

FIX-N-FAX #40

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

No. 40

Equipment Standard

Mandatory Compliance

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Air Filter Maintenance, All Vehicles

The department continues to experience catastrophic engine failures caused by improperly serviced or damaged air filtration systems.

The most common occurrences is with filters that have been perforated by a high pressure air hose, washing used filters which are weakened during the washing process, and misaligned element seal to housing and damaged filter housing.

More harm than good is caused when air filters are changed more often than the manufacturer recommends. Most air filters perform more efficiently after they have accumulated a certain amount of dirt. These contaminants act as an additional filtering medium that can screen very fine dust particles that might slip through a new filter. Let filters do the complete job before replacing them and wait until the recommended intervals or a high gauge reading.

The department recommends that the air filtration system be monitored for leaks of unfiltered air at each inspection interval around all critical areas.

Cleaning filters with high pressure air is not permitted.

Caution should be used not to damage the filter or sealing surface. When damage occurs in cleaning or changing filters, it usually goes unnoticed; then serious engine damage is the result.

Cleaning and reusing old filters is an expensive way to economize.

The department recommends the use of an in-dash calibrated air cleaner service gauge that can be utilized by the driver to monitor two conditions involving the engine intake system.

1. Condition one is where the gauge is reading too high under a hard pull, full throttle, and max govern rpm.
 - a) Inspect the intake spark arrestor screen for debris.
 - b) Replace air cleaner element, making sure that it actually seals properly, that the element physically fits the housing. Don't rely on the part number alone.
2. Condition two is where the gauge does not indicate any restriction at all during a hard pull, full throttle, and max govern rpms.
 - a) This indicates that the gauge is broken or has become disconnected.
 - b) This indicates that the element is not filtering the intake air because it is damaged, does not fit, or the plumbing between the air cleaner and the engine is loose or damaged.

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