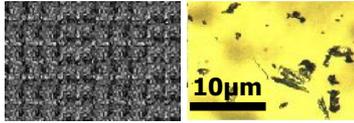


Oil Filter-Basics

Filters - **Device for separating solid particles from a fluid**

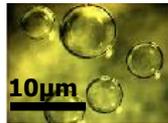
Real World Contamination (See below photomicrograph)

Wear Causing Agent



Soot Wear Metal

Filter Plugging Agent



Water

- Fuel
- Solvents
- Sludge...etc

What causes damages to engine?



- Most damage is caused by particles in the 5 to 15 micron* range
- Removal of these particles greatly reduces engine wear

*Micron: 0.000001 meter

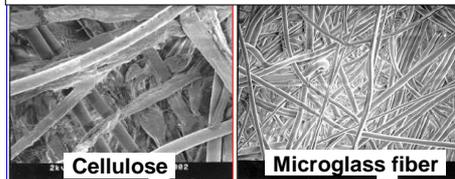
Genuine vs. Imitation



Model	PC200-7 and after
Engine Size	Φ107
Filter Type	Full Flow
Filter Media	Blending of Polyester & Adhesive Polymers

• **Full-Flow Filter**
Its function is to get rid of wear metal and soot that are contained in the oil.
Same function as conventional filter except for its media (Cellulose→Polyester & Polymers)

Full Flow Filter Media



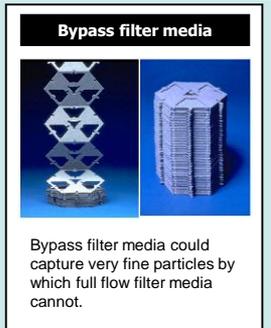
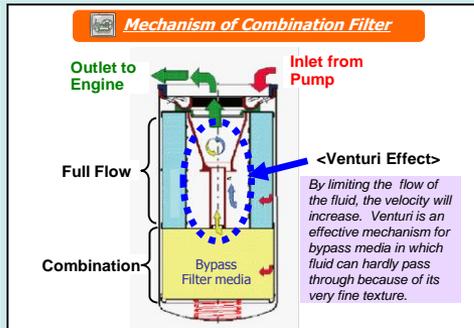
Media makes the differences!!

Efficiency*	Cellulose	Polyester & Polymers
30µm	98.7%	98.7%
10µm	30.0%	60.0%

*Microglass is more efficient to capture smaller particles than cellulose

Mechanism & Tips

- Increasing soot level in the engine is one of the concern for our current engine which highly developed system meets the requirement of today's emission regulation.
- Komatsu adapted combination filter to all engine for all size above φ114 since Tier 2.



- High filtration performance. Komatsu Genuine Oil Filter
- High dispersibility DH series Komatsu Genuine Oil
- Improvement of combustion chamber & Optimized oil pan

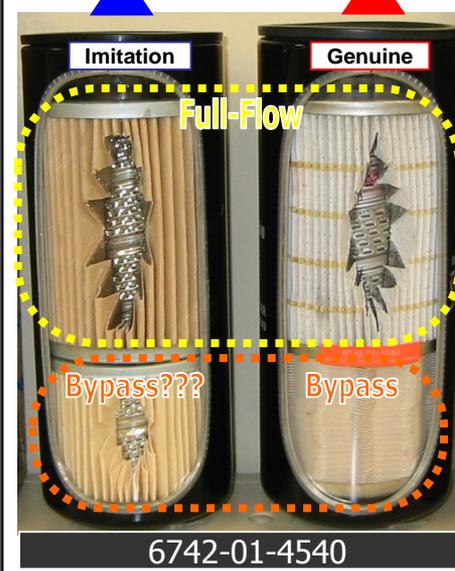
Oil change Interval

500H

Interval for conventional machines **250H**

Oil change interval has been extended from conventional every 250 hours to every 500 hours, thanks to the adoption of high quality Komatsu genuine oil and oil filter, and improvement in engine.

⚠ The oil change interval is not necessarily applied to all machine models uniformly. Carry out oil change according to the Operation and Maintenance Manual.



Model	PC400-7
Engine Size	Φ114
Filter Type	Combination
Filter Media	1) Blending of Polyester & Adhesive Polymers 2) Bypass filter

• **Combination Filter**
Integrated filter of full-flow filter and bypass filter.
Bypass filter portion through which 3 to 5% of the oil passes has filter papers with finer mesh than that of full-flow to increase filtration performance filtering carbon particles (Soot) mainly.