

## 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** – The upper ball stud is spring loaded in its socket. This minimizes looseness at this point and compensates for normal wear. If the ball stud has any noticeable lateral shake, or if it can be twisted in its socket with finger pressure, it must be replaced.

**All Other Models Lower Ball Joint** – Lower ball joints are a loose fit when not connected to the steering knuckle. Wear may be checked without disassembling the ball stud as follows: Raise vehicle and support weight of control arms at wheel hub and drum. Accurately measure the distance between the tip of the ball stud and the tip of the grease fitting below ball joint. Move support so that control arm is supported and wheel and hub are free. Again measure distance between ball stud and grease fitting. If difference between two measurements exceeds  $\frac{3}{32}$ ", replace ball joint assembly.

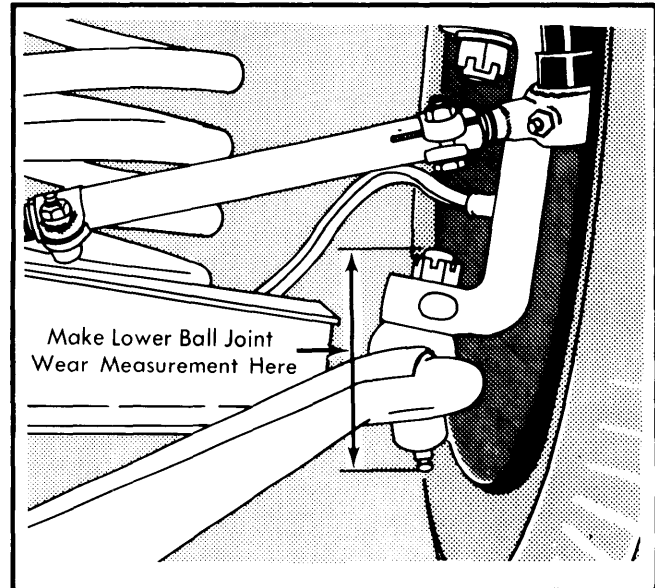


Fig. 1 Checking General Motors Lower Ball Joint

#### 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*.

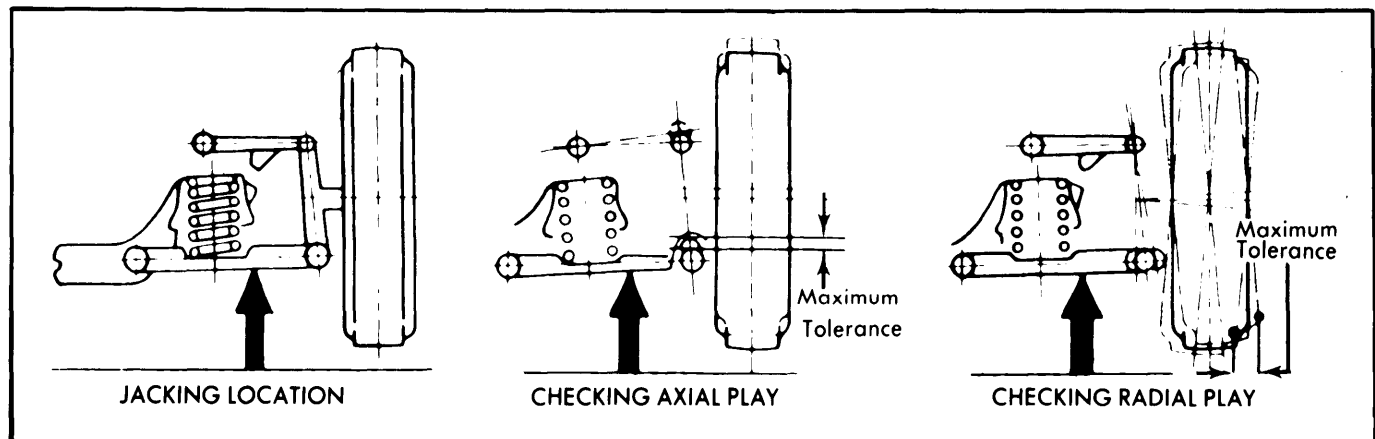


Fig. 2 Spring On Lower Control Arm

## 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.

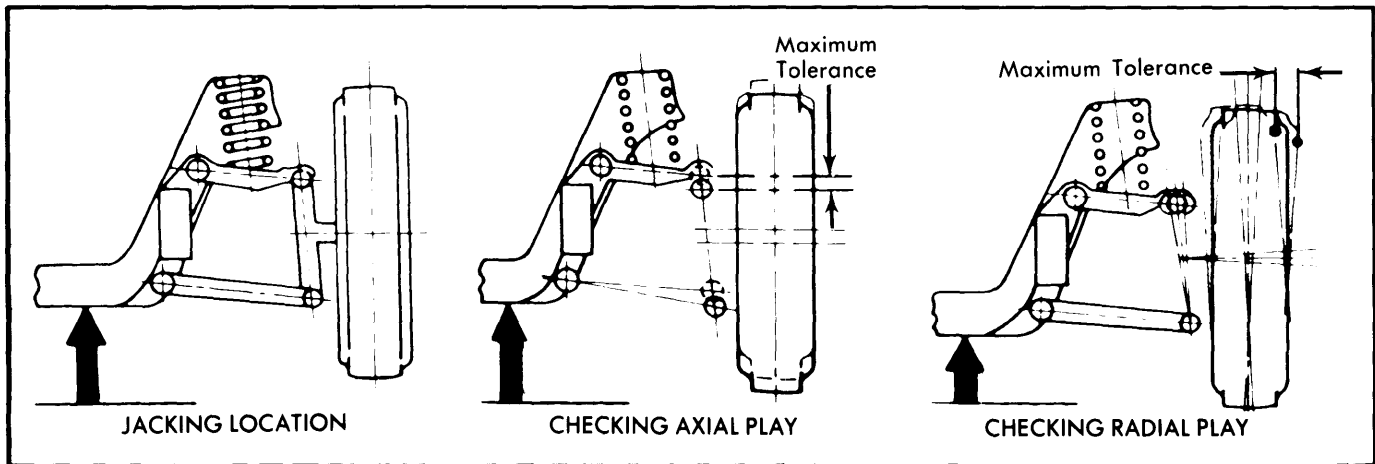


Fig. 3 Spring On Upper Control Arm