

# On the Safe Side with Bosch Cabin Filters

## Beware of Inferior Filters!

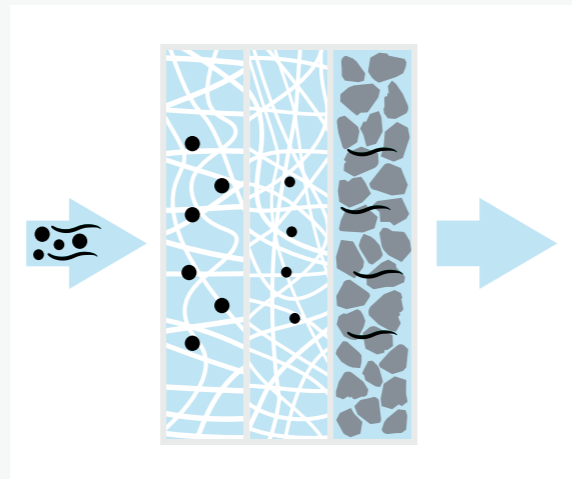


**BOSCH**

Invented for life

### High-Quality Cabin Filter Filter Medium

Pure air through several well-coordinated filter layers



Reliable filtration performance through high-quality fibers

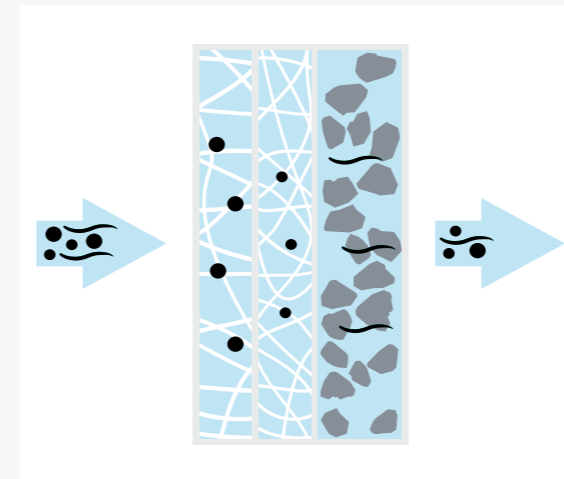


Stability and increased filter surface through special embossing of the filter medium



### Low-Quality Cabin Filter Filter Medium

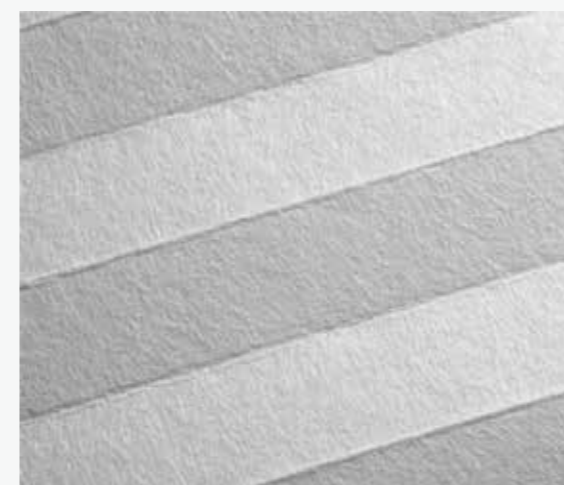
Too thin and badly coordinated filter layers



Low-quality fibers, insufficient number of fibers



Low-quality filter medium without embossing



#### Unpleasant Consequences

► Particles, pollen and fine dust penetrate to the interior of the vehicle

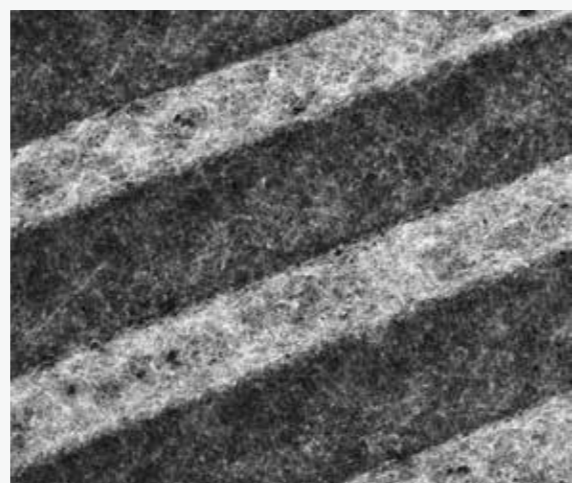
► Low filtration performance

► Reduced service life

### High-Quality Cabin Filter Activated Carbon

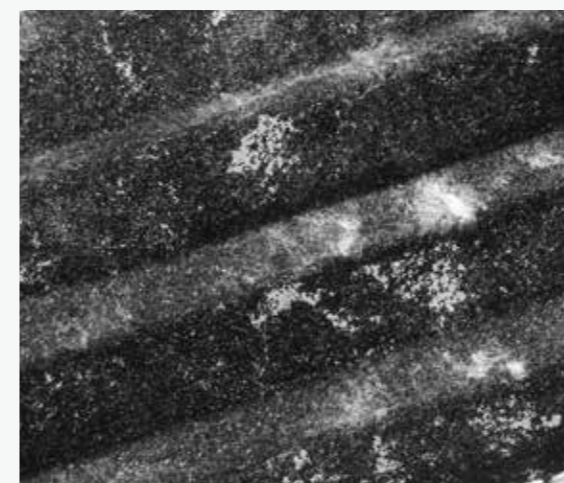
Reliable adsorption of harmful gases and odors through

- High-quality activated carbon
- Sufficient amount of activated carbon
- Firm connection with the carrier fleece



### Low-Quality Cabin Filter Activated Carbon

- Usage of
- Low-quality activated carbon
  - Insufficient amount of activated carbon
  - Irregular distribution



► Harmful gases and odors get through to the interior of the vehicle

### High-Quality Cabin Filter Stability

Robust pleat geometry – even when exposed to humidity



### Low-Quality Cabin Filter Stability

Unstable pleat geometry



► Unreliable filtration performance

### High-Quality Cabin Filter Fit

Shape is exactly geared to the installation space – and is still highly flexible in order to ease the installation under difficult circumstances



### Low-Quality Cabin Filter Fit

Incorrect fit and bad workmanship



► Bypass of unfiltered air and accumulation of dirt on the air conditioning

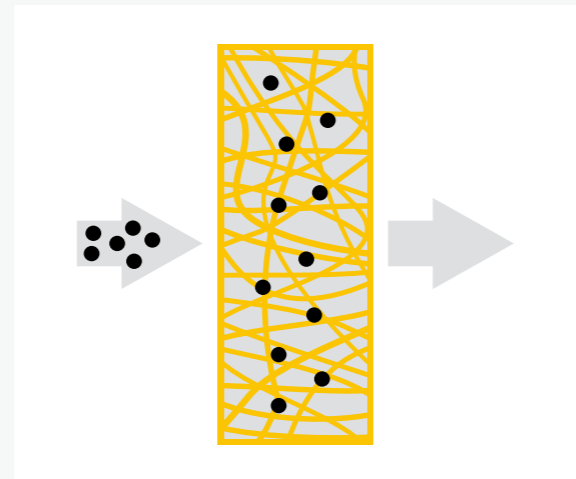
# On the Safe Side with Bosch Oil Filters

## Beware of Inferior Filters!

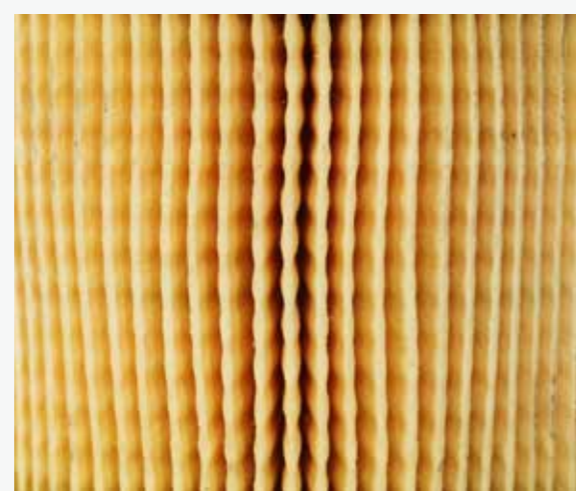


### High-Quality Oil Filter Filter Medium

High particle-separation rate by microporous filter medium



Large dust-holding capacity through high number of pleats

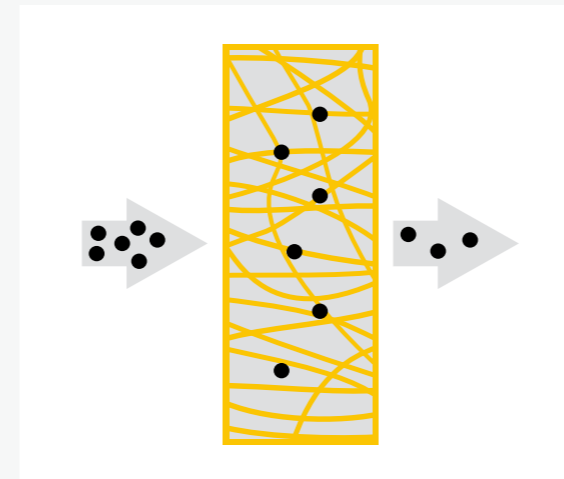


Reliable filtration thanks to meticulous processing and stable pleat geometry



### Low-Quality Oil Filter Filter Medium

Low-quality filter medium



Small number of pleats



Unstable pleat geometry, excess of glue



#### Possible Expensive Consequences

- ▶ Increased wear of the engine
- ▶ Possible increase in fuel consumption
- ▶ Inadequate filtration of the oil
- ▶ Increased wear up to engine damage
- ▶ Reduced service life
- ▶ Reduced engine performance
- ▶ Possible increase in fuel consumption

### High-Quality Oil Filter Leakproofness

Corrosion-resistant housing prevents oil leakage



Robust felt ring prevents oil leakage



High-quality sealing made of a special rubber prevents oil leakage



### Low-Quality Oil Filter Leakproofness

Corrosion caused by spray water



Poorly fitting felt ring



Damaged, porous sealing



#### Possible Expensive Consequences

- ▶ Increased wear up to engine damage
- ▶ Environmental pollution caused by leaking oil
- ▶ Loss of the internal leakproofness, poor filtration of the oil
- ▶ Increased wear up to engine damage
- ▶ Increased wear up to engine damage
- ▶ Environmental pollution caused by leaking oil

### High-Quality Oil Filter Bypass Valve

Accurately set valve-opening pressure ensures reliable lubrication of the engine – even under cold conditions and in case of a clogged filter.



### Low-Quality Oil Filter Bypass Valve

Poor functioning of the bypass valve



- ▶ Increased wear up to engine damage
- ▶ Bursting of the oil filter

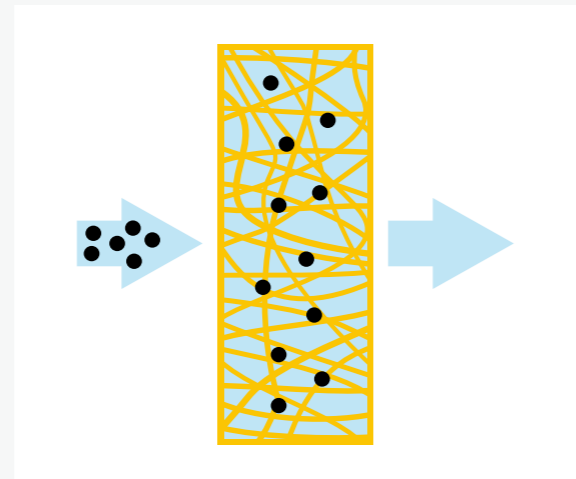
# On the Safe Side with Bosch Air Filters

## Beware of Inferior Filters!

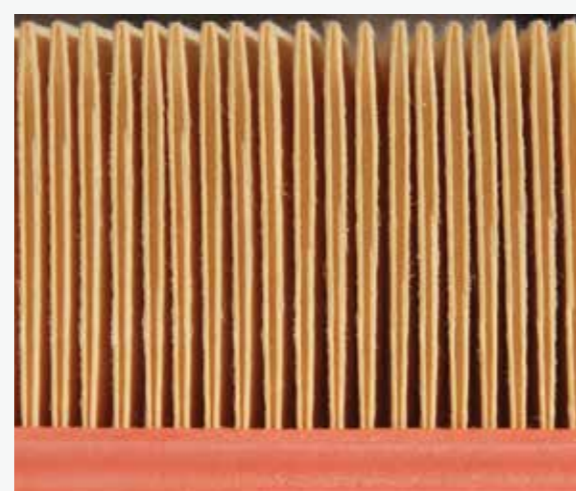


### High-Quality Air Filter Filter Medium

High particle-separation rate by microporous filter medium



Large dust-holding capacity through high number of pleats



Moisture resistance through impregnation with special resin

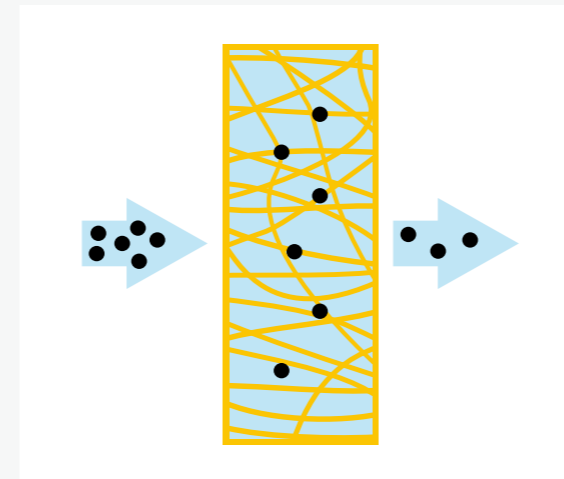


Inflammation protection through special coating (according to the OE equipment)

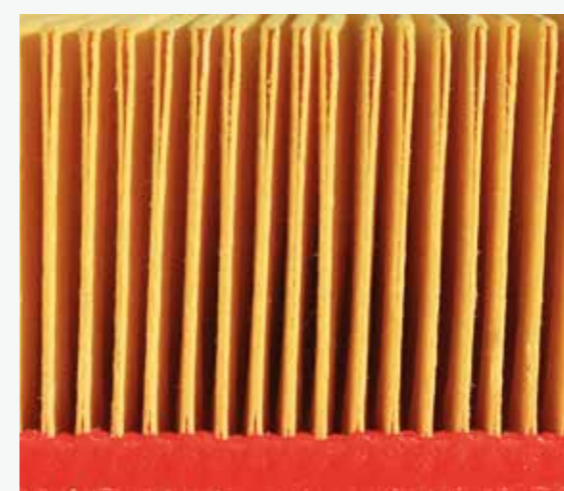


### Low-Quality Air Filter Filter Medium

Low-quality filter medium



Small number of pleats



Conglomeration of pleats due to wetness



Fire hazard caused by aspirated cigarette stubs or backfire



#### Possible Expensive Consequences

- ▶ Increased wear of the engine
- ▶ Accumulation of dirt on the air-mass meter

- ▶ Reduced service life

- ▶ Poor fuel-mixture preparation
- ▶ Reduced engine performance
- ▶ Increased fuel consumption

- ▶ Vehicle fire

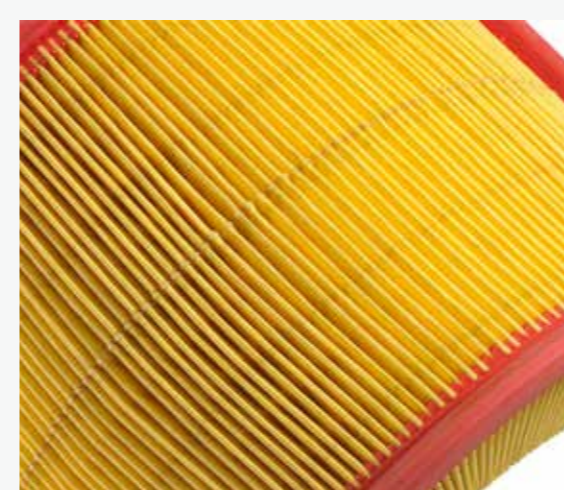
### High-Quality Air Filter Stability

Permanently stable pleat geometry through sufficiently dimensioned glue beads



### Low-Quality Air Filter Stability

Unstable pleat geometry



#### Possible Expensive Consequences

- ▶ Reduced service life
- ▶ Poor fuel-mixture preparation
- ▶ Reduced engine performance
- ▶ Increased fuel consumption

### High-Quality Air Filter Seal

No bypass of unfiltered air due to high-quality polyurethane seal



No loss of filter surface through careful processing of the sealing material



### Low-Quality Air Filter Seal

Poor processing, low-quality sealing material



Excessive use of sealing material



#### Possible Expensive Consequences

- ▶ Increased wear of the engine
- ▶ Accumulation of dirt on the air-mass meter

- ▶ Reduced service life
- ▶ Poor fuel-mixture preparation
- ▶ Reduced engine performance
- ▶ Increased fuel consumption

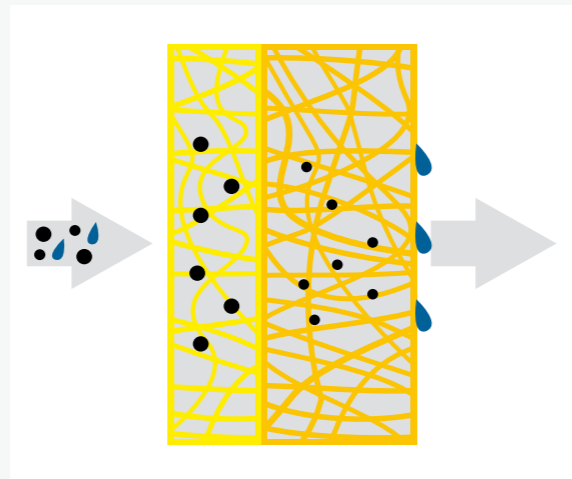
# On the Safe Side with Bosch Fuel Filters

## Beware of Inferior Filters!



### High-Quality Fuel Filter Filter Medium

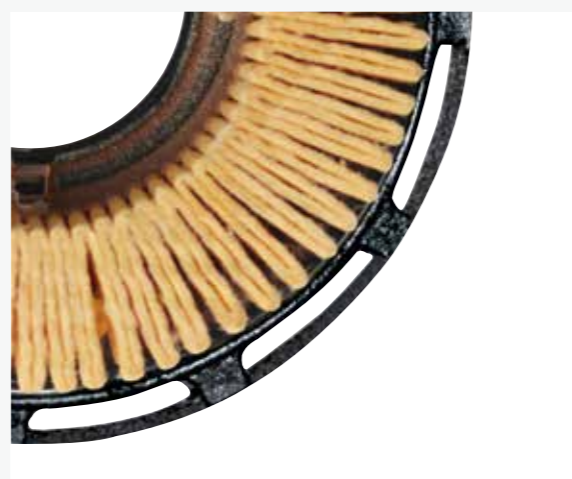
High particle-separation rate thanks to microporous multi-layer filter medium



Large dirt-holding capacity through high number of pleats

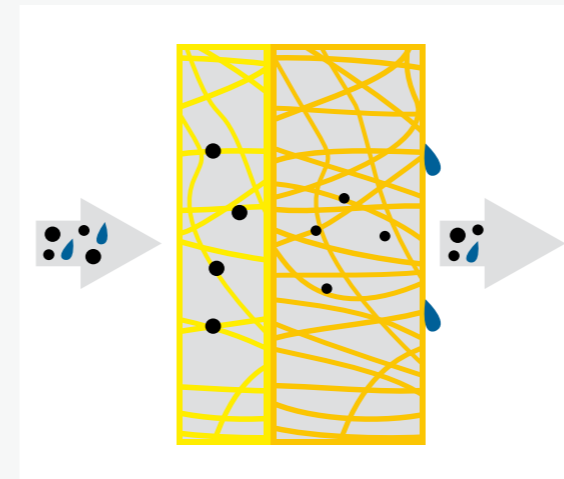


Reliable filtration thanks to stable pleat geometry



### Low-Quality Fuel Filter Filter Medium

Low-quality filter medium



Small number of pleats



Unstable pleat geometry



#### Possible Expensive Consequences

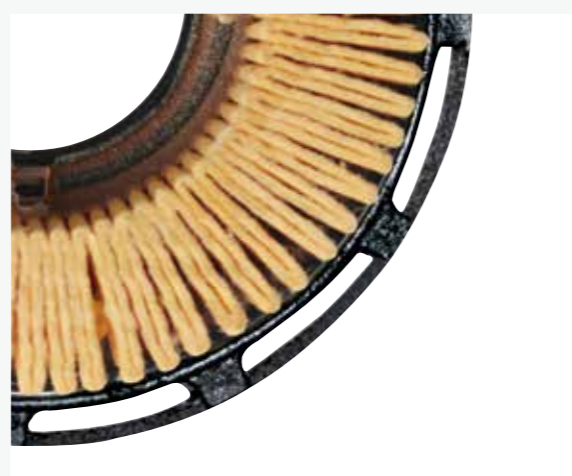
- ▶ Increased wear of the engine
- ▶ Injector clogging
- ▶ Corrosion damage on injection system, engine and pump
- ▶ Increased wear of the engine caused by particles
- ▶ Reduced service life
- ▶ Insufficient fuel filtration
- ▶ Increased wear of the engine

### High-Quality Fuel Filter Tightness

Corrosion-resistant housing prevents fuel leakage



Stable connection of the end pleats



High-quality sealing made out of a special rubber prevents any fuel leakage

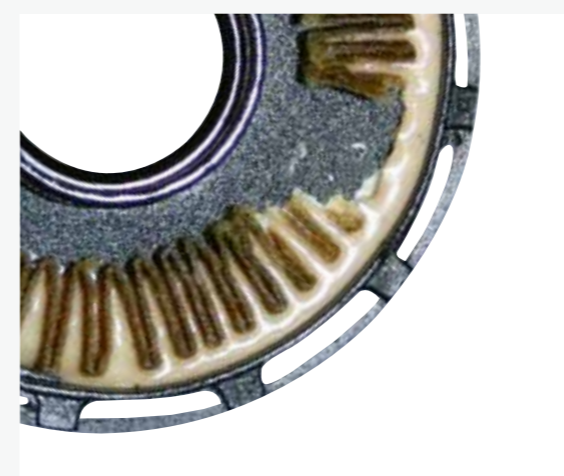


### Low-Quality Fuel Filter Tightness

Corrosion caused by spray water



Bypass of unfiltered fuel caused by the missing connection of the end pleats



Damaged, porous sealing



#### Possible Expensive Consequences

- ▶ Hazards caused by leaking fuel
- ▶ Environmental pollution caused by leaking fuel
- ▶ Increased wear of the engine
- ▶ Hazards caused by leaking fuel
- ▶ Environmental pollution caused by leaking fuel

### High-Quality Fuel Filter Cleanliness

Protection cap on the clean side (outlet) of the filter to prevent any soiling during transport and storage



### Low-Quality Fuel Filter Cleanliness

Missing protection cap facilitates filter soiling



- ▶ Increased wear of the engine caused by dirt particles
- ▶ Reduced service life of the filter