



# Inspection Bulletin

North American Standard Inspection Program

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## 2006-01 – Worn Camshaft Bushings

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### Summary

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

### Background

All components of a foundation brake system, including brake camshafts and bushings, are very important components for the safe operation of commercial motor vehicles. Camshaft bushings provide 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 bushing's wear. However, any wear or looseness in the camshaft bushing may affect the overall brake stroke to some degree. The brake stroke 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 brake components.

An inspection that identifies a camshaft bushing that is worn, should be limited to whether the condition is causing some other brake violation. An excessively worn camshaft bushing may result in the brake having excessive pushrod stroke, worn out linings on the bottom shoe or an inoperative brake. In each case, the condition should be documented under the specific brake violation already specified in the OOSC. The 20% defective brake rule should be applied accordingly.

Until a worn camshaft bushing results in a condition specified in the OOSC, roadside inspectors should not consider worn camshaft bushings as a violation or a specific OOS condition. All member jurisdictions are encouraged to provide this inspection bulletin to all certified inspectors.

