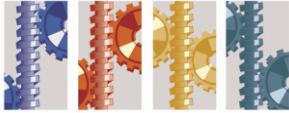




OIL FILTRATION SYSTEMS

CJC™ Application Study

Hydraulic Oil - Plastic Injection Moulder



INDUSTRY

*Application Study
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2001

CUSTOMER

One of the largest European plastic moulding companies with approximately 700 hydraulic injection moulding machines in operation 7,500 hours a year.

THE SYSTEM

ENGEL, BATTENFELD and FERROMATIK MILACRON injection moulders. Standard ISO VG 46 type hydraulic oil.

THE PROBLEM

The customer wanted to increase the oil change intervals.

THE SOLUTION

CJC™ FineFilter HDU 15/25 PM and **LG 15/25 L** with **CJC™ Fine Filter Insert A, B and BG** with a filtration ratio corresponding to 3 µm absolute.

THE TEST

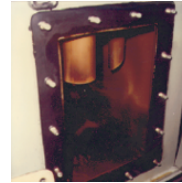
11 different filter systems were tested under equal operation conditions over a period of 12 months. Various pressure filters, return filter and CJC Offline Fine Filters. The tested filters varied from 3 to 100 µm absolute.

The machines had been in operation an average 7,500 hours prior to the test. No oil changes were carried out before or during the test period.

THE RESULT

It was decided to install CJC™ Fine Filters on all of the 700 injection moulding machines within the company.

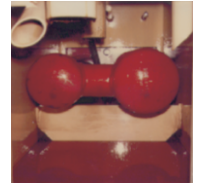
AFTER 12 MONTHS



Machine with suction filter only:
Oil change and tank cleaning required.

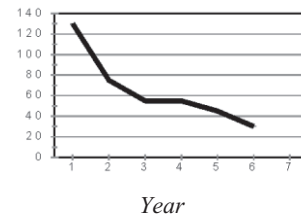


Machine with 6 µm pressure filter:
Oil change and tank cleaning required.



Machine with 3 µm CJC™ Offline Filter:
No oil change and no tank cleaning required.

Hours of production lost through breakdown and maintenance:



Based on the above information the documented pay back time of the CJC™ FineFilter is 5½ months. - The rest is pure profit...

THE RESULT

	Before	After
Particle content:	ISO 18/16	ISO 13/10
Maintenance cost per machine:	1,900 Euros	964 Euros
Life time of pumps:	15,000 hours	40,000 hours
Unplanned stoppage, hrs/yr:	127.5	36.0
Service intervals:	1 year	6 years
Life time of hydraulic oil:	15,000 hours	45,000 hours

COMMENTS

Former maintenance manager, Lars Ryo:

"Installing CJC™ Offline Filters is the single best preventive maintenance element we ever implemented. We never had unplanned stops caused by resin or other debris in the valves, nor was cleaning of the hydraulic tanks necessary any longer".

