



BLOW-BY FILTER

CHOOSING OUR GENUINE PARTS



***GENUINE
PARTS***

How Blow By Filter works

Part of gas produced by combustion during engine operation leaks through piston elastic ring openings, mixing with oil fumes in sump.

These vapors produced by combustion increase both the pressure in the crankcase decreasing the useful power generated by pistons and the production of pollutants due to oil raising in the engine head.

To keep the pressure into acceptable value this mixture is convey into the engine intake. This system is known as Closed Crankcase Ventilation (CCV).

In order to reduce oil consumption and emissions, the oil in this mixture is partially separated with a specific device: Blow-By filter.

The main functions of the crankcase ventilation system:

1

DISCHARGE THE BLOW-BY GAS FROM CRANKCASE AVOIDING EXCESSIVE PRESSURIZATION

2

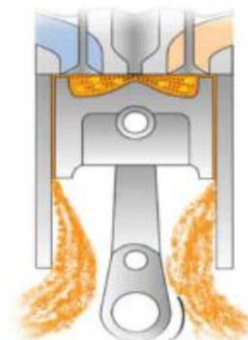
SEPARATE THE BLOW-BY GAS FROM OIL

3

DRAIN THE SEPARATED OIL PROPERLY

4

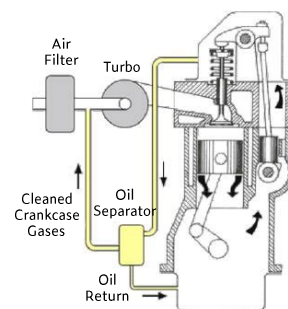
GUARANTEE THE ADEQUATE CRANKCASE PRESSURE



Centrifugal Blow-by



Oleophobic treatment reduce the pressure drop and oil absorption inside the filter.



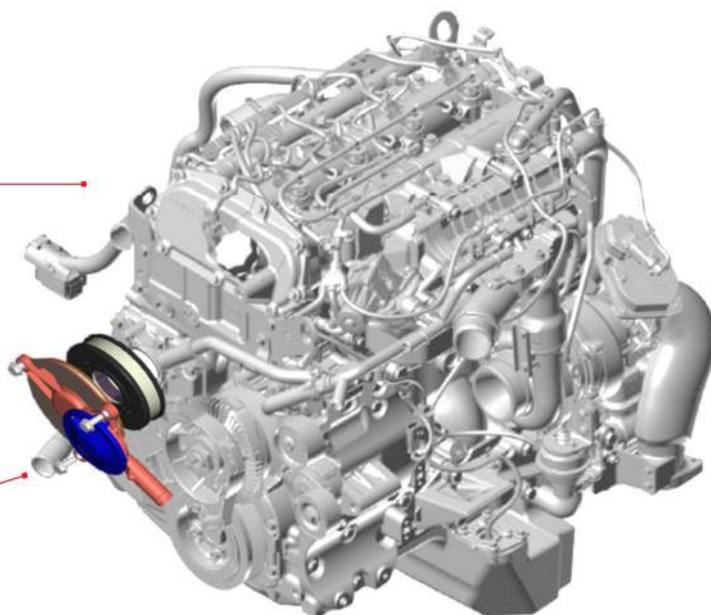
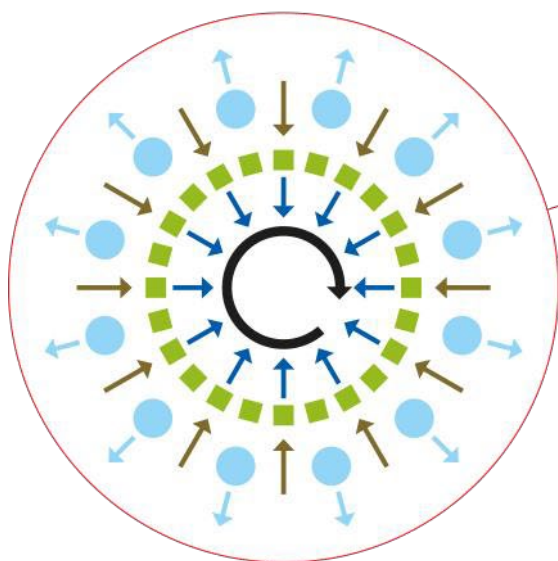
CLOSED CRANKCASE VENTILATION SYSTEM HELPS REDUCING EMISSIONS AND OIL CONSUMPTION

Genuine Blow By performance

A CCV configuration requires high efficiency for oil separators in order to avoid loss of turbo compressor efficiency. Blow-by filters removes airborne oil droplets from the crankcase gases that decrease engine efficiency and less compressor fouling.

F1C

Centrifugal Blow-by mounted on high pressure pump gear.



A surface treatment gives to the media an oleophobic behavior to avoid oil absorption inside the filter.



Features:

1

MAINTENANCE INTERVAL: 100.000/50.000 KM

2

LOW PRESSURE DROP

3

OIL CARRY OVER <0,5 G/H

Our genuine parts

We have tested 2 main competitors alternatives on the market and we have carried out 10 test types to certify that our genuine parts are the best solution for FPT engines.

1. DIMENSION & VISUAL

2. PERFORMANCE MEASUREMENT

3. ELEMENTAL MATERIAL BEHAVIOR/COMPOSITION

Test type	Description	Target	
1	Dimension	Compare dimensions with original part to find possible weight, visual and packaging differences	
2	Weight		
3	Visual		
4	Packaging		
5	Performance	EFF - Filtration Efficiency	Measures the ratio between number of particles, of a certain size, before and after the filter
6	TGA - Thermo Gravimetric Analysis	Reliability	Measures the weight percentage of volatile components, combustible matter and ash with temperature increase up to 1,000 °C
7	SEM - Scanning Electron Microscopy		Generates images of samples at magnifications up to 100,000X
8	EDS - Energy Dispersive Spectroscopy		Identifies the major inorganic elements in a material
9	FTIR - Fourier Transform Infrared		Identifies the primary component of a plastic, rubber or organic material
10	DSC - Differential Scanning Calorimetry		Identifies the glass transition temperature of plastic material








**2 COMPETITORS ANALYZED
WITH 10 DIFFERENT TESTS**

Why choose a Genuine FPT Blow By Filter

Laboratory results highlighted a reduction in the maintenance interval taking as reference the FPT Genuine offer (risk factor $\leq 100\%$).

		RISK FACTOR		
		Comp 1	Comp 2	Comp 3
Dimension Visual	<i>Technical Specs</i>	10%	20%	100%
	<i>Filtering Media Process</i>	20%	10%	
Reliability	<i>Plastic Lids</i>	50%	50%	
	<i>O-Ring</i>	50%	50%	
		33%	33%	
Performance	<i>Efficiency (weighted on n° of pleats)</i>	65%	57%	100%

Potential risks of not using FPT Genuine Parts:

-  PARTS ASSEMBLY/DISASSEMBLY LONGER TIME AFFECTING VEHICLE AVAILABILITY
-  BOTH DIAMETER OUT OF SPEC INCREASING RESIDUAL STRESS OVER FILTER STRUCTURE
-  NO GUARANTEE PRODUCT FOR FPT ENGINE
-  HIGHER OIL CONSUMPTION
-  INCREASED NUMBER OF REPLACEMENT DUE TO EARLIER BLOW BY FILTER CLOGGING
-  ENGINE WEAR AND SEIZURE RISK INCREASE OF TURBOCHARGER
-  REDUCED LIFE ATS COMPONENTS

Analysed Competitor Media

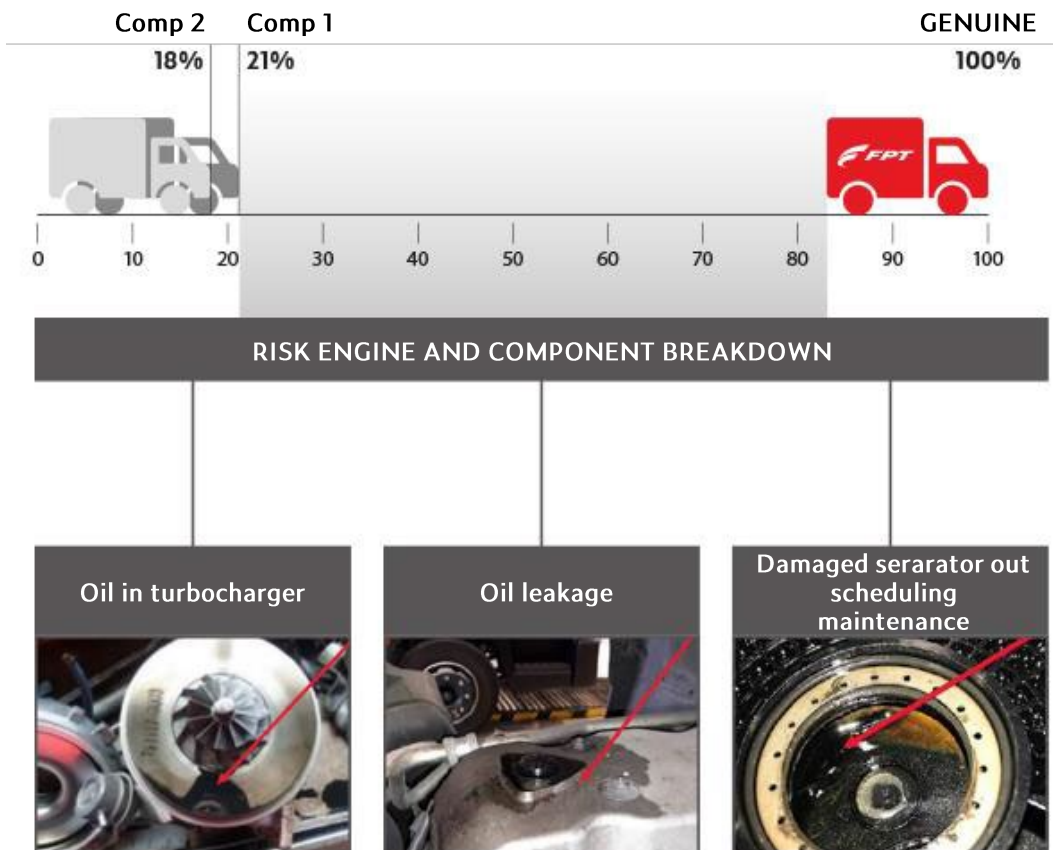


Get the most from your Oil Filter

Since manufacturing and performances of Not Genuine Parts cause low quality filtration, particulates out of the oil then end up in the engine wearing its components.

Moreover they are built with cheaper materials, with the high risk of deterioration and damaging leaks which could result in a breakdown or costly engine damages.

TCO increases due to reduction of maintenance interval, and consequently cost increases due to manpower, oil consumption and filter replacement.



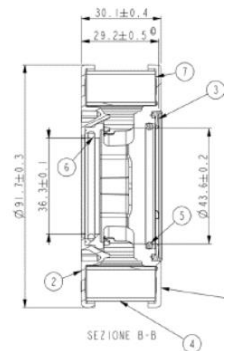
DIMENSIONAL AND VISUAL

Technical Specification:

- Dimension and pleating not compliant with genuine

Marking:

- No reference to original part on piece



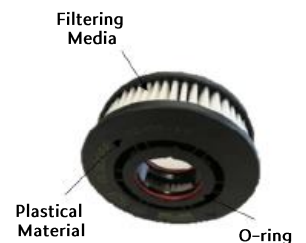
RELIABILITY

Media behaviour:

- Filtering material release

Material Analysis:

- Materials not compliant with genuine



PERFORMANCE

Test bench:

- Filtration performances not compliant with genuine

Genuine Parts Benefits

FPT is the only one who can guarantee the original quality and performance of your engines. By using Genuine parts, made by those who built your engine, you ensure long-lasting performance and over-time value of your investment.

-  ACHIEVING THE MAINTENANCE INTERVAL DECLARED BY FPT
-  PERFECT FIT FOR SYSTEM EFFICIENCY OF THE ENTIRE ENGINE
-  COMPLIES FULLY WITH FPT SPECIFICATIONS
-  ALL GASKETS SUPPLIED HAVE ACCURATE PROFILES TO PROVIDE PERFECT SEAL
-  MAXIMIZING PRODUCTIVITY BY REDUCING TURNAROUND TIME AT DEALER WORKSHOP
-  ANTI-COUNTERFEITING TEXT ON LABEL
-  COMPLETE PRODUCT RANGE COVERING RUNNING PARC
-  12 MONTHS WARRANTY

Wherever you are, you can have access to a vast selection of Genuine Parts for your engine. This means enhanced performance and minimal downtime to maintain high levels of productivity.

TOP QUALITY AND PERFORMANCE ARE REACHED ONLY BY USING FPT GENUINE PARTS.



24/7 CARE & ASSISTANCE

Please, don't hesitate to contact us for any further information

fptindustrial.com