



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 11-020
Date Opened: 05/23/2011
Investigator: Chris Lash
Approver: Frank Borris
Subject: Brake Master Cylinder Internal Leak

Date Closed: 03/14/2012
Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: NISSAN NORTH AMERICA, INC.
Products: 2007 - 2008 Nissan Altima
Population: 508,221

Problem Description: The brake master cylinder may leak internally, resulting in illumination of the brake warning lamp and potential reduction in brake effectiveness.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	62	182	237**
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	0	13,581	13,581

*Description of Other: Warranty claims for master cylinder replacement due to possible leak.

** Count indicates duplicate reports received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation is closed. Nissan is conducting a service campaign to check for brake pad wear and or a slow fluid leak that can cause the brake lamp to illuminate prematurely.

Summary:

The Office of Defects Investigation (ODI) opened PE11-020 to investigate possible brake performance loss due to brake fluid leaking from the master cylinder into the brake booster in the subject vehicles. A total of 237 complaints were identified by ODI and Nissan. The majority of complaints and warranty claims reported that brake malfunction indicator lamp (MIL) illumination as the only symptom of a problem. Only 12 complaints alleged any effect on brake performance and in each of these the drivers were able to stop the vehicles without incident. No crash claims could be attributed to the alleged defect.

Returned part analysis data provided by Nissan showed that most of the master cylinders replaced under warranty did not have a leak condition. These replacements may have resulted from brake MIL illumination due to pad wear. For most of the warranty claims, in a few cases where a master cylinder leak was found, Nissan's testing showed that the leaks were extremely slow and would require thousands of miles or months of driving before brake performance could be affected. After an extensive study of replaced master cylinders for a presumed leak, Nissan was unable to identify any concern with the parts or design of the subject components that could affect brake performance.

Nevertheless, Nissan does recognize a concern with premature brake MIL illumination and has decided to address this problem by conducting a voluntary service campaign covering approximately 1.17 million model year 2007 through 2012 Altima vehicles (up to June 25, 2011 production, the date of Nissan's running change for the longer life brake pad). Nissan's owner letter for the service campaign states, "As your brake pads wear over time, the brake fluid level in the master cylinder reservoir will drop and may cause the brake warning lamp to illuminate." Although this is a

normal condition, there has been concern that the brake warning light illumination may be caused by a slow fluid leak over time." Nissan's service campaign will inspect the brake pads and test the master cylinder for leakage. If leakage is detected, Nissan will replace the master cylinder at no charge. If excessive pad wear is observed, customers will be notified and will be responsible for repairs. For more details concerning Nissan's service campaign, see the PE11-020 file on www.Safecar.gov.

Based on the low failure rate for confirmed master cylinder leakage in the subject vehicles and the low probability that the condition would affect brake performance, this investigation is closed.