



**Demo**

Location: Main

Unit ID: **MWM TCG2020 1409098**

Model:

Machine Type: Engine, Biogas



Additive package is not consistent with previous results. Viscosity @40 is not consistent with base oil. Advice: Re-sample at the next service intervention.

KR, 06 Oct 2015

Oil	Fuchs Titan Ultralube 15W40	Sample ID	4C05F3 (P10403)	4C05B3 (P10402)	4BAFE3 (P10088)	4BAFA3 (P10087)	4B495A (P9665)
Note:		Sampled on	01 Oct 2015	29 Sep 2015	21 Sep 2015	14 Sep 2015	10 Sep 2015
		Received on	02 Oct 2015	02 Oct 2015	22 Sep 2015	22 Sep 2015	11 Sep 2015
		h Total					
		h Oil					
		Top up (l.)					
		Warning Limits	▲	▲	●	●	▲
ASTM D6595-00 WEAR METALS	Iron	ppm	1	1	2	2	2
	Chromium	ppm	<1	<1	<1	<1	<1
	Nickel	ppm	<1	<1	<1	<1	<1
	Molybdenum	ppm	10	11	6	6	3
	Aluminium	ppm	2	2	5	4	4
	Lead	ppm	<1	<1	<1	<1	<1
	Copper	ppm	4	5	11	11	8
	Tin	ppm	<1	<1	<1	<1	<1
	Silver	ppm	<1	<1	<1	<1	<1
	Titanium	ppm	<1	<1	<1	<1	<1
ASTM D6595-00 CONTAMINANTS	Silicon	ppm	2	2	1	1	2
	Sodium	ppm	3	3	7	7	7
	Vanadium	ppm	<1	<1	<1	<1	<1
ASTM D6595-00 ADDITIVES	Calcium	ppm	1478	1506	1901	1982	1918
	Magnesium	ppm	8	8	9	10	9
	Phosphorus	ppm	219	238	541	535	517
	Zinc	ppm	257	263	49	47	44
	Barium	ppm	<1	<1	<1	<1	<1
	Boron	ppm	6	7	3	3	3
ASTM D445	Viscosity at 40°C	cSt	119	120	110	109	109
	Viscosity at 100°C	cSt	14.1	13.8	14.8	14.6	14.7
ASTM E2412	TAN	mg KOH/g	1.54	1.37	1.89	1.37	1.45
	Water	ppm	577.5	577.5	388.3	764.8	375.4

Date 07 Oct 2015