



Commercial Vehicle Safety Alliance

North American Standard Inspection Program

I N S P E C T I O N B U L L E T I N

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Camshaft Bushings

Summary

This *Inspection Bulletin* is intended to clarify the inspection of the brake camshaft and camshaft bushings during a roadside inspection and provides guidance when a power unit or trailer is in violation and/or in an out-of-service (OOS) condition.

Background

All components of a foundation brake system, including brake camshafts and camshaft bushings, are very important components for the safe operation of commercial motor vehicles. Camshaft bushings provide an important function, support and flexibility, in the proper operation of a vehicle's braking system.

A camshaft bushing may become worn allowing some non-rotational movement of the camshaft. Pulling on the camshaft by hand generates a combination of lateral and rotational movement and does not provide an accurate assessment of the bushings wear. However, any wear, or looseness, in the camshaft bushing will to some degree effect the overall brake stroke. These Brake Adjustment Limits are specified in the Reference Charts under Part II of the *North American Standard Out-of-Service Criteria* (OOSC).

Inspection Guidance

Certified inspectors should inspect a foundation brake system for non-functioning, loose, contaminated (with grease or oil), or missing/cracked components.

Inspection of the camshaft bushing should be limited to whether the condition of the bushing is causing some other brake defect. A missing, or excessively worn, camshaft bushing may result in the brake having excessive pushrod travel, worn out linings on the bottom shoe, or a potentially inoperative brake. In each case, the violation should be noted under the specific brake defect already specified in the OOSC. Apply the 20% defective brake rule accordingly.

Until a camshaft bushing results in a condition already specified in the OOSC, roadside inspectors should not considered camshaft bushings as a specific OOS defect. All member jurisdictions are encouraged to provide this *Inspection Bulletin* to all certified inspectors.

