



Hydraulic oil Hydraulic Winch - Tugboat

Application Study

Application Study written by:

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in cooperation with
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Year of installation:
2017

CUSTOMER SAVINGS & BENEFITS

Installing the CJC® Oil Filter HDU 27/27 at the hydraulic winch, the customer obtained below benefits:

- reduced risk of losing charter (come off-hire)
- component lifetime increased up to factor 10
- increased system reliability with clean hydraulic winch system

CUSTOMER

Ship: Tugboat "Beaufort", build in 2010
by Damen in HOLLAND
Gross tonnage: 284

Owner: Dublin Port Company, Ireland.

SYSTEM

System: Hydraulic winch
Oil type: Shell Tellus 46
Oil volume: 1200 ltr.

PROBLEM

The hydraulic system was running under extremely hot conditions and consequently, problems had followed. A sample was taken to identify the situation.

An extremely high level of varnish was detected with black membrane and a *Not Countable* number of particles. The system was extremely dirty.

SOLUTION

A CJC® Oil Filter HDU 27/27 P with CJC® Filter Insert B 27/27 (3 µm absolute) was installed with a dirt holding capacity of 4 ltr.

TEST

First sample was taken on 12. December 2016, which revealed that the oil was extremely dirty; the ISO code was estimated to app. 22/20/14, *Not Countable*. The CJC® Oil Filter was installed shortly after the report and the second oil sample showed that the ISO Code dropped to 15/14/11 already after only one single pass of filtration. After 4 months of running with the CJC® Oil Filter, the ISO was reduced to 13/12/7, (99% particle reduction) - perfect conditions for optimum system reliability. No problems were seen on the winch anymore.

RESULT

Furthermore, Dublin Port Company installed an CJC® HDU 27/108 MZ on their RoRo Ferry on the ram hydraulic system, with very good experiences, which lead to this test.



Tugboat "Beaufort"

CJC® Oil Filter HDU 27/27
installed at the hydraulic winch
on the tugboat "Beaufort"

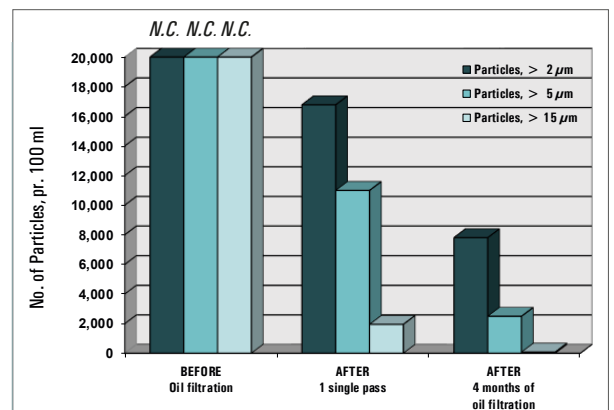


RESULT

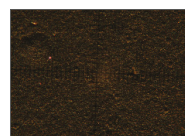
Particle reduction			
	BEFORE oil filtration 12.12.16	AFTER only 1 pass 12.12.16	AFTER 4 months of oil filtration 04.04.17
ISO Code 4407	22/20/14	15/14/11	13/12/7
Particles > 2 micron	n.c.	16780	7804
Particles > 5 micron	n.c.	10995	2496
Particles > 15 micron	n.c.	1950	77

Oil samples by Filtrex Services, particle count per 100 ml

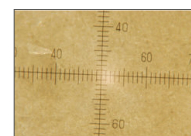
PARTICLE REDUCTION



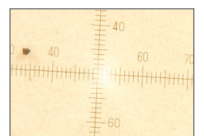
Oil samples by Filtrex Services, particle count per 100 ml



Oil sample
BEFORE
oil filtration



Oil sample
AFTER only
1 single pass



Oil sample
AFTER 4 months
of oil filtration

CUSTOMER COMMENTS

*Mr. Moss, Technical Supervisor, Dublin Port Company:
"I would highly recommend talking to C.C.JENSEN! Especially if you are experiencing any oil condition problems, this system works!"*