

TECHNICAL BULLETIN-0006
DODGE AND JEEP PIN JOINTS
DESIGN AND DIAGNOSIS



**Specialty
Products
Company**



For many years Dodge and Jeep have been using a solid axle in the front of their four-wheel drive SUV's and trucks. Dana 30, Dana 44 and AAM925 are the most common. These vehicles have two 'ball' joints per side, but the truth is that they really only have one actual ball style joint per side and that is the lower joint. The upper ball joint is actually a pin design not a ball design. The pin in the upper joint is held in place by spring loaded bushings (3) that hold the pin (2) in place so it can pivot. The pin itself is designed to move up and down in the bushing and housing about ½ inch or 12mm.

This design relaxes the axle housing tolerances so the joints can pivot with a minimal amount of tension between the two. This system has worked very well for many years, but it is easy to mis-diagnose ball joint play if you are not aware of how the system works.

A common way to check for ball joint play is to raise the vehicle by the axle and then check for axial movement with a pry bar under the tire. Then check for radial movement by pushing the tire in and out. If there is up and down movement in the first test this would indicate play in the lower ball joint, but it is not an indication there is a problem with the upper joint. Again, the pin in the upper joint can move up and down. Check the ball joint specifications for your specific vehicle to see if any axial or radial play is allowed by the manufacturer. If no play is allowed the lower joint should be replaced. Any side-to-side play in either joint is normally not acceptable and would indicate replacement of either or both joints but again check the specifications.

I know there is a lot of labor involved in replacing these joints so why not just replace them both at the same time? If both joints are OE and have not been replaced, I would be inclined to replace them both if indicated by testing. But if the upper pin joint has been replaced recently to correct an alignment issue, then the lower joint may be the only one needing service.

The Specialty Products Company ball joints part numbers that fall into this category are the

1. 23510-23520-23530-23540
2. 23710-23720-23730
3. 23800-23810-23820-23830
4. 23850-23852-23854

