



# RamAir „Aeriform“ Cleancharger Filter Systems

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## 1. Filter Facts

All engines - normal and racing - require rpm depending on a constant changing volume of airflow. The fuel management system will provide the right air/fuel mixture of aspirated air volume to enable maximum power output by minimising or avoiding airflow restriction. Non filtered air can cause engine damage. This is the reason why filters are in place to protect the engines during their planned lifetime.

The filter has to absorb as many dirt particles as possible without restricting the airflow required. A reduction of airflow will lead to powerloss.

## 2. RamAir Aeriform Cleancharger Filter System

### 2.1 RamAir versus Paper Filter

Nearly all cars now come fitted as standard with a paper type air filter, why ?

Well mostly owing to the costs of a paper filter, it's very inexpensive to produce & let's not forget, cars are produced in their millions – so every penny saved boosts profits.

The most obvious disadvantage with paper, is that the filter media is just that, paper. As we all know, paper does not like to be exposed to water / humidity. The instant that the paper media becomes damp it's efficiency as an air filter reduces drastically. Yet RamAirs' Aeriform material is unaffected by moisture – namely owing to it's unique polymer oil.

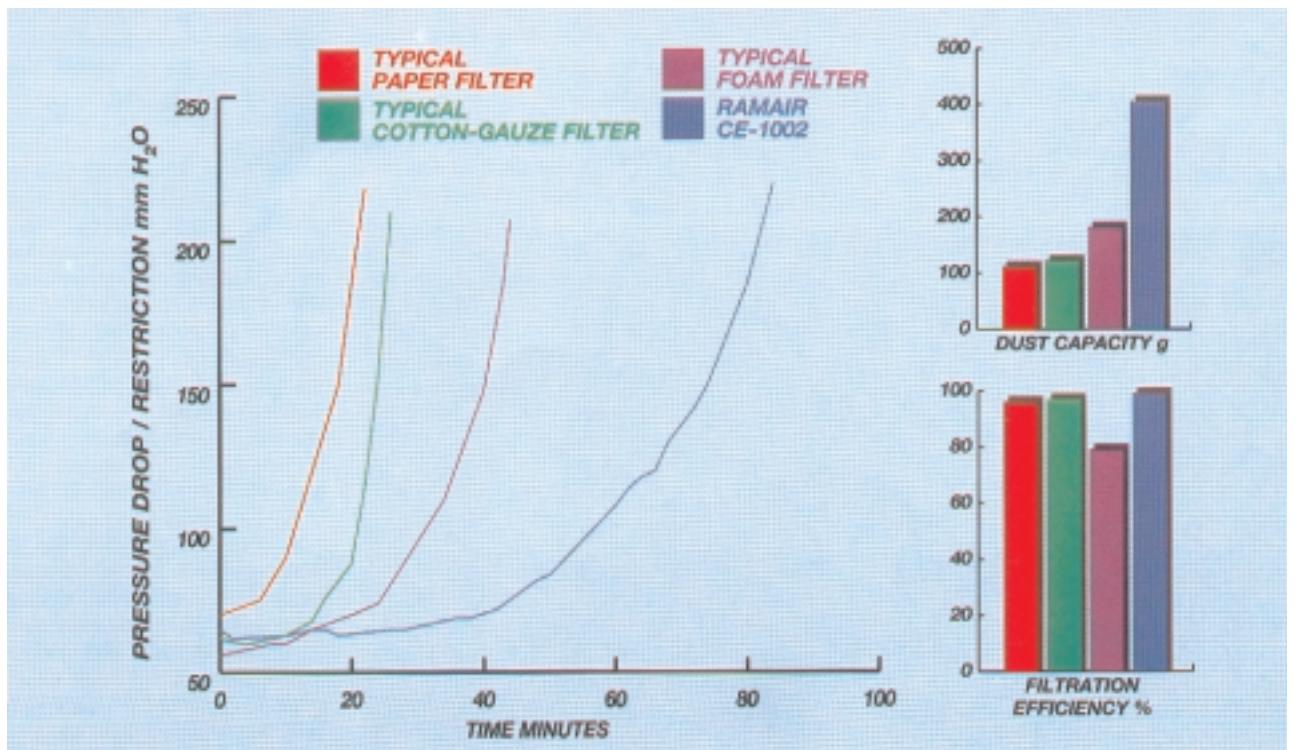
All RamAir filters carry a limited lifetime warranty , which means that they are guaranteed against manufacturing defects for as long as the original purchaser owns the vehicle.



## PERFORMANCE FILTERS

### 2.2 RamAir versus Cotton Filters

All RamAirs' C.E.filters (Car Elements) are manufactured using Aeriform technology which means that every single air filter has variable stage air filtration. Each filter is constructed in three different grades of foam to ensure maximum air filtration, unlike cotton/gauze filters. Cotton air filters have only one grade of filter media, which means that once this becomes contaminated with particulates the air flow quickly deteriorates. Laboratory tests have proven that RamAirs' Aeriform filter media will outlast all cotton gauze filters.



### 2.3 Daily street usage with airbox

To fulfil these customer's requirements RamAir has developed the Aeriform Cleancharger Replacement Filters. They are made to replace the standard paper or cotton airfilter inside the airbox. Our patent Aeriform Cleancharger Filter material in combination with polyurethane sealings creating a Cleancharger filter which can easily replace the factory or cotton airfilter.

#### The concerned motorist is mainly interested in

- protecting his engine
- extend the lifetime of his filter
- guarantee maximum airflow for best power output
- providing high airflow over a longer filter service interval
- protecting the environment by reducing constant "throw away" paper-filter change
- easy DIY filter service



## **2.4 Racing and Performance kit Development**

Normal engines for street use have airboxes. One of the reasons for this, is noise reduction. To generate maximum airflow race engines (with carburetors or fuel injection system) are normally designed with straightened airflow systems to guarantee the maximum amount of oxygen to improve combustion performance.

In the past, race engineers used special airflow designed rampipes with our filters to avoid loss of airflow (and power). Over time, engine protection( and durability) became extremely important so RamAir started to develop the known Aeriform Cleancharger Performance Filtersystems. This is designed to replace the airbox system and supply the volume of air (and oxygen) needed to guarantee the maximum output and at the same time the engine is well protected against debris and small broken car parts caused by rough racing activities.

We have used this experience to design 360 degree filter elements to replace the airbox and supply the maximum air required. These kits are individually developed for a specific model and type. The kits come with all fitting parts requested and full diy fitting instructions.

## **2.5 O.E.**

RamAir has the ability and indeed the right team to liase with O.E. manufacturers and has the technology and capabilities to deal with various quantities required. Two very important customers who choose RamAir year after year are Aston Martin & TVR. Whatever your requirements RamAir will deliver.

## **3. Service life and service intervals**

### **3.1 Cleaning:**

All RamAir filters are impregnated during their manufacture with the unique RamAir Dirt Retention Polymer. As we all know though, no filter will last forever without any cleaning. RamAir recommends cleaning your RamAir filter periodically as and when needed to maintain the best performance. Because the Dirt Retention Polymer is unique to RamAir, only the genuine RamAir cleaner is effective in its removal and therefore the most effective. Full cleaning instructions are listed on the containers.

### **3.2 Impregnation:**

Applying the RamAir Dirt Retention Polymer to your RamAir air filter could not be easier as RamAir have now developed two products to suit your preference. The first being a small spouted plastic bottle (100ml) - similar to a washing up liquid dispenser. This design enables very accurate delivery of the polymer to the air filter by simply squeezing the bottle. Very simple & very inexpensive. The second is our most popular - an aerosol



(100ml). The specially designed nozzle on the RamAir Aerosol cans ensures that the polymer is dispensed in the correct volume and at exact velocity to ensure maximum adhesion to the filter.

RamAir do sell the Dirt Retention Polymer in a larger 500ml bottle which is ideal for many racing teams. Similarly the Polymer Remover Cleaner is available in 1 litre containers. If you take the time to clean & re-apply the RamAir polymer your RamAir filter should last you a very, very long time...

### **3.3 Warranty**

RamAir UK Ltd. guarantee this product to be free from manufacturing or material defects for as long as the original purchaser owns the vehicle it was purchased for. No guarantee may be honoured unless this registration has been returned to Ramair UK Ltd. within 30 days of purchase. An original purchase receipt must accompany all claims. This guarantee does not apply to race applications – Please contact our sales or technical desks for advice.

## **4. RamAir Service**

### **4.1. Racing service**

Motorsport is the most demanding situation for an air filter to be involved in and yet many race teams return to RamAir year after year: Many race teams have been known to run their engines without air filters to gain that extra amount of power required. Yet RamAir has the ability to manufacture air filters to various specifications from a simple free flowing single stage pre-filter to a four stage Rally car air filter. RamAir works in partnership with many race teams to manufacture to their exact requirements, including the following classes; BTCC, DTM, F1 Stocks even Autograss. All of which are very diverse.

### **4.2. Technical Support**

RamAir has an extensive R&D facility which is thriving with many new and exciting projects. During normal office hours we can be contacted for advice / technical help. Whether it be correct installation advice or a new product requirement. RamAirs' R&D team are there to help. That's why many race teams choose RamAir, because they know they will have full technical support throughout the racing season.

For any technical queries e-mail: [tech@ramair-filters.com](mailto:tech@ramair-filters.com)