



DelcoRemy

Alternator Contamination from Engine Exhaust and Engine Blowby Oil

Products: Delco Remy Alternators

Applications: Engines Operating in Vehicles and Other Compartmental Environments

Background: Working alternators are being removed from service due to the appearance of excessive **oil/soot** contamination in late-model equipment and vehicles.

Problem: Remy Inc. has found that crankcase oil vapors (blowby) and exhaust soot can accumulate inside and around alternators. Evidenced by abnormal staining, the contamination results in customer removals. The most prevalent source of the contamination is from the draft tube. Oil vapor has been identified through lab analysis of the alternator deposits, and the source of the vapor has been documented through studies of under-hood flow paths on vehicles exhibiting contamination.

The contamination will appear as a dark stain concentrated around the vents, fans and pulleys. Customers typically remove alternators, often still functional, believing that the alternator bearing grease is leaking. The problem is most prevalent on equipment which have high idle times and operate without frequent use of the main engine fan. Though mistaken as a bearing leak, this problem is a valid concern since contamination can lead to overheated electronic components inside the alternator and subsequent failure.



Examples of Blowby and Soot Contamination

Root Cause: Vehicle tests conducted with (fan-off) engines show that contaminated air in the engine compartment flows through the alternator, leaving deposits of combustion by products. Blowby has been observed to flow over and under the engine from the opposite side of compartments to reach the alternator.

Recommendation: Delco Remy alternator bearings use a very small amount of grease that will not contaminate the alternator or surrounding engine surfaces. If contamination described in this document is observed on the alternator, exercise caution when cleaning these applications, because pressure washing the interior of the product is not recommended.

Remy Inc. will refer contamination issues to the engine and vehicle service centers and will deny warranty for products that failed from being contaminated with excessive engine blowby or exhaust soot.