

## VAC VALVES

### Vacuator™ Valves Automatically Expel Dust and Water

Many Donaldson air cleaners are supplied with a small, wedge shaped, rubber valve called a Vacuator™ Valve, or 'vac valve'.

This simple device is often overlooked but is critical to the correct operation of the air cleaner, and is an integral part of the pre-cleaning stage on two-stage air cleaners. It is commonly thought that the vac valve is just a water drain, but it does a lot more than just let accumulated moisture drain out of the air system.

#### How Does It Work?

As dirty air is drawn into two-stage air cleaners, it is forced to spin. This spinning action causes the dirt particles to be thrown to the outside of the air cleaner where it accumulates in the dust cup or the vacuator tube. This action is known as centrifugal pre-cleaning and is an effective method of removing much of the dirt from the incoming air before it reaches the filter.

When the engine is running, there will be a slight vacuum in the air cleaner. This vacuum will cause the vac valve to close, preventing air and dirt from entering. However, the engine will also have a pulsing effect on this vacuum, causing the vac valve to open and close slightly and rapidly, expelling the accumulated dust from inside the air cleaner. The vac valve will also expel dust when the engine is stopped, so the vac valve makes the pre-cleaning action of the air cleaner 'self cleaning'

However, if the vac valve is damaged, worn, or even missing, not only will dust not be expelled from the air cleaner, dirty air will be drawn into the air cleaner through the vacuator tube. This will disrupt, or even prevent the separation of dust from the incoming air, the pre-cleaning action, and will result in much shorter filter life. Dirt will also build up inside the air cleaner and restrict engine airflow.

The air cleaner will still clean the air going to your engine but you will need to change your filter more often.

For the efficient operation of your air cleaner, it is important to check the vac valve periodically for wear or damage. Over time it may also become hard, particularly if it is exposed to harsh environments. Or it may be missing. In all these cases, we recommend fitting a new vac valve.



#### DID YOU KNOW

A worn, damaged or missing vac valve will result in shorter air filter life.

An air cleaner should be installed with the vac valve at the lowest point.



**THINK FILTERS. THINK DONALDSON**



**AUS: 1800 345 837**  
**NZ: 0800 743 387**

[www.donaldsonfilters.com.au](http://www.donaldsonfilters.com.au)