MOOG STEERING & SUSPENSION

NASCAR PERFORMANCE

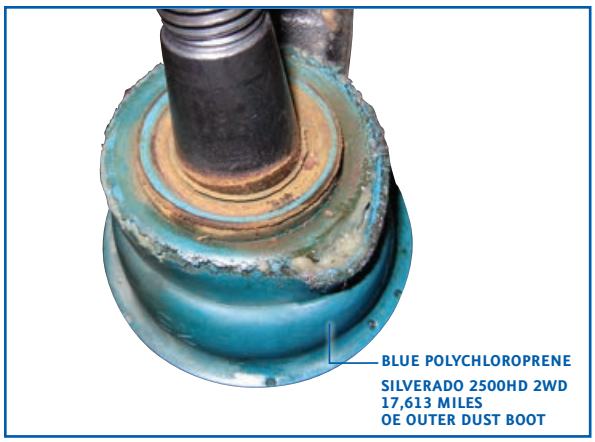
MOOG® ENGINEERED BOOT DESIGN

THE PROBLEM SOLVER®

PROBLEM:

Premature Wear Due to Boot Failure

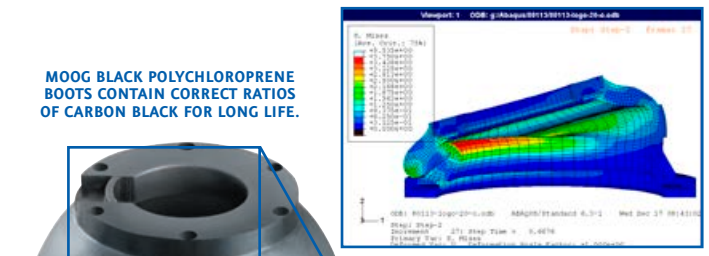
- The boot fails, allowing contaminants and moisture inside. Resulting corrosion and wear cause excessive deflection in the tie rod socket assembly, with loose steering and associated toe angle changes. Ball joints with a non-serviceable polymer socket design are unable to flush the contamination, and corrosion/accelerated wear quickly sets in.
- Boot failure is due to the reduction of carbon black strengthening filler in the polychloroprene material in order to achieve a blue color. Reducing carbon black content cuts material strength, resulting in boot degradation and failure.



SOLUTION:

MOOG® Premium Sealed Boot Design

- MOOG black polychloroprene (neoprene) boots contain proper ratios of carbon black to ensure maximum strength and durability.
- Boot designs are computer modeled and stress tested to assess prototypes and enhance finished-product service life.
- Finite Element Analysis (FEA) testing during development places real-world loads on proposed designs to analyze and reinforce higher-stress areas of the boot (see illustration).
- On appropriate applications, a steel ring insert provides reinforcement, and the sealed design ensures a positive barrier against moisture and debris.
- The MOOG grease-relief valve prevents overfilling as well as debris and moisture intrusion. The indexed valve directs excess lube away from critical brake components.



FINITE ELEMENT ANALYSIS (FEA) ANALYZES HIGH STRESS AREAS OF THE BOOT DURING DEVELOPMENT.

Be Car Care Aware®

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