

Air Filters

Intro

AIR FILTERS ARE ONE OF THE MOST COMMON MODS DONE. THEY'RE CHEAP, PROVIDE INDUCTION NOISE AND, AS MANY WRONGLY BELIEVE, OFFER AN IMMEDIATE POWER GAIN. IS THERE A DIFFERENCE BETWEEN A \$20 AIR FILTER AND A \$200 AIR FILTER? DO THEY FLOW THE SAME AND, MORE IMPORTANTLY, DO THEY PROVIDE THE SAME LEVEL OF PROTECTION? WE SELECTED TEN OF THE MOST POPULAR POD FILTERS TO PUT THROUGH OUR PUNISHING TESTS.

Page

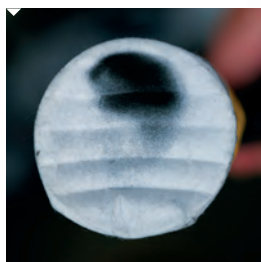
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Text

ASM

Photos

Mark Pakula



AEM Dryflow

The AEM Dryflow filter - which never requires oiling - is certainly impressive in terms of its quality, and it backed up our impressions with an excellent performance in the filtration test. The airflow test did see it ranked a little poorly, but at least it would redeem itself by doing a great job of protecting your engine.

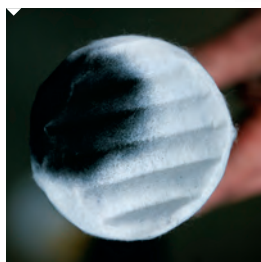
Up Close

PRICE: \$100
MATERIAL: Synthetic
TYPE: Dry
FLOW: 519.2cfm
FILTRATION: Very Good

Score

FLOW:

9TH
FILTRATION:
3RD



A'PEXI Power Intake

A'PEXI were the only Japanese brand of filter in the test to use a pleated gauze type design, but sadly the performance from this filter was slightly disappointing. Both the filtration and airflow rankings were surprising, both just below average. +

Up Close

PRICE: \$125
MATERIAL: Cotton
TYPE: Dry
FLOW: 533.3cfm
FILTRATION: Good

Score

FLOW:

7TH
FILTRATION:
6TH



▼ HKS Direct Drive

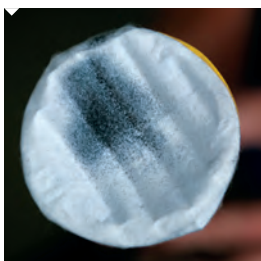
With the biggest reputation of the lot, the HKS Direct Drive filter had a lot of pressure on its shoulders. It was a huge shock when it failed to deliver a stellar performance. Airflow-wise it finished sixth with 539.6cfm. The gapped sponge material also failed the filtration test, delivering a poor result.

▼ Up Close

PRICE: \$125
MATERIAL: Foam
TYPE: Dry
FLOW: 539.6cfm
FILTRATION: Poor

▼ Score

FLOW:
6TH
FILTRATION:
9TH



▼ K&N RR-3301

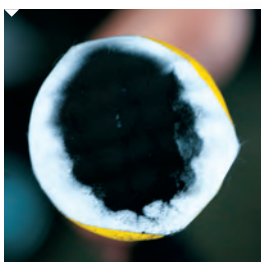
K&N have always maintained a great name when it comes to automotive filters and this test shows just why. The filter might not be the highest flowing but it was still at the top of the field, and it offered the highest level of protection, trapping more particles than any other filter in this test by a considerable margin. In terms of finding the middle ground between flow and protection, the K&N sets an awesome example.

▼ Up Close

PRICE: \$125
MATERIAL: Cotton
TYPE: Oil
FLOW: 579.6cfm
FILTRATION: Excellent

▼ Score

FLOW:
4TH
FILTRATION:
1ST



▼ Redline Airforce 1

The Redline filter flowed extremely well, registering an impressive 596.9cfm on the bench. This equates to the second highest reading, however the Redline filter was let down by a poor showing in the filtration test.

▼ Up Close

PRICE: \$40
MATERIAL: Cotton
TYPE: Oil recommended (not supplied)
FLOW: 596.9cfm
FILTRATION: Poor

▼ Score

FLOW:
2ND
FILTRATION:
10TH



Simota Power Stack WS-002

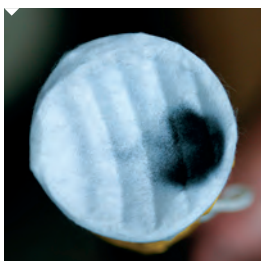
The bargain buy Simota filter on test did perform admirably in this test, netting third on the flow bench and fifth in the particle test. Simota are popular among modifiers for good reason.

Up Close

PRICE: \$29.95
MATERIAL: Cotton
TYPE: Dry
FLOW: 594.2cfm
FILTRATION: Good

Score

FLOW:
3RD
FILTRATION:
5TH



Tenzo WS002-CH

The Tenzo registered 522.8cfm, a figure higher than both the AEM and no name TRUST imitation filters. In the filtration test, it beat six of the ten filters tested, providing more than adequate protection for street environments. It also scores brownie points for being an all-round competent filter that can be had for a super reasonable price.

Up Close

PRICE: \$19.95
MATERIAL: Cotton
TYPE: Dry
FLOW: 522.8cfm
FILTRATION: Good

Score

FLOW:
8TH
FILTRATION:
4TH



3A Racing

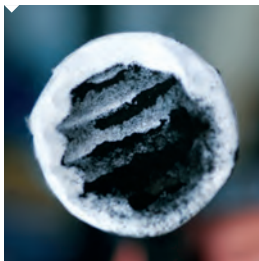
In all honesty, to begin with we thought the 3A Racing filter wouldn't be a top performer. It's certainly nasty looking with its yellow and red combination. Upon testing however, our initial doubts were turned on their head as the unassuming pleated filter punched out huge figures. With the highest airflow of the bunch and the second best filtration this is definitely a clear cut winner. +

Up Close

PRICE: \$28.95
MATERIAL: Cotton
TYPE: Dry
FLOW: 601.2cfm
FILTRATION: Very Good

Score

FLOW:
1ST
FILTRATION:
2ND



Trust Airinx

Trust is another name synonymous with top level performance parts, which did mean we were surprised at its mediocre performance. Just bettering A'PEXI. While its flow capability was dead on average, the filtration capabilities of the yellow foam design was ranked towards the bottom of the pile, leaving it as an unattractive option.

Up Close

PRICE: \$120
MATERIAL: Foam
TYPE: Dry
FLOW: 554.7cfm
FILTRATION: Below average

Score

FLOW:
5TH
FILTRATION:
7TH



No name (TRUST Imitation)

This filter, an obvious imitation of the TRUST filter, lived up to our low expectations and performed just as a cheap knock off filter would be expected. Filtration was poor, and the flow rate was the worst of the test.

Up Close

PRICE: \$15
MATERIAL: Foam
TYPE: Dry
FLOW: 473.3cfm
FILTRATION: Below average

Score

FLOW:
10TH
FILTRATION:
8TH

Assessment

We initially toyed with the idea of doing the air filter test on a dyno by fitting them one after the other to the same car. The results however, would be worthless, as heat soak in the vehicle's engine would tamper with the figures. Dyno testing also wouldn't offer us any insight into filtration, which is the principle role of air filters in the first place.

After a lot of discussion, we came up with a two-pronged testing procedure to uncover how the filters flowed as well as how protective they would be for an engine. The flow test was done on Smith's Engine Research's flow bench, which was one of the few benches in Sydney capable of maxing out an air filter. Each filter was tested straight out of their boxes at ten inches of water, so the conditions were identical for each. After this, the filters were attached to a high-powered suction device, with particles spread over a set surface area. The filters would be exposed to the same amount of particles (measured on a scale) for the same amount of time (30 seconds).

Our results are going to be controversial, and will no doubt be a shock to many, many enthusiasts. It has been a common belief that name brand filters are the best, that sponge filters flow more, and that cotton filters offer the best filtration. As our results show, none of these theories are valid.

It is worth noting that our testing methods were designed to push their filters to their maximum potential. The main goal with our testing was to create a pecking order by gauging how well these filters performed solely against one another. and then

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Quick Contacts

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