Tire Factory, Banbury Mixer, Gearbox, Gear Oil
CJC® Oil Filtration

CUSTOMER SAVINGS & BENEFITS
By installing a CJC® Oil Filter, the following benefits were obtained:

- 3 x longer oil life
- 2 x longer equipment life
- Significant maintenance cost reduction
- 60,000 USD savings in extended oil life/machine
- Approx. 1,500 kg CO_2 annually pr. machine.

CUSTOMER
A major US based tire factory.

SYSTEM
System: Banbury Mixer Gearbox
Oil type: Mobilgear SHC 636, ISO 680
Oil volume: 3,000 L / 660 Gallon

PROBLEMS
The Banbury mixer operates in rough environment, which lead to high particles counts of carbon black. The customer experienced frequent spare part changes and a significant reduced lifetime on the gearbox. The customer changed the oil every two years on a time-based basis. The mixer had an oil volume equal to $20,000.

SOLUTIONS
The solution to the problem was to install a **CJC® Oil Filter HDU 27/54,** using **CJC® Filter Inserts GFi 27/27**, with a dirt holding capacity at minimum 3.5 kg solids, 2 L of water and 4 kg varnish.

RESULTS
After installing the CJC® Fine Filter, the contamination level was reduced from ISO 22/21/17 to ISO 17/16/13, resulting in a significant reduction of maintenance costs. The Banbury Mixer lifetime was extended by a factor of 2, and oil changes were extended from every 2 years time-based basis to more than 6 years without oil changes. This has so far resulted in the fact, that 3 oil changes could be avoided, each at a value of 20,000 USD, in total 60,000 USD over 6 years. Because of the convincing results, the factory afterwards purchased +40 CJC® Oil Filters for mixing gearboxes, extrusion gearboxes, stock prep gearboxes, and bead prep gearboxes.

FINANCIAL BENEFITS
Payback period: 2 months
Total savings: 60,000 USD

ENVIRONMENTAL BENEFITS
Installation of the CJC® Oil Filter prevented premature oil changes, thus prolonged the oil lifetime resulting in reduction around ≈ 1,500 kg CO_2 annually pr. machine.

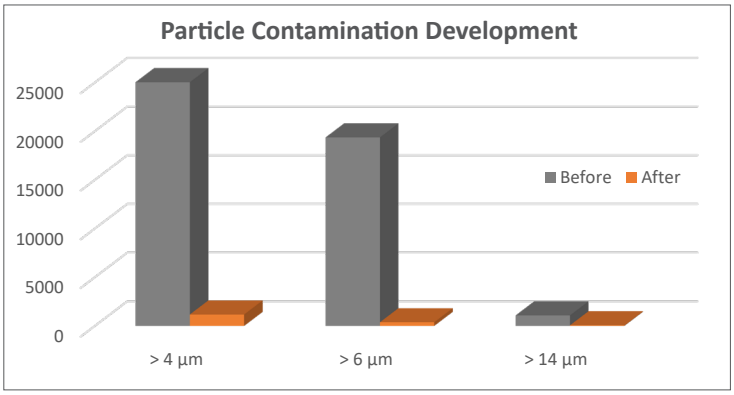
CJC® Oil Filter installed at the gearbox of the Banbury Mixer

*Oil sample **BEFORE** oil filtration*

*Oil sample **AFTER** oil filtration*

RESULT

Particle Contamination	Before	After
ISO Code	22/21/17	17/16/13
Particles, > 4 µm	25033	1178
Particles, > 6 µm	19366	379
Particles, > 14 µm	1086	66
Lifetime Extension Factor, OIL	-	3
Lifetime Extension Factor, PARTS	-	2



Customer Statement:
Maintenance Manager:
"We wanted to reduce the number of oil changes (cost reduction efforts). Since many filter companies do not provide filtration equipment for higher viscosity oils, we wanted to do a trial for our most critical piece of equipment that ran with ISO680 gear oil. During the trial period, we selected three companies to test their filtration efficiencies. The CJC® HDU series depth filter far exceeded the other two filter companies and was selected as the filter of choice for our most critical applications."

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Customer Case written by:
Mr. Peter Smyth, C.C.JENSEN Inc. USA
Mr. Henrik L. Rasmussen & Mr. Dennis Vestergaard
C.C.JENSEN A/S, Denmark

C.C.JENSEN A/S
Løvholmen 13 | DK-5700 Svendborg | Denmark
Phone +45 6321 2014 | sales@cjc.dk
www.cjc.dk