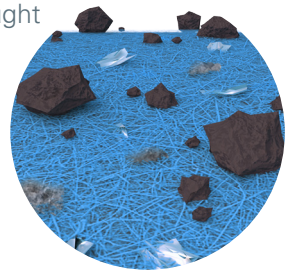
Donaldson
FILTRATION SOLUTIONS

SERVICING YOUR AIR FILTER
TO CHANGE OR NOT TO CHANGE?

Air filter service life should be determined by measuring airflow restriction, no one can tell when to service by visual inspection alone.

While new Donaldson air filters provide good engine protection, a Donaldson air filter that has been in service for a period of time works even better than a new one. Reason being the paper media in the filter is porous to allow air to pass through it on its way to the engine. As dirty air passes through the filter, contaminant is caught in the media and begins plugging some of the pores.



As more dirty air enters the intake system, previously trapped contaminant helps to filter out even the smaller particles, making the filter even more efficient at preventing new contaminant from entering the engine, the dirt particles become part of the filtering process. This is referred to as barrier filtration.

Donaldson engineers formulate paper filter media to use the principle of barrier filtration to our advantage: Donaldson air filters are designed to reach peak efficiency faster than others.

The efficiency of a Donaldson air filter continually increases with use until the level of restriction reaches the optimal maximum recommended by the engine manufacturer.

This restriction can only be measured with one of the following:

- Water Manometer
- Service Gauge, or
- Restriction Indicator

Restriction measuring devices remove the guesswork from air cleaner servicing and allow you to safely benefit from the filter's optimum performance.

A major cause of over-servicing can sometimes be 'better to be safe than sorry' where users consider time or odometer readings rather than airflow restriction measurement to be used to determine when to service. In the case of air cleaners, more servicing is not better.

Servicing too frequently prevents the air filter from ever reaching its peak efficiency. In addition, the risk of engine damage increases every time the air filter is removed from the air cleaner housing.

HOW SHOULD AIRFLOW RESTRICTED BE MEASURED?

Dial gauges continuously monitor airflow restriction levels and always display the current level measured in inches of H2O. Restriction Indicators can be a "go/not go' device that turn red when the pre-set level is reached or have a graduated 'step' scale. Both styles can be reset. The recommendation is that preferably a Water Manometer, if not a Dial Gauge, be used to measure the filtration system restriction when the vehicle or piece of equipment is called in for other scheduled preventative maintenance.

DID YOU KNOW

Two methods are used to measure the restriction of turbo-charged engines. The first method is to take the reading with the truck on a dynamometer under full load. This result is actual restriction. A locking step gauge is the other method. This popular method will give actual, on-the-road peak readings.

The point at which air filters should be changed is when airflow restriction levels reach the maximum allowable level set down by the respective engine manufacturer

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