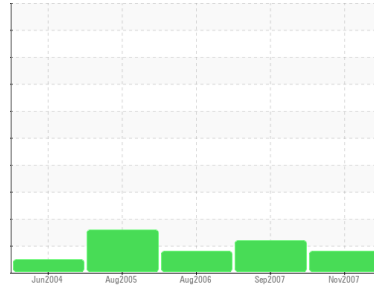




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

M.S.E.

Machine Id
UHO103

Component

3 Hydraulic System

Fluid

QUAKER CHEMICAL QUINTOLUBRIC 822-EHC 46 (520 LTR)

DIAGNOSIS

Recommendation

Nous vous recommandons de remplacer le filtre et d'utiliser un système de filtrage hors-ligne afin d'améliorer la propreté du fluide.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il y a une quantité modérée de particules (de 5 à 100 microns) dans l'huile.

Fluid Condition

L'état de l'huile permet d'en prolonger l'utilisation.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC22061503	WC22061513	WC22051732
Sample Date	Client Info	07 Nov 2007	18 Sep 2007	16 Aug 2006
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	Not Changd
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	4	4	3
Chromium	ppm	ASTM D5185(m)	3	3	3
Nickel	ppm	ASTM D5185(m)	0	0	<1
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	<1	0
Aluminum	ppm	ASTM D5185(m)	4	4	4
Lead	ppm	ASTM D5185(m)	1	5	2
Copper	ppm	ASTM D5185(m)	2	4	2
Tin	ppm	ASTM D5185(m)	164	159	90
Vanadium	ppm	ASTM D5185(m)	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	3	5	2
Barium	ppm	ASTM D5185(m)	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	<1	<1	<1
Manganese	ppm	ASTM D5185(m)	0	<1	0
Magnesium	ppm	ASTM D5185(m)	<1	1	<1
Calcium	ppm	ASTM D5185(m)	2	2	2
Phosphorus	ppm	ASTM D5185(m)	248	237	209
Zinc	ppm	ASTM D5185(m)	12	18	11
Sulfur	ppm	ASTM D5185(m)	304	295	256

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	<1	<1	<1
Sodium	ppm	ASTM D5185(m)	7	2	5
Potassium	ppm	ASTM D5185(m)	4	<1	<1
Water	%	ASTM D6304*	0.046	0.052	0.075

FLUID CLEANLINESS

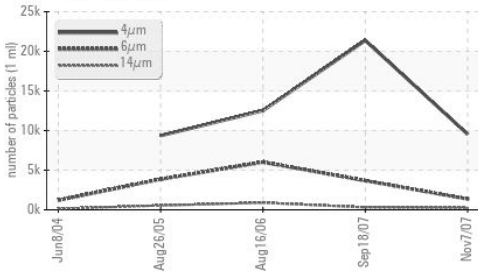
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	9544	▲ 21368	12516
Particles >6µm	ASTM D7647	▲ 1356	▲ 3674	▲ 6016
Particles >14µm	ASTM D7647	▲ 241	▲ 312	▲ 895
Particles >21µm	ASTM D7647	109	78	155
Particles >38µm	ASTM D7647	19	7	9
Particles >71µm	ASTM D7647	6	0	0
Oil Cleanliness	ISO 4406 (c)	▲ 20/18/15	▲ 22/19/15	▲ 21/20/17

FLUID DEGRADATION

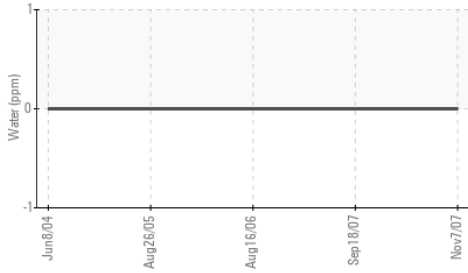
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	4.34	4.29	4.04

OIL ANALYSIS REPORT

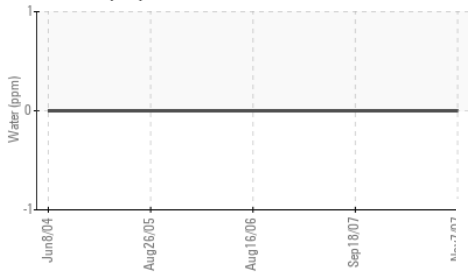
▲ Particle Trend



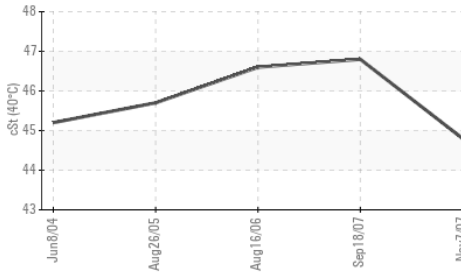
Water (KF)



Water (KF)



Viscosity @ 40°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	NEG	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	44.8	46.8	46.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

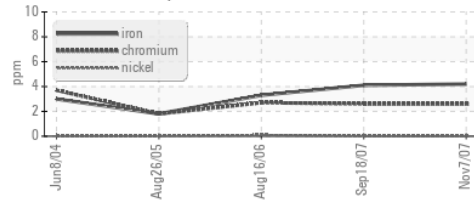


Bottom

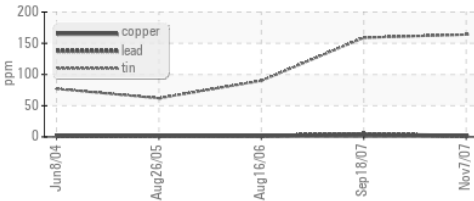


GRAPHS

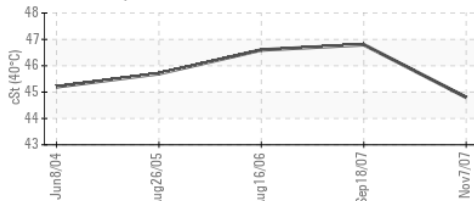
Ferrous Alloys



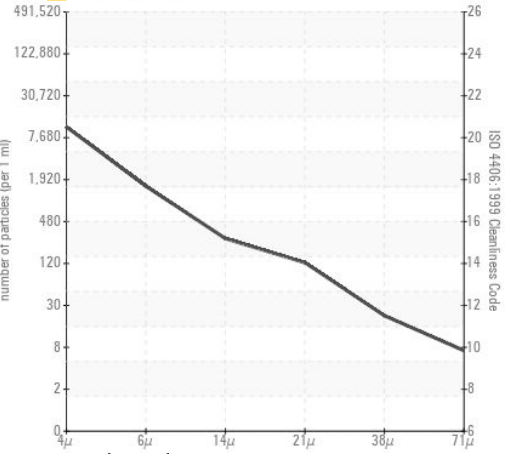
Non-ferrous Metals



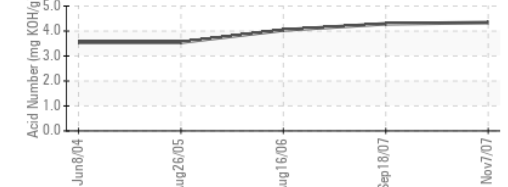
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC22061503
Lab Number : 01425524
Unique Number : 2556248
Test Package : IND 2 (Additional Tests: KF)
Received : 21 Nov 2007
Tested : 22 Nov 2007
Diagnosed :

RTA - ALMA
 3000 RUE DES PINS OUEST, BATISSE 7103 MEZZALINE
 ALMA, QC
 CA G8B 6T3
 Contact: Guy Dufour
 guy.dufour-almacou@riotinto.com
 T:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

F: (418)480-6004