

BALL JOINT CHECKING

FACTORY RECOMMENDED METHOD

CHRYSLER CORP.

Lower Ball Joint (Coil Spring Suspension) – 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.

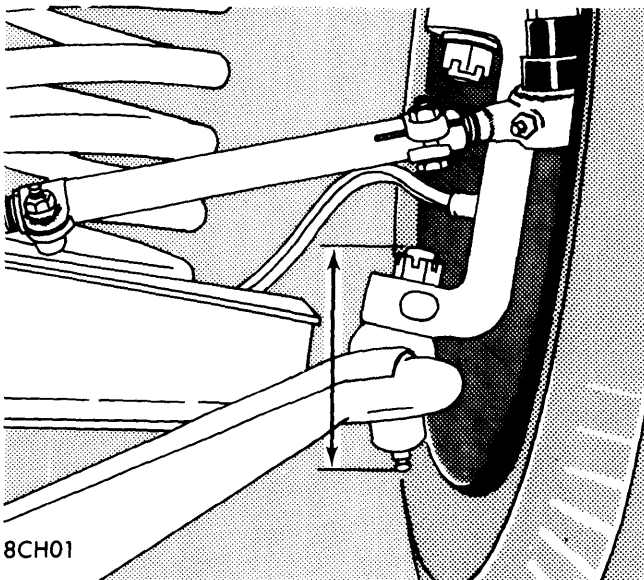
Lower Ball Joint (Leaf Spring Suspension) – Ball joints are preloaded (zero axial end play). If any axial end play is observed, ball joint requires replacement.

GENERAL MOTORS (EXCEPT GMC MOTOR HOME)

"K" Models – Raise vehicle on hoist and position suitable jack just inside of front springs. Disconnect tie rod and connecting rod to allow independent movement of each steering knuckle. Turn steering knuckle using a torque wrench on one of the steering arm attaching stud nuts. Maximum torque required to rotate knuckle should be 20 ft. lbs. Knuckle should turn smoothly through turning arc and have no vertical end play.

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.

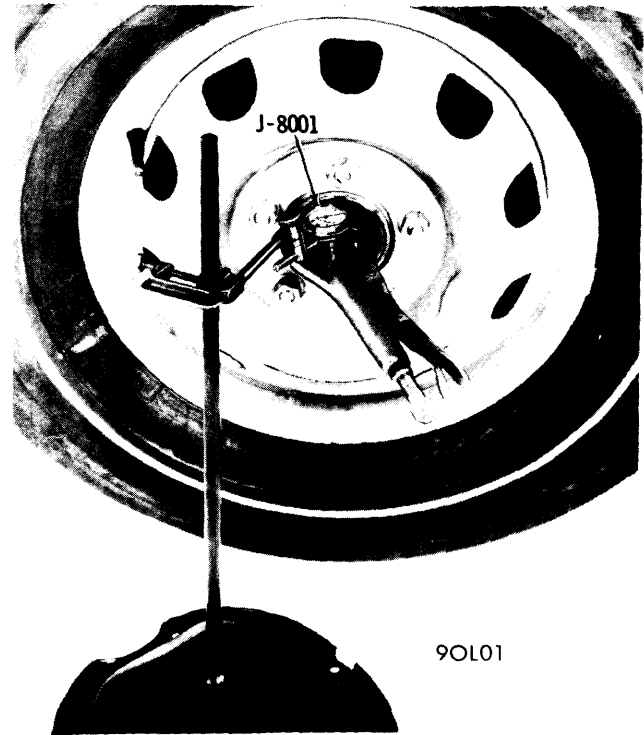
All Other Models Lower Ball Joint – Lower ball joints are a loose fit when not connected to steering knuckle and wear may be checked without removing ball stud from steering knuckle. Raise and support vehicle under lower control arms, as close to ball joint as possible. Measure distance between upper 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.



CHECKING GENERAL MOTORS LOWER BALL JOINT

GMC MOTOR HOME

Lower Ball Joint – Raise and support vehicle under lower control arms. Clamp self-locking pliers on hub at axle drive nut, so that pliers are in a horizontal position. Using a suitable stand, mount dial indicator so that contact tip of indicator points downward and rests against pliers. Place pry bar between lower control arm and drive axle outer race, then pull down on bar. If dial indicator reading exceeds .125", ball joint requires replacement.



GMC MOTOR HOME BALL JOINT VERTICAL CHECK

INTERNATIONAL HARVESTER

All Models W/2WD – Manufacturer gives no method for checking ball joints. See *Alternate Method*.

All Models W/4WD – Attach a suitable 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.

JEEP

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

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.

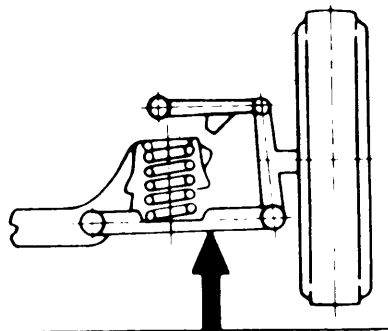
Ball Joints

BALL JOINT CHECKING (Cont.)

SPRING ON LOWER CONTROL ARM

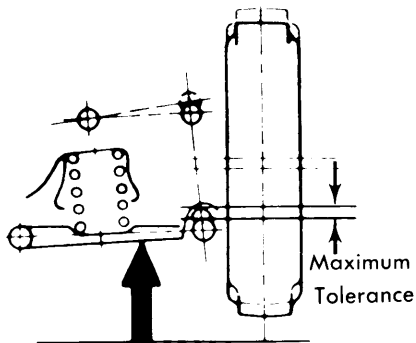
Upper Ball Joint — Replace ball joint if there is any perceptible looseness at joint.

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

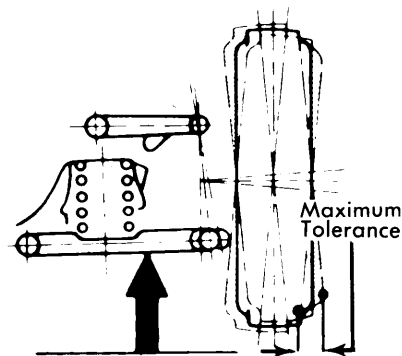


JACKING LOCATION

3F469-3F471

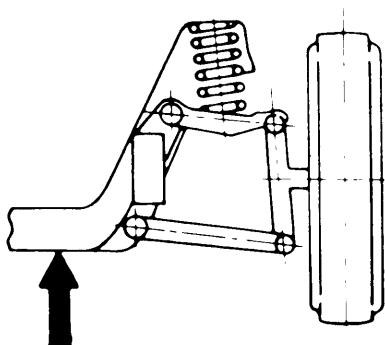


CHECKING AXIAL PLAY



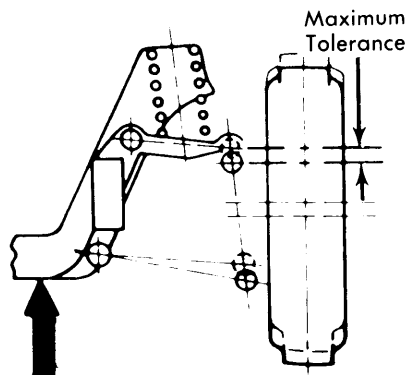
CHECKING RADIAL PLAY

SPRING ON LOWER CONTROL ARM

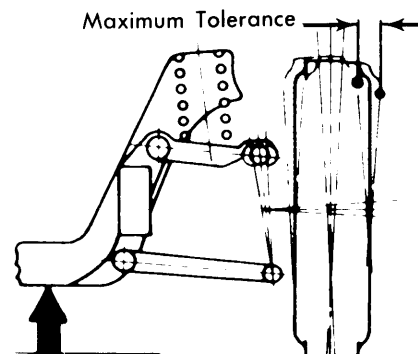


JACKING LOCATION

3F466-3F468



CHECKING AXIAL PLAY



CHECKING RADIAL PLAY

SPRING ON UPPER CONTROL ARM

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.