

K&N FILTERS

# A REVOLUTION IN FILTRATION [TECHNOLOGY]



# **WHY K&N MAKES THE WORLD'S BEST AIR FILTERS**

- High Air Flow with Exceptional Filtration
- Designed to Increase Horsepower and Acceleration
- Washable and Reusable
- Lasts up to 50,000 miles before cleaning is required depending on driving conditions
- Million Mile Limited Warranty
- Economical, a K&N Air Filter Will Last the Life of Your Vehicle
- Works with Original Equipment Manufacturer's Vehicle Electronics
- Environmentally Friendly, K&N Reusable Air Filters Reduce the Volume of Disposable Air Filters that end up in the Nation's Landfills

## **WE TAKE AIR FILTERS SERIOUSLY!**

For over 30 years we've manufactured serious air filters completely unlike traditional disposable filters. Our air filter is designed to achieve high, virtually unrestricted airflow while maintaining filtration levels critical to ensure long engine life. The secret to our success lies in the unique characteristics of our filter medium that was originally developed by K&N all those years ago in the dust, sweat and tears of desert motocross racing. We just wanted to win races and stumbled on a cotton filtration technology destined to be great (by the way there is no truth to the story that the first K&N was made from the blood soaked bandages of a racer left for dead somewhere outside of Las Vegas). K&N air filters consist of four to six sheets of cotton gauze layered between two sheets of aluminum wire mesh. This media is then pleated and oiled to enhance its filtering capabilities and overall performance. The result is an air filter designed to increase horsepower and acceleration.

## **THE LAST AIR FILTER YOUR ENGINE WILL EVER NEED!**

We warrant our replacement filters for 1 million miles. Why would we do such a thing? Because they are engineered to last the life of your engine. We only use quality materials and never compromise. Every 50,000 miles, we recommend you clean and re-oil our filter, then put it back in your engine and it will perform virtually like new.

### **OUR CORE PURPOSE**

To provide a high performance experience for our customers and ourselves.

### **OUR MISSION**

To offer products that provide an unsurpassed positive experience from the point of first impression throughout the customer life.

### **OUR COMMITMENT**

We are committed to working together as a team toward achieving a unified vision through:  
Quality Products that Perform as Promised • People Helping People Enjoy Their Lives More • Honesty, Integrity and Respect for People • Innovation, Creativity and Personal Development • Living with Passion, Commitment and Enthusiasm • Innovative Products Only

*I'd like to thank you for a really great product. I installed your FIPK on my 1999 Chevy S10 extended cab 4x4, and simply put, the results were amazing. I already had a K&N filter installed (with the front of the air box cut out for more air flow) and it ran very well. After installing the FIPK it's a completely different truck. It does absolutely everything you guys said it would. Thanks for a superior product.*

**KJ Guzzi**  
Glenn Dale, Maryland

*I just picked up an air filter for my Ford Ranger, and I have to say that it has made a huge difference in the way the truck accelerates...especially at highway speeds. I had one on my V8 Jeep, but I never realized how much the performance would show up on my fuel injected V6 found in my Ford. ...Great products guys!*

**Joel Maala**  
Mississauga, Ontario Canada

*I have to say that the FIPK ROCKS! It's so hard to find anything for the newer Explorers especially the V6, I was starting to lose interest in my SUV. I found a custom exhaust place here in Tucson that did a GREAT job installing an exhaust system, that working with your product made miles of difference in the performance of my truck. Installation was easy, so easy that I did it in the midst of Tucson's worst thunderstorm this year, nothing but a simple overhang to keep some of the rain off. I know very little about engines and cars, but with the directions (pictures made the mission) I was able to go from the box to test driving in under 45 minutes. Thanks for the renewed faith in automotive performance products. A Job WELL done!*

**Dave Andren**  
Tucson, Arizona

*I installed a FIPK system on my '98 Dodge Ram 1500 quad cab/ long bed. After re-gearing the beast with 456 gearing, I noticed a big difference in the overall performance of my truck. (Not gonna set any land speed records) After the install of the FIPK was completed it was time to test it out. I lit those big tires up and I laid two even patches of rubber down my street. What a difference. The beast is ready to race. Thank you for an unbelievable high performance product*

**Tom W.**  
San Diego, California

## K&N AIR FILTER FACTS

### Facts You Should Know About Air Filters

We believe the primary function of an air filter is to deliver both high airflow and outstanding dirt protection. We design our air filters to provide minimum restriction allowing high airflow into an engine. In the vast majority of cases increased airflow will increase engine performance measured by horsepower and throttle response (torque). The performance benefits of maximum airflow are clear, compelling and well documented. That is why so many professional racers are willing to run expensive vehicles with no air filter, as opposed to installing a disposable air filter. They are seeking the additional horsepower and throttle response needed to win the race.

We design our air filters to be highly efficient at removing the contaminants that can harm your engine while maximizing the airflow characteristics of the filter in question. The ability of an air filter to protect your engine is generally measured using a testing procedure developed by the Society of Automotive Engineers identified as the SAE J726 procedure. We subject a sample of our filter designs to this test procedure using Coarse Test Dust, which includes particles ranging in size from less than 5.5 microns to 176 microns. As a point of reference, a human hair is approximately 50 microns in diameter. The result of the above test procedure is a specific air filtration efficiency number. This efficiency number represents the percentage of test dust retained by the filter and thereby kept out of an engine. Our goal is to design our air filters to achieve maximum airflow while targeting overall filtration efficiency at 98%.

Because no two air filters are alike, the specific airflow and overall filtration efficiency will vary depending on the filter in question. However, you can rest assured that each air filter we sell, has been designed to achieve high air flow while protecting your engine.

Both air flow and dirt protection are critical to engine performance. For this reason a consumer should always evaluate an air filter based on both its filtration efficiency and air flow capabilities. It is very easy to design an air filter that exhibits high airflow simply by reducing its filtration to unacceptable levels. As the "look" of a K&N air filter has become popular, many companies have begun offering products that copy that "look." While imitation is said to be the sincerest form of flattery, our own testing has shown that many of these look-alike products result in significantly lower levels of filtration efficiency.

### What's the Big Deal About Air Flow?

Simply put, Everything! At its most basic level, an engine is an air pump. More air entering the engine increases the efficiency of the

combustion process creating more horsepower and torque. Horsepower is a measure of the engine's maximum power while torque measures how quickly you can accelerate.

The K&N Filtercharger® is designed to increase engine performance in both horsepower and throttle response by reducing air flow restriction.

Maintaining optimal, unrestricted air flow becomes a problem when it must pass through a filtering medium. The level of air resistance varies depending on the size, surface area and physical attributes of the filtering medium. Our cotton air filter design flows substantially more air throughout the filter's life while maintaining filtration levels critical to ensure long engine life.

### A Word About Filtration Requirements

There are few areas more confusing than identifying dirt retention requirements when it comes to air filters. Most vehicle owner's manuals remain silent on the point. In fact, few air filter manufacturers publish any information as to the filtration efficiency of their filters. This stands in marked contrast to oil and fuel filters where there is a relatively large amount of information regarding filtration requirements and capabilities. Studies have shown most engine wear is caused by particles 10 to 20 microns in size. K&N air filters, like most quality disposable air filters, provide excellent filtration of these particles.

To ensure our air filters provide a high level of dirt protection, we regularly test our air filter designs using the testing procedure described above. Those tests demonstrate K&N air filters generally achieve overall filtration efficiency in the range of 97% - 98%, while some of our air filter designs have achieved levels as high as 99%. The fact that our air filters at times reach overall filtration efficiencies as high as 99% while maintaining high airflow is a testament to the quality and capabilities of our oil impregnated cotton air filter medium.

On occasion we see "new" air filters developed and sold under the premise they provide increased levels of dirt filtration. More often than not, as opposed to quoting specific efficiency numbers, this "increased protection" is described as increased dirt retention capacity, meaning the filter can hold more dirt before requiring replacement. Remember, K&N air filters are designed to provide a service life in excess of disposable filters and then only require cleaning and oiling for re-use.

We encourage customers to do their homework and be aware of the filtration capabilities of an air filter before they buy. Our own testing has revealed wide differences in filtering capabilities.

We were surprised to see some disposable paper air filters with an overall filtration efficiency as low as 93%. We hope we have provided enough information to ensure consumers know what they are getting when they buy a K&N air filter.

### Filtration 101 - A Deeper Cut




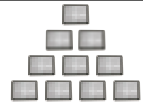
Most people believe that all air filters function on a go/no go basis where dirt particles that are larger than the openings in the filter media are trapped while particles that are smaller than the openings can pass right through. A dry paper air filter does function in this manner. That's why paper filters are so restrictive to air flow. The openings in this type of filter have to be very small to filter efficiently.

The oiled cotton media used in the K&N air filter functions in an entirely different manner. There are scientific principles that determine how an air filter removes dirt particles from the air stream. The first of these principles is known as interception, which applies to dirt particles traveling with the air stream. Air flow will always take the shortest path and as the air is forced to flow around the filter's fibers some of the particles will contact the sides of the fibers and be captured. These particles are then held in place by the oil or tacking agent in the fiber.

Another principle is known as impaction, which mostly affects larger or heavier dirt particles. Impaction occurs when the inertia or momentum of the particle causes it to deviate from the flow path. In other words the heavy particles do not follow the air stream around the filter's fibers but instead they run straight into the fibers and are captured.

The most important principle for our use is diffusion, which deals with the laws of physics that govern the motion of very small dirt particles. Small particles are highly affected by the forces in the air stream. Forces such as velocity changes, pressure changes, turbulence caused by other particles and interaction with the air molecules cause these very small particles to become random and chaotic. As a result, these particles do not follow the air stream and their erratic motion causes them to collide with the filter's fibers. This phenomenon enables an air filter to capture dirt particles that are much smaller than the openings in the media. In addition, the way that dirt collects or loads on the K&N filter is very different. A paper filter exhibits "surface loading" which means dust collects only on the surface of the media. In contrast, K&N filters exhibit "depth loading". The multiple layers of cotton fibers provide many levels of dust retention. This characteristic allows the K&N filter to hold significantly more dirt per square inch of media than the average paper filter.

**K&N vs. Disposable Filter Life**

	+		=	1,000,000 Miles	=	Buy 1 for the life of your vehicle
	+		=	150,000 Miles	=	BUY, REPLACE, BUY, REPLACE

**STOP THROWING AWAY YOUR AIR FILTER!**

One K&N air filter will last the life of your vehicle. Assuming you drove your vehicle for 150,000 miles and bought and installed a disposable air filter every 15,000 miles, you would have thrown away 10 disposable air filters.

Utilizing these scientific principles, K&N has been able to design an air filter that is very free flowing while also being highly efficient at removing dirt from the air.

### Independent Laboratory Test Results

In order to verify our filters maintain filtration levels necessary to protect your engine, we test a sample of our air filter designs through independent laboratories. The testing procedure used is the SAE J726 air filter test procedure established by the Society of Automotive Engineers (These are the folks who are supposed to know everything).

### Paper vs K&N

The K&N air filter is somewhat more complex than traditional disposable paper air filters. The unique design features multiple layers of oiled cotton fabric which captures the airborne dirt particles. These dirt particles cling to the fibers of the filter and actually become part of the filtering media. This process, known as depth loading, allows the K&N air filter medium to retain significantly more dirt per square inch than a paper filter. The cotton fabric is sandwiched between pleated aluminum screen. Pleating increases surface area which in turn prolongs service intervals. Pleating exposes substantially more surface area compared to a flat element like foam.

The dirt particles collected on the surface of a K&N element have little effect on air flow during much of its service life because there are no small holes to clog. Particles are stopped by layers of crisscrossed cotton fibers and held in suspension by the oil. As the filter begins to collect debris, an additional form of filter action begins to take place because air must first pass through the dirt particles trapped on the surface. That means a K&N air filter continues to exhibit high air flow throughout the life of the filter while it is accumulating dirt. Test performed by an independent laboratory commonly known as the Frazier Permeability tests have shown that the Medium used in K&N air filters flows more than 300%

more air than paper air filter medium when compared on a square inch per square inch basis. A square inch comparison is not directly proportional to the increase you can expect from installing a K&N air filter in replacement of a paper air filter due to the effect of such things as filter size, number and depth of pleats. However, you can be assured a K&N air filter will provide dramatically more air flow (up to 50%) which can enhance engine performance.

### Washable and Reusable

All of our air filters are washable and reusable. They can be easily cleaned and oiled using our K&N Recharger kits and returned to your vehicle up to 25 times. We recommend you check your air filter every 30,000 miles, however, under most street conditions the filter will not require cleaning until 50,000 miles of continuous use. And yes, we've heard the stories of customers who ran their K&N filter for 100,000 miles without a cleaning, but we believe cleaning after 50,000 miles to be the most beneficial service life without sacrificing air flow.

### Stock Replacement Filters

We manufacture stock replacement air filters to fit most vehicles on the road today. These filters are designed to replace the factory air filter that came with your car. They fit into the factory air box and are engineered to seal tightly with no air leakage. These filters are made with the same filter medium used in our racing filters and put a little bit of performance into your every day driving experience. Our stock replacement filters are backed by our Million Mile Limited Warranty and are emissions legal in all 50 states.

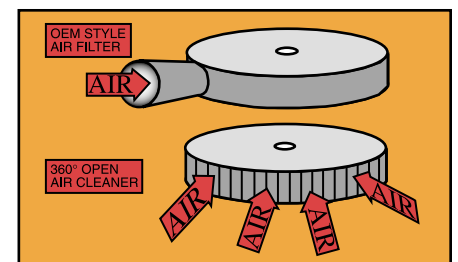
Our stock replacement air filters are washable, reusable and can handle all driving conditions. Water will not damage their performance and with proper cleaning, they will last the life of your engine. And of course, they offer high air flow and that means

performance! Our replacement air filters are designed to provide up to a 4% increase in horsepower and torque. The amount of performance gain varies from vehicle to vehicle based on the overall factory air intake design. The greater the restriction created by the stock paper element, the greater the potential performance gain when you switch to a K&N.

### Beyond the Stock Air Filter and Air Box

Addressing the next area of restriction, K&N engineers looked at the vehicle's air box (the container that houses the air filter) and any hoses or duct work connecting it to the engine. Because the air must first travel through this system before it reaches the carburetor or throttle body, the overall size and shape of the system has a profound effect on air flow. Air, like water, does not like to turn corners nor does it react favorably when confronted by an obstruction such as a sharp bend in a hose or a baffle. In many cases, the air box and/or the hoses and duct work used to create the air filtration system is just as restrictive as the original paper filter element. In some extreme cases, the air box and/or the air delivery system is the greatest source of restriction. The inlet to the air box is a good example. In many instances this opening is one half the cross sectional area of the throttle body or carburetor opening. It would be like trying to run a marathon while breathing through a soda straw.

An original-equipment cylindrical air cleaner box covering a throttle body or carburetor is another example. Most often, these round air cleaner housings are sealed to the outside air.



The engine must then breathe through a snorkel attached to the perimeter of the housing. At times the snorkel is fed through a network of hoses and scoops.

To directly address the problem, we introduced a line of air intake kits, the most popular of which is our Fuel Injection Performance Kits (better known by the acronym, FIPK). These kits replace both the air box and the restriction. Our FIPKs vary in design because they are application specific meaning each kit is engineered to fit a particular make, model and year of vehicle. FIPKs utilize a 360-degree filter design which provides increased surface area to promote air flow.

# K&N Filter Facts

## Off-Road and Racing

An air filter element becomes an insurance policy when used in off-road applications. Competitors will sacrifice a high-tech engine for a chance to win a race — but to win, they must finish. If the engine ingests too much dirt and debris, it may die an ugly death before the vehicle can cross the finish line.

You might think this would be the perfect application for an inexpensive, throw-away paper filter. But remember, in competition a little extra horsepower can mean the difference between coming in first or finishing second. The air filter now becomes an important part of the performance package.

K&N air filters are designed to provide minimum restriction long after disposable air filters have begun choking an engine. We have even run tests on a rear-wheel dynamometer that show the use of a K&N Air Filter can result in more horsepower and torque than operating the vehicle with no air filter. That's why most off-road competitors choose K&N filters.

In a hypothetical 24-hour off-road race to further the point, a properly sized K&N filter will see the racer through to the end with cfm to spare. The equivalent disposable air filter, on the other hand, will probably need to be replaced with a fresh element to ensure the engine has an adequate supply of air to complete the course. A K&N air filter will provide excellent filtration without sacrificing air flow for a longer period of time — that's performance with value.

## Racing

One might consider a paved road course or oval track as a clean air zone. After all, how much dirt and debris could be hovering above an asphalt track?

Subscribing to that theory, a road racer may elect to forgo an air filter in favor of large volumes of unrestricted air. However, testing the theory using an air filter enclosed in a

vented housing should dispel the myth. The filter and housing will trap particles of loose trash kicked up by other race cars during the heat of battle. Dirt, small stones and pieces of shredded rubber expelled from soft compound racing tires can be found inside the housing after even a short race. Once a driver, car owner or engine builder realizes just how much trash is thrown around during a normal race, few would expose their expensive engines to unfiltered air in future events.

Whenever possible, performance enthusiasts should install a K&N 360 degree open-element filter. A correctly sized conical or round filter will deliver virtually unrestricted air flow. And, as we have learned, providing the engine with all of the air it needs promotes optimum performance. In a high speed application, a K&N filter will straighten the air which counteracts turbulence.

Straight cut velocity stacks, for example, pose a unique problem. Exposed to the outside air, velocity stacks experience a phenomena that actually hinders performance at high speed. We are referring to stacks and air horns that protrude through the hood and extend into the air stream so the direction of the air rushing over the car is at a perpendicular angle to the length of the tube.

Air moving rapidly over these stacks create turbulence inside the opening. At high speed, the rushing air tends to create a partial vacuum inside the tube. The condition is counterproductive to air flow. The phenomena also effects open carburetors. The higher the ground speed, the greater the problem. Vacuum created by the engine is trying to coax air into the cylinders and the high speed air flowing over the open end of the stack is causing resistance.

Reversion creates other problems. In an automotive application, reversion refers to reversed air flow, or in simpler terms, it's when air in the intake runner reverses direction for a split second. The condition is caused when a burst of pressure escapes into the intake runner from the cylinder during valve overlap.

Reversion creates resonance shock waves inside the tubes which exit the open end of the tube at various rates depending on engine speed. It has also been proven that these shock waves interfere with each other when the stacks are in close proximity.

Installing a free-flowing air filter on top of each stack or over the carburetor air horn eliminates these conditions. How? The solution is simply explained. The filter creates a plenum over the opening. Air entering the filter is slowed, smoothed and straightened. The filter then becomes an endless source of calm, clean air. Shock waves dissipate within the confines of the plenum without interfering with the shock waves emitted from an adjacent stack.

## A Better Choice For The Environment

K&N cotton air filters have always been washable and reusable, designed for the life of an engine. If you assume an engine life of 150,000 miles in which a disposable air filter must be replaced every 15,000 miles, only one K&N air filter would be used during the same period in which 10 disposable air filters were discarded. Considering there are millions of vehicles throughout the world, the volume of disposable air filters that could be eliminated from our landfills is a staggering number.

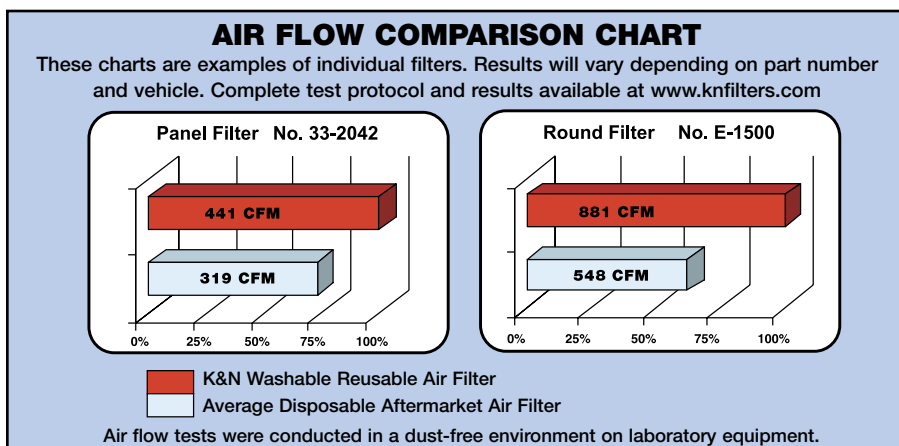
## Filter Selection

If maximum horsepower is the objective, the size and shape of the air filter element is paramount.

Let's first consider shape. When fitting a conventional round filter on top of the engine, such as a carburetor, central fuel injection or throttle body fuel injection, we have found a large diameter, short filter will flow more air than a small diameter, tall filter. For example, a 10-inch diameter filter 2-inches tall will flow more air than a 5-inch diameter filter that is 4-inches tall. Where space permits, the height of the filter should be between 1/5 and 1/4 of its diameter.

The shape of the filter is less important if the application calls for a remote mounted filter, which includes many late model fuel injected models. Typically these vehicles will use a flat panel filter or a conical or cylindrical shaped filter with a rubber mounting flange designed to be mounted on the end of the inlet hose.

**That brings us to size:** Use the formula below to compute the minimum size filter required for your particular application. The usable portion of the filter is called the EFFECTIVE FILTERING AREA which is determined by multiplying the diameter of the filter times Pi (3.1416) times the height of the air filter in inches, then subtracting .75-inch. We subtract



.75-inch to compensate for the rubber seals on each end of the element and the filter material near them since very little air flows through this area.

$$A = \frac{CID \times RPM}{20,839}$$

**A = effective filtering area**

**CID = cubic inch displacement**

**RPM = revolutions per minute at maximum power**

**Example: A 350 CID Chevy engine with a horsepower peak at 5,500 rpm.**

$$A = \frac{350 \times 5500}{20,839} = 92.4 \text{ square inches}$$

If you are sizing a panel filter, multiply the width of the filter area (not the rubber seal) times its length. If you are sizing a round filter, use the following formula to determine the height of the filter.

$$H = \frac{A}{D \times 3.14} + .75$$

**A = effective filtering area**

**H = height**

**D = outside diameter of the filter**

**3.14 = pi**

**.75 = the rubber end caps**

**Example:**

$$H = \frac{92.4}{12 \times 3.14} + .75 = 3.20 \text{ inches}$$

Referencing the K&N catalog shows the proper filter for this application would be an E-1500 which is 3.5 inches tall. Keep in mind, this is the minimum size requirement. To extend the service interval and to provide an even greater volume of air to the engine, install the largest filter that will fit in the space allotted. If the space above the engine is restrictive, perhaps a remote filter arrangement could be used to gain space.

Off-road conditions require added filter area. A filter should be sized 1-1/2 to 2 times larger than normal for any conditions that could be considered severe. In this case, the E-1500 used in our example should be replaced by an E-1120 or an E-1150. For long distance off-road events, two double-size remote mounted filters would be best.

### Some Important Tips About K&N Filterchargers® • Service Interval

A K&N Filtercharger® is a high-performance air filter, both in terms of air flow and filtration. However, the service interval can vary widely depending on the severity of the driving conditions. The service interval can be from 100 miles in a desert-racing environment

to 50,000 miles for normal street use. The proper way to determine when an air filter needs service is with an air restriction gauge. Such a device is commonly used on heavy duty trucks and construction equipment. A restriction gauge, measures the pressure differential inside and outside the filter and gives the information in different forms of measurement. As the filter collects more and more dirt, the restriction value increases. At a predetermined point or rate of restriction, the filter is serviced. The maximum allowable restriction for a K&N Filtercharger is 15" of vacuum (water). If the restriction is allowed to go higher, the filter media might become so restricted that the element could distort allowing dirty air to bypass the filter and enter the engine. Conversely, cleaning a filter too often will shorten its serviceable life expectancy. Installing a restriction gauge will optimize service intervals and take the guess work out of your maintenance schedule.

### Service Life

A K&N Filtercharger® can be washed up to 25 times before it is considered no longer serviceable. Even though the filter may not show outward signs of deterioration, it should be replaced after 25 washings. Excessive washings will deplete the tiny cotton hairs that crisscross the openings. The resulting damage will allow tiny dust particles to pass through.

### Limited Warranty

All K&N stock replacement air filters are backed by our famous million mile limited warranty. See our website for stock replacement and off-road warranty details.

### Over-Oiling

When servicing a K&N filter, take care not to over-oil the element. Besides impeding air flow, excess oil can migrate into the intake system where it can coat electronic sensors, which may hinder their operation. Never saturate the filter. If oil drips from the filter, wash it and start over. Use only K&N oil. For example, an E-1500 filter has 92.4-inches of surface area requiring 1.707 fluid ounces of oil. Follow oiling instructions included with your filter or refer to the instructions listed in the back of this catalog.

### Fit and Finish

When installing a K&N filter, check all gaskets, clamps and seams for damage and/or deterioration. Check the filter's sealing surface. Do not install a filter if the seal shows signs of damage or deterioration. Check for cracks in the air box, particularly at the seams and around the corners. Such defects could cause

air leakage around the filter. Also, check to ensure the filter is sealing properly in the air box. A plastic air box can warp from age or continuous heat cycling. Apply a thin layer of filter grease on both sides of the seal each time the filter is installed. An impression in the grease will indicate a positive seal. Check any lines or hoses connected to the air box or adjoining hoses leading to the engine. Engine oil in the air box, resulting from excessive blow-by, will cause the filter to shrink and possibly lose its seal. Clean any dust or debris out of the air box with a damp cloth, making sure nothing enters the air inlet while the filter is out. Never start the engine without the filter in place. Use only K&N Air Filter Cleaner to clean your filter. Harsh household cleaners can damage the cotton material and/or the rubber seal. Check the outside of the medium for broken wires, rips or tears. Do not use an element that shows signs of damage or wear. Use K&N Air Filter Sealing Grease on the sealing surface that contacts the air box. Do not use sealing grease on clamp-on type filters. If a filter is especially difficult to install, it will come with an instruction sheet explaining the correct installation procedure. Keep the instruction sheet with the vehicle for reference anytime the filter is removed. It is very important the filter be installed correctly. The filter can be positioned in the base or the lid, whichever is more convenient and makes the installation easier. Do not use excessive force to install a filter.

### Vehicle Warranty

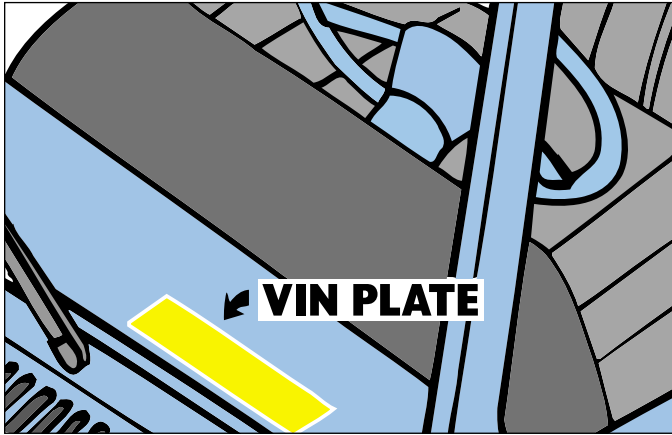
Contrary to what you may have heard or read, in the USA, a K&N Filtercharger® will not void your vehicle warranty. The Magnuson-Moss Warranty Act, prohibits a manufacturer from conditioning its warranty of a consumer product upon the consumer using any article or service (other than one provided without charge under the warranty) which is identified by brand, trade or corporate name, unless expressly authorized by the Federal Trade Commission. If the manufacturer does not provide air filters free of charge, they cannot void the vehicle's warranty simply because you have installed an aftermarket air filter.

### Summary

We offer thousands of part numbers, including stock replacement applications, universal clamp-on filters and air intake systems. Our goal is to provide the highest quality component at a competitive price. A K&N Filtercharger® will be the last filter you will ever buy for your car, truck, motorhome, motorcycle, ATV, boat or jet ski - Guaranteed.

# Replacement Element Facts

## DOMESTIC VEHICLE ENGINE IDENTIFICATION



In some domestic vehicles, there are two or more engines that are of the same cubic displacement, but do not use the same filters. To identify the proper filter for these vehicles, match the engine code from the vehicle identification number (VIN) with the character listed next to the engine size in the application section.

Vehicles manufactured by Chrysler, Ford and GM from 1972-1980 use the fifth VIN character and from 1981-2002 use the eighth.

Vehicles manufactured by AMC/EAGLE (except Jeep) from 1972-1980 use the seventh character, from 1981-1988 use the fourth character and from 1989-98 use the eighth.

Vehicles manufactured by Jeep from 1972-74 (up to SN #100000) use the eighth character, from 1974-80 (from SN #100001) use the seventh character, from 1981-88 use the fourth character and from 1989-02 use the eighth.

### VIN ENGINE CODE LOCATIONS

#### CHRYSLER, FORD and GM

1972-80  
1L11HAC000000  
△ 5th character

1981-03  
1G1AM11A1CH000000  
△ 8th character

#### AMC/EAGLE (except Jeep)

1972-80  
A1M111Z000000  
△ 7th character

1981-88  
1CEUN1111GB000000  
△ 4th character

1989-98  
1E1BB11U1LH000000  
△ 8th character

#### JEEP

1972-74  
(up to SN #100000)  
J1A111CN000000  
△ 8th character

1974-80  
(from SN #100001)  
J1A111N100001  
△ 7th character

1981-88  
1JTHE1111G000000  
△ 4th character

1989-03  
1J1ET11L1LT000000  
△ 8th character



In some cases it may be necessary to reference the VIN plate and the owner's manual for correct VIN character identification or call our toll free customer service number

Century					
AIR FILTER					
1978	V8	305	2 BBL.	2 bbl.	<b>E-1450</b>
77-78	V8	350	4 BBL.	(R)	<b>E-1650</b>

1.800.858.3333

### DISPLACEMENT CONVERSION CHART FOR POPULAR ENGINE SIZES

LITERS	CUBIC INCHES	LITERS	CUBIC INCHES	LITERS	CUBIC INCHES
1.0	61	3.3	200	5.4	330
1.1	67	3.7	225	5.7	345
1.4	86	3.8	229	5.7	350
1.5	92	3.8	231	5.8	351
1.6	96	3.8	232	5.9	360
1.6	97	3.9	238	6.0	366
1.6	97.6	4.0	243	6.0	368
1.6	98	4.1	250	6.1	370
1.7	105	4.1	252	6.2	381
1.8	110	4.2	255	6.4	390
1.9	118	4.2	258	6.6	400
2.0	121	4.3	260	6.6	403
2.0	122	4.3	262	6.9	420
2.1	128	4.3	265	7.0	425
2.2	135	4.4	267	7.0	427
2.3	140	4.5	275	7.0	429
2.4	146	4.6	286	7.2	440
2.5	150	4.7	289	7.3	445
2.5	151	4.8	292	7.4	454
2.6	156	4.9	300	7.5	455
2.6	159	4.9	301	7.7	460
2.8	171	5.0	302	7.8	488
2.8	173	5.0	304	8.2	500
2.9	177	5.0	305	8.8	534
3.0	184	5.0	307		
3.2	198	5.2	318		
3.3	199	5.4	327		

1000cc = 1 LITER  
61.02 CI = 1 LITER