



**MOOG® PATENTED COVER PLATE**

**THE PROBLEM SOLVER®**

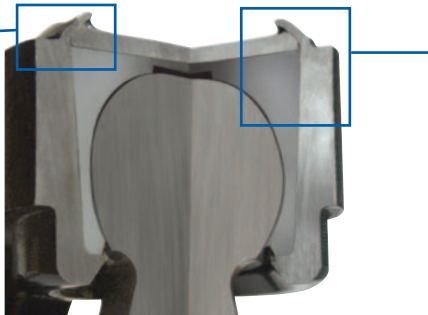
**PROBLEM:**

**Tolerance "Stackup"/Excessive Play/Premature Failure**

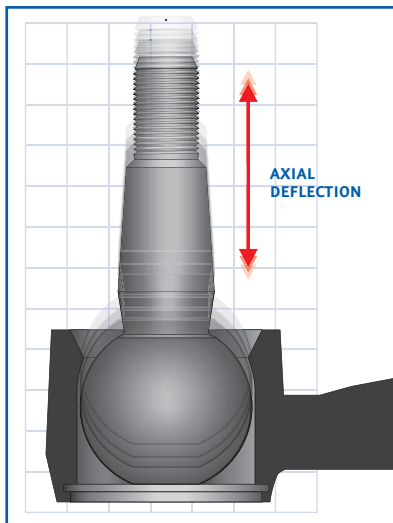
- Traditional spun cover plate design does not allow precise component clearance control.
- Excessive clearance within the housing can lead to axial deflection (or lash), reducing component and assembly life.

TRADITIONAL COVER PLATE DESIGN IS UNABLE TO CONTROL INTERNAL CLEARANCE AND CAN ALLOW CONTAMINANTS TO LEAK INTO THE BEARING.

NON-MOOG DESIGN



A new socket style part should have virtually no deflection. But over use, deflection will occur as the bearing inside the unit wears, and the part loosens up. And the more deflection or looser it gets, the more it wears, as the ball stud is no longer tight in the socket, and is literally bouncing around in the socket, which will rapidly wear the bearing surface. Eventually, the component will fail.



AXIAL DEFLECTION IS VERTICAL MOVEMENT (UP AND DOWN) OF THE BALL STUD WITHIN THE HOUSING.

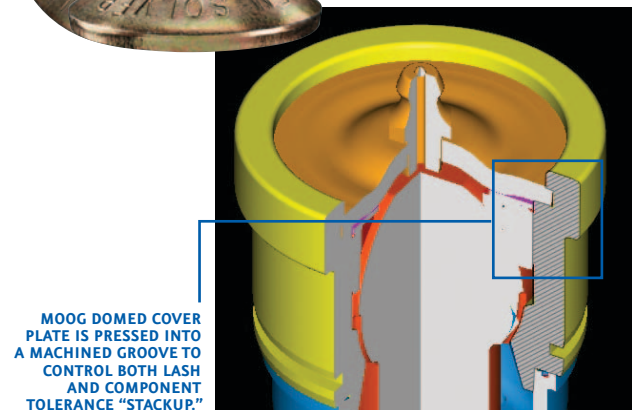
**SOLUTION:**

**MOOG® Premium Patented Domed Cover Plate Design**

- The MOOG exclusive patented domed cover plate fits into a machined groove and is pressed into the part, where it flattens and securely grips the groove, sealing against the housing. This technique allows for a consistent, tight part with minimal axial clearance or deflection (based on a typical 200-lb. test).
- The domed cover plate eliminates excessive lash while allowing adequate assembly clearance, and controls component high-side tolerance "stackup" to prevent binding.
- The patented, proprietary cover plate design holds axial clearances to near-zero lash.
- Axial and radial deflection consistency is more precise than conventional closure methods; providing for more durability, extending the life of the part.



THE COVER PLATE IS MANUFACTURED WITH A DOMED SHAPE THAT FLATTENS AS IT IS PRESSED INTO THE COMPONENT.



MOOG DOMED COVER PLATE IS PRESSED INTO A MACHINED GROOVE TO CONTROL BOTH LASH AND COMPONENT TOLERANCE "STACKUP."

**MOOG PATENTED COVER PLATE DESIGN IS FOUND ON MOOG SOCKET-STYLE COMPONENTS, INCLUDING: BALL JOINTS, TIE-ROD ENDS AND SOCKET-STYLE SWAY BAR LINKS**

