



**CLEAN OIL
BRIGHT IDEAS**

Gear / Bearing Oil SCHEIDER Plastic Extrusion Machine

CJC™ Application Study

**Application Study
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2007

CUSTOMER

Cork Plastics Ltd, Ireland

THE SYSTEM

Gear / bearing oil for a plastic extrusion machine from Scheider.

Oil volume: 60 L

Oil type: Shell Omala 320

THE PROBLEM

Samples were taken to see the cleanliness level in the oil and in the gear box. The analysis came out as "Not Countable", meaning too dirty to measure. The ISO code was estimated at app. 22/18/15.

Furthermore, the dark brown colour on the membrane indicated a high level of varnish in the oil.

THE SOLUTION

A CJC™ Fine Filter type HDU 15/25 PV, with a pump flow of 30 L/h, was installed.

CJC™ Filter Inserts BG 15/25 were used.

THE TEST

Oil samples were taken during a period of 7 months to see the development in the cleanliness level.

THE RESULT

Starting with an uncountable number of particles and a very dark brown colour on the membrane, the cleanliness level slowly began to improve.

As it is often the case, when the oil is very clean the filter starts cleaning the pipes, bearing, gear, etc. This explains the drop to an ISO code 17/16/12. Hereafter, the particles released from the system increased to 18/17/12, before dropping again to an ISO code 13/11/8.

The varnish in the oil was removed, which is shown on the membrane that is now white.

The **water level** was also reduced from 150 ppm to 33 ppm.

According to diagnostics this cleanliness level should give a bearing **Life Extension Factor of 6**.

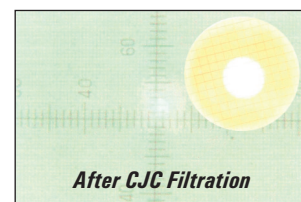


A CJC™ Fine Filter HDU 15/25 PV installed at Cork Plastics

OIL MEMBRANES



Before CJC Filtration



After CJC Filtration

	Extruder Line 29			
	27.10.05	13.01.06	22.02.06	12.05.06
Particles, 2 µm	N.C.	84656	231620	7054
Particles, 5 µm	N.C.	32480	68194	1924
Particles, 15 µm	N.C.	2312	2035	143
ISO Code	22/18/15	17/16/12	18/17/12	13/11/8
Water, ppm	150	69	17	33
Membran color	dark brown	light brown	white	white

PARTICLE DEVELOPMENT

