



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Main Deck

Machine Id

ARVA Crane Starboard Whip (S/N 1804)

Component

Starboard Gearbox

Fluid

PETRO CANADA ENDURATEX EP 150 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC62004192	WC62004481	WC62004205
Sample Date		Client Info		13 Aug 2012	02 Feb 2012	24 Jul 2011
Machine Age	hrs	Client Info		0	1115	881
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		None	None	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)		13	52	3
Chromium	ppm	ASTM D5185(m)		<1	<1	<1
Nickel	ppm	ASTM D5185(m)		0	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)		0	<1	0
Lead	ppm	ASTM D5185(m)		0	<1	<1
Copper	ppm	ASTM D5185(m)		<1	1	<1
Tin	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	LIGHT	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

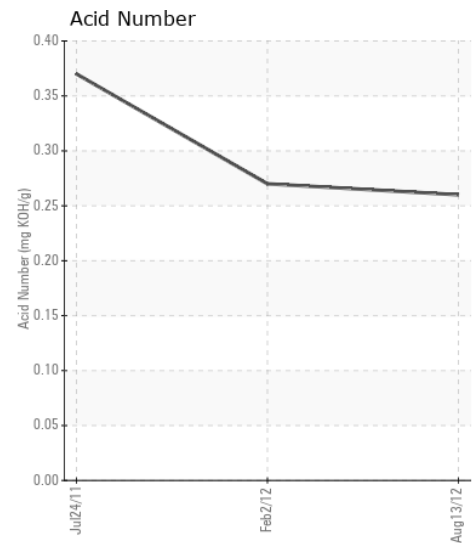
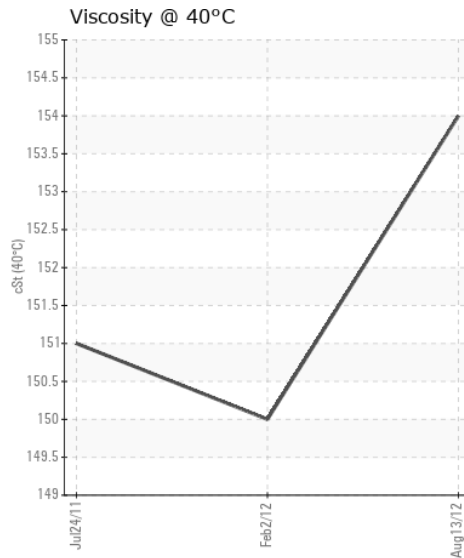
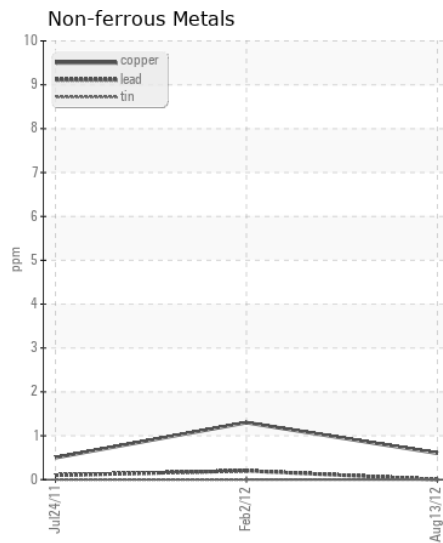
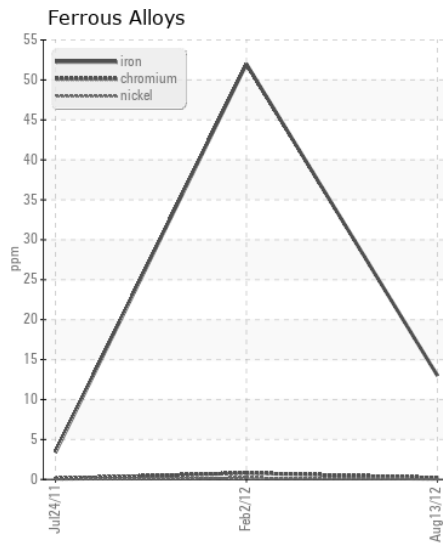
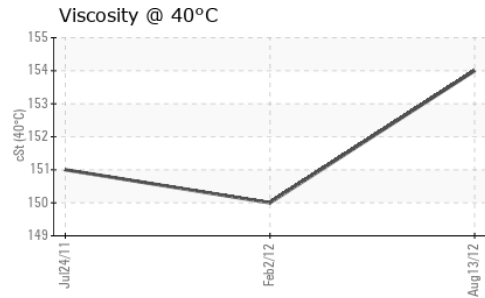
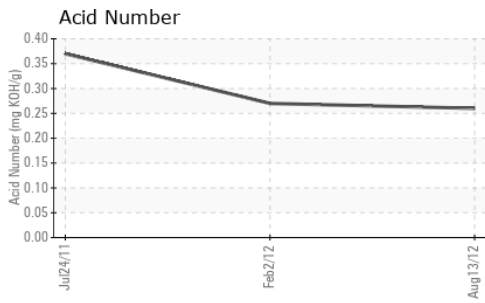
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185(m)		5	6	2
Potassium	ppm	ASTM D5185(m)		6	23	7
Water		WC Method		NEG	NEG	NEG
Silt	scalar	Visual*	NONE	VLITE	NONE	VLITE
Debris	scalar	Visual*	NONE	VLITE	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*		NEG	NEG	NEG

FLUID CONDITION

The TAN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		3	6	2
Boron	ppm	ASTM D5185(m)		34	31	13
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		<1	<1	<1
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1	0
Calcium	ppm	ASTM D5185(m)		4	7	3
Phosphorus	ppm	ASTM D5185(m)		249	240	235
Zinc	ppm	ASTM D5185(m)		8	16	11
Sulfur	ppm	ASTM D5185(m)		9642	9794	10374
Acid Number (AN)	mg KOH/g	ASTM D974*		0.26	0.27	0.37
Visc @ 40°C	cSt	ASTM D7279(m)		154	150	151



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC62004192
Lab Number : 01780160
Unique Number : 3559677
Test Package : MAR 2
Received : 17 Aug 2012
Tested : 20 Aug 2012
Diagnosed : 20 Aug 2012 - Wes Davis

CANADIAN COAST GUARD
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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.