# BULLETIN: 27024

**Premature Ball** Joint Wear and Service Issues Dodge/Freightliner Sprinter Van

#### www.moogproblemsolver.com

### **PROBLEM:**

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#### Design is under-sized for severe duty use

- Ball joints experience premature wear, especially in harsh fleet environments. The original equipment ball joint is a non-serviceable, plastic bearing design with a 1.25" ball stud diameter. Ball joints for vehicles of this size and purpose typically use a larger ball stud diameter for better load-carrying capability. The plastic bearing deforms under load, causing wear in the compressed area, leading to deflection.
- The original equipment ball joint uses a very shallow stud taper in combination with a very high stud nut torque specification of 210 foot pounds. This pulls the stud with extreme force, locking it into the knuckle. Separating the ball joint stud from the knuckle can prove difficult. This is clearly evident in the photo below. Without the use of a special taper breaker, this ball joint was cut off to aid in stud removal from the knuckle.



## SOLUTION:



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#### MOOG® K7455 ball joint

- Typically, MOOG will oversize the ball stud to increase loadcarrying capability, but in this case the ball joint housing outside diameter is too small, limiting the size of the internal components. To gain additional strength and wear resistance, MOOG induction heat-treats the ball stud and housing bearing surface.
- For this particular application, the MOOG powdered-metal bearing has several advantages over the OE plastic bearing. The hardened powdered-metal will not deform under the heavier load, and the porous material keeps lubrication at the bearing surface.
- MOOG K7455 uses a premium polychloroprene boot with a built-in grease-relief valve, providing a sealed, serviceable part able to flush contamination. Since a low-profile "pin" style grease fitting is used, a grease gun "needle adapter" is all that is needed to easily service the joint in a limited space.

#### Miller Tool #9282



A heavy duty taper breaker designed specifically for the Sprinter can successfully separate the ball joint stud from the knuckle. The taper breaker is made by Miller Special Tools and can be ordered direct by calling 1-800-801-5420.

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