



## 5 Tips to Fit an Air Filter

Air filtration is essential for every engine. Good air filtration is essential for long and reliable engine life.

There are 4 essential criteria in air filter design.  
Quality, Efficiency, Capacity and Restriction.

In today's article, we'll talk about Quality...

Quality is a measure of excellence or a state of being free from defects, deficiencies and significant variations. It is brought about by strict and consistent commitment to certain standards that achieve uniformity of a product in order to satisfy specific customer or user requirements.

Quality is number 1. If an air filter is made poorly, it can have a catastrophic effect on an engine within a relatively short space of time. All it takes is about 150-200grams of dirt to get through to the engine and the engine will fail.

Meeting quality expectations ensures an air filter will minimise the impact of progressive engine wear by providing the engine with a secure barrier to the external environment and the contamination it contains.

This means the filter must be manufactured to strict control standards and assembly procedures which prevent such things as poor glue penetration, poor gasket adhesion, damaged media and damage to the filter as a whole.

Damage potential doesn't just end with production. It also involves quality processes in packaging handling, transport and storage that protect a filter after it is made.

Dropping a packaged filter may not seem like much of a problem and it can often appear as though the damage is limited only to the carton.

However, sudden impacts to air filters from being dropped from a height whilst still in the unopened carton can cause unseen damage to the element. The perforated metal cage that composes part of the main support is not designed to withstand high impacts. It can possibly become distorted and, as such, put undue contact pressure on the filter media. Over time, this can cause wear of the media as it naturally moves throughout its service life causing a hole which allows dirt to enter the engine.

Be on the lookout for a filter that shows any sign of damage.

Before fitting an air filter, make sure:

- It is free of any obvious damage.
- Check that the seals are intact and in good order.
- Have a look at the penetration of the media into the glue on each end of the filter
- Make sure the filter fits into the housing correctly - too long and it is at risk of being crushed, causing a bulge in the cage which will result in a hole. Too short and a poor seal will be achieved allowing the filter to leak.
- Any air filter carton that shows any sign of damage to the box, warrants further inspection before being fitted.

A damaged filter can leak for any number of reasons so it's important to make sure the filter that is being fitted is not damaged in any way. If in doubt chuck it out. It's not worth risking the safety of the engine for the cost of an air filter.

Cummins Filtration has high standards and produces air filters of exceptional quality, using ISO 9001 Management System to ensure quality standards. That's why we back ourselves with the best warranty in the business and warrant engine repair if one of our filters should ever happen to fail due to poor quality.