



**CLEAN OIL
BRIGHT IDEAS**

**Application Study
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Hydraulic Oil ENGEL Plastic Moulding Machine

CJC™ Application Study

CUSTOMER

DBI Plastics A/S, Denmark

THE SYSTEM

54 ENGEL plastic moulding machines 20-400 tons
Oil type: Texaco Rando HD 68

OIL MAINTENANCE

DBI Plastics uses plastic moulding machines to manufacture protective covers and plastic plugs for industrial use. The moulding machines run around the clock.

As in all other plastic moulding machines, dirt particles and oxidation products are continuously ingressing to and generated in the hydraulic oil, and in the long run these can have a highly damaging effect on the machine components and on the lifetime of the oil.

SOLUTION

Positive experience with using CJC™ Off-line filters for maintaining the oil has lead DBI Plastics to install CJC™ Fine Filters on practically all plastic moulding machines in the factory. The types used are **CJC™ Fine Filters HDU 15/25 PV and LG 15/25 L** and the filter inserts are of the type **BG 15/25**.

When ordering new ENGEL machines, DBI Plastics always specifies CJC™ Filters on the machines.

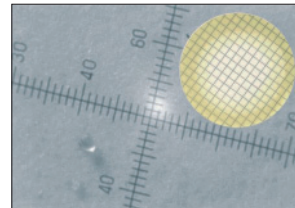
THE RESULT

Oil samples are continuously taken from the machine oil in order to analyse the present state of the oil. Only when the test results show that the oil can no longer be used, the oil is replaced with new oil.

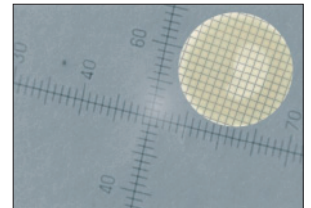
Going through the oil samples taken recently, we discovered a machine, which has used the same oil for a period of 16 years! (see the table to the right for results)



OIL SAMPLES



*Latest oil sample from:
Machine 283, which was in
operation for the first time in 1991
Type: ES600/125 - 125 tons
Lifetime of the oil: 16 years*



*Latest oil sample from:
Machine 284, which was in
operation for the first time in 1996
Type: ES330/80 HL - 80 tons
Lifetime of the oil: 11 years*

THE RESULT

Machine No:	283	284
Date of Analysis:	03.07.2007	25.06.2007
Particles 2 µm	8696	2448
Particles 5 µm	5251	1049
Particles 15 µm	550	383
ISO code	14/13/10	12/11/9

COMMENTS

DBI Plastics, Mr. Preben Jensen:

"I can only remember changing oil on one of my plastic moulding machines, and that was because of a leak from the oil cooler. Otherwise we run the same oil throughout the lifetime of a machine. I am pleased with the CJC™ Fine Filters, and when I buy new machines, I always specify them with CJC™ Off-line Filter."