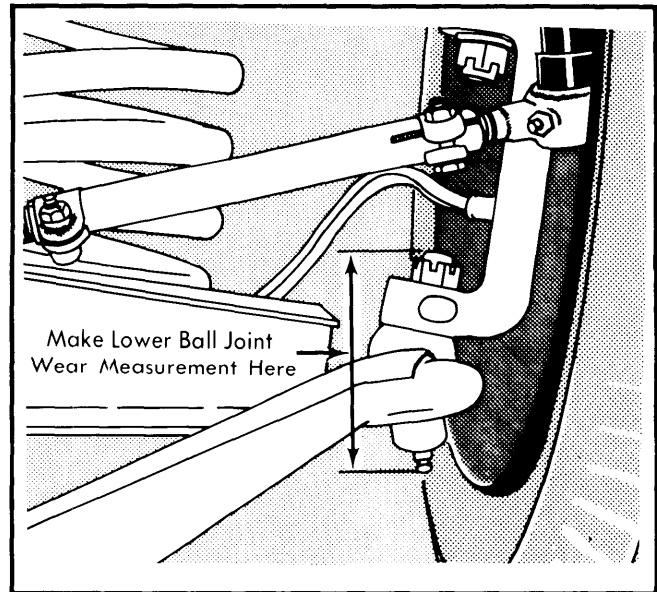


Fig. 1 Checking General Motors Lower Ball Joint

INTERNATIONAL HARVESTER

All Models (Dial Indicator Method) — Attach dial indicator to lower yoke or axle tube. Set indicator tip against knuckle or lower ball socket. With tire in straight ahead position, grasp wheel at top and bottom, then apply inward and outward force. If indicator reading exceeds .020", replace both upper and lower ball joints.

All Models (Camber Method) — Raise front of vehicle and use caster, camber and king pin gauge to take camber reading. Pull top of wheel outward and take reading, then pull bottom of wheel outward and take second reading. If readings vary more than $\frac{1}{4}$ ", replace both upper and lower ball joints.

JEEP

All Models — Manufacturer gives no method for checking ball joints. See *Alternate Method*.

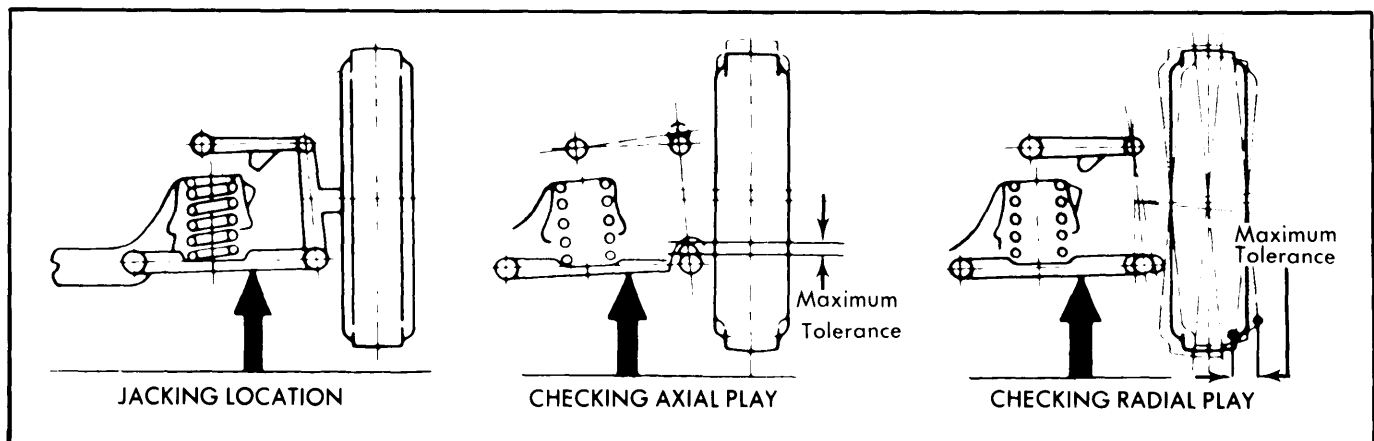


Fig. 2 Spring On Lower Control Arm

BALL JOINT CHECKING (Cont.)

ALTERNATE METHOD

NOTE — There are two general types of suspensions; one type with spring or torsion bar attached to upper control arm, and other type with spring or torsion bar attached to lower control arm. Check axial play by moving wheel up and down. Check radial play by rocking wheel at top and bottom.

SPRING ON LOWER CONTROL ARM

Upper Ball Joint — Replace ball joint if there is any perceptible looseness at joint.

Lower Ball Joint — If radial play, measured at bottom of tire on side wall, exceeds .250", replace ball joint assembly.

SPRING ON UPPER CONTROL ARM

Upper Ball Joint — If radial play, measured at top of tire on side wall, exceeds .250", replace ball joint assembly.

Lower Ball Joint — Replace ball joint if there is any perceptible looseness at joint.

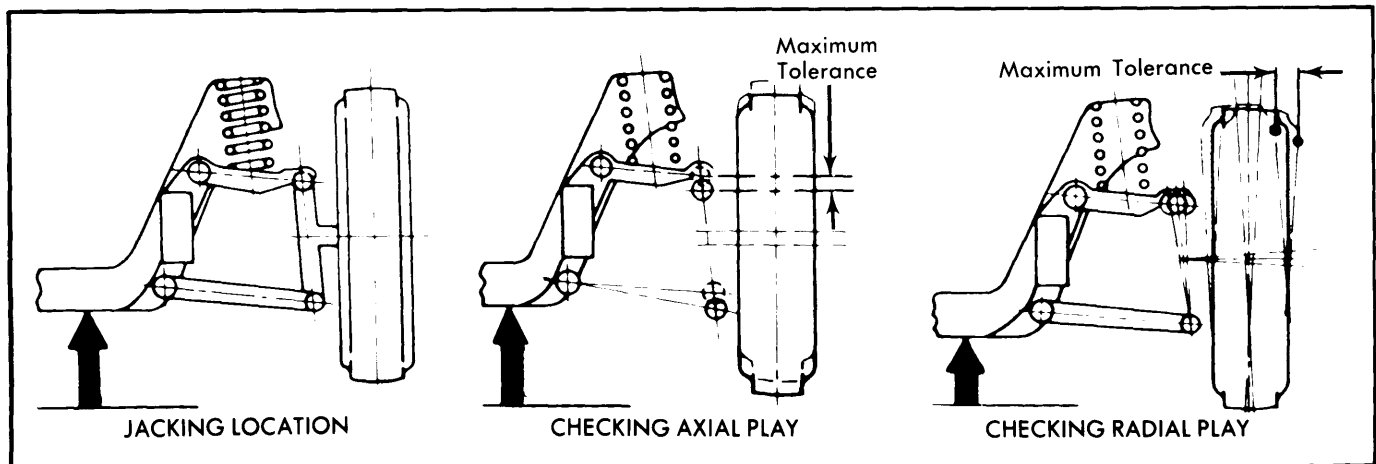


Fig. 3 Spring On Upper Control Arm