



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Area
SAMUELRIS
Machine Id
S30-26112 Stbd Steering Gear Hydraulic System
Component
Starboard Steering
Fluid
PETRO CANADA HYDREX MV 32 (450 LTR)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0759188	WC0759205	WC0759164
Sample Date		Client Info		12 Jan 2024	10 Jul 2023	07 Jan 2023
Machine Age	mths	Client Info		110	104	98
Oil Age	mths	Client Info		63	57	51
Filter Age	mths	Client Info		110	104	98
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	2	2	2
Chromium	ppm	ASTM D5185(m)	>12	3	2	2
Nickel	ppm	ASTM D5185(m)	>6	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>4	<1	<1	0
Lead	ppm	ASTM D5185(m)	>12	<1	1	<1
Copper	ppm	ASTM D5185(m)	>30	10	10	9
Tin	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

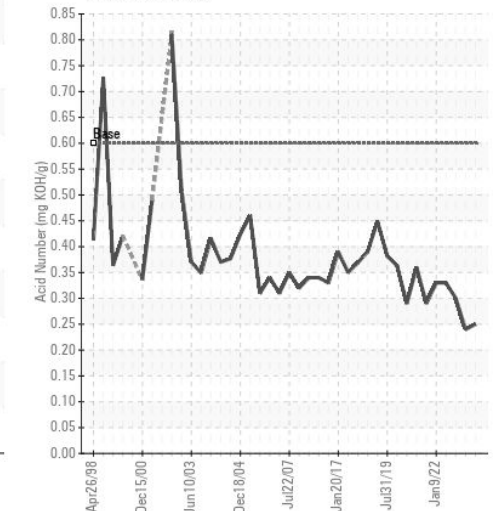
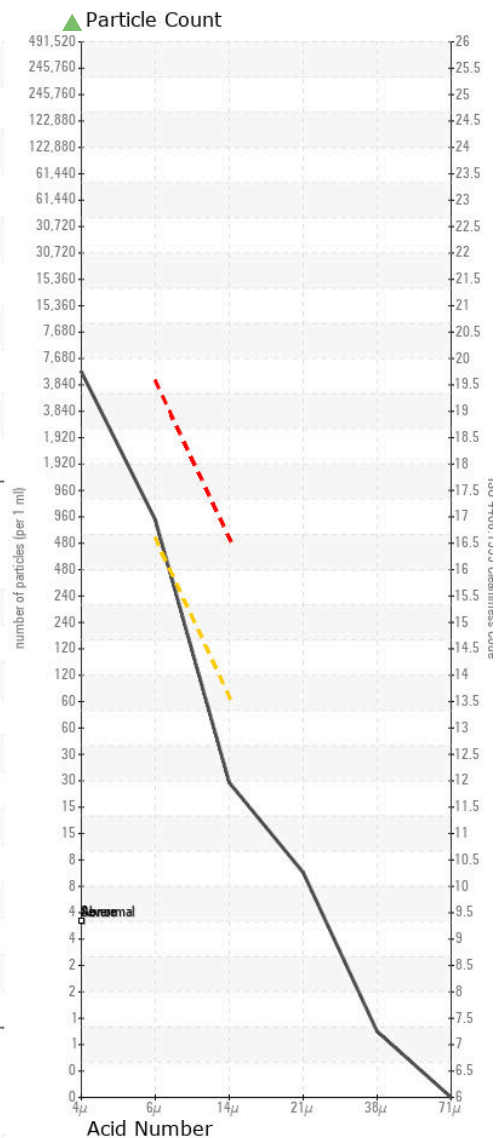
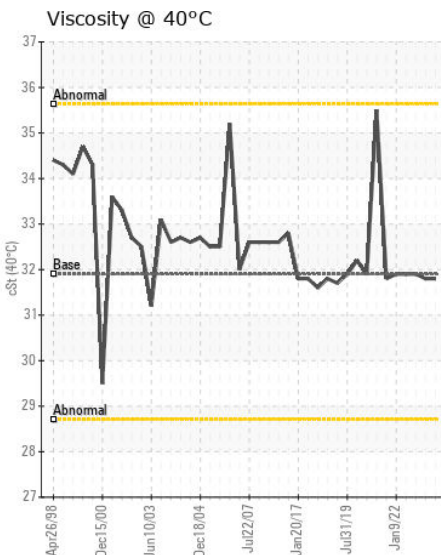
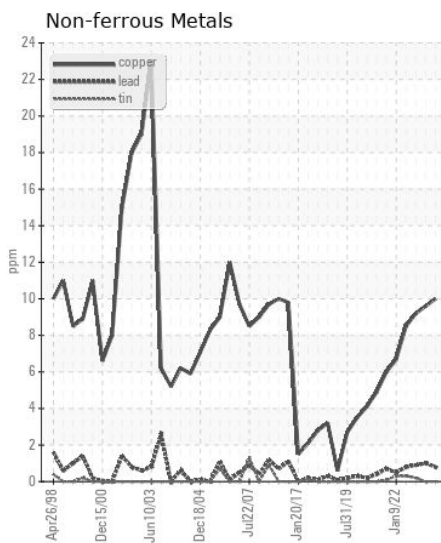
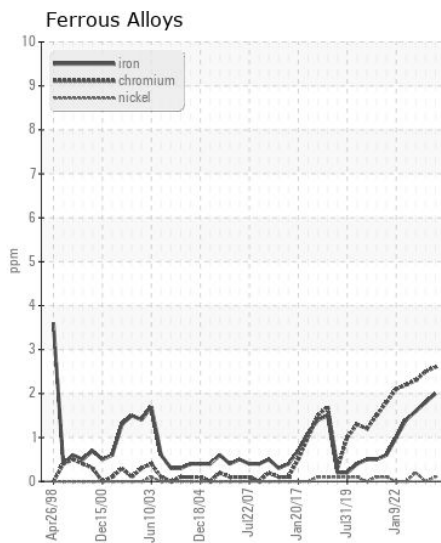
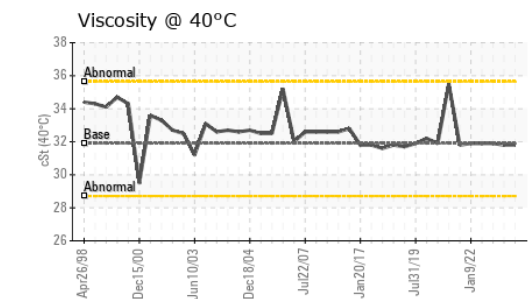
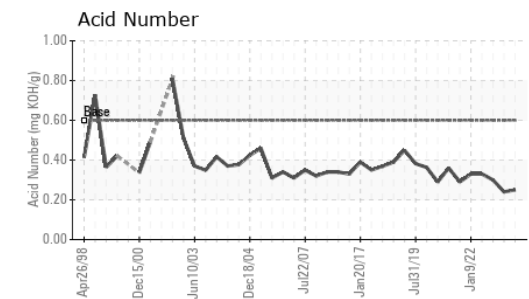
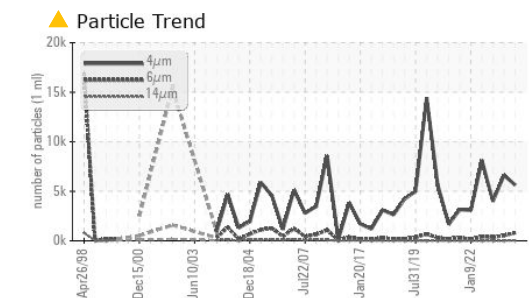
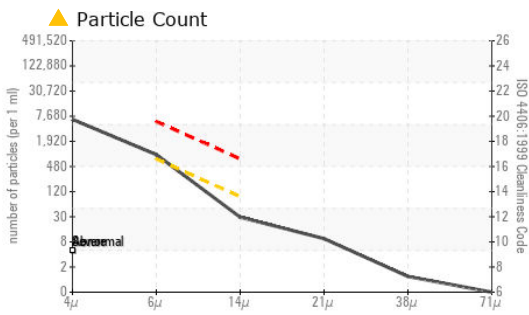
There is a light amount of silt (particulates < 14 microns in size) present in the fluid.

Silicon	ppm	ASTM D5185(m)	>10	0	0	0
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1
Water		WC Method		NEG	NEG	NEG
Particles >4µm		ASTM D7647		5633	6623	3984
Particles >6µm		ASTM D7647	>640	810	540	359
Particles >14µm		ASTM D7647	>80	26	25	21
Particles >21µm		ASTM D7647	>20	8	6	5
Particles >38µm		ASTM D7647	>4	1	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>-/16/13	20/17/12	20/16/12	19/16/12
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
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 AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

Sodium	ppm	ASTM D5185(m)		0	<1	0
Boron	ppm	ASTM D5185(m)	0	0	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	0	<1	0
Calcium	ppm	ASTM D5185(m)	50	79	76	82
Phosphorus	ppm	ASTM D5185(m)	330	303	324	326
Zinc	ppm	ASTM D5185(m)	430	386	401	385
Sulfur	ppm	ASTM D5185(m)	760	722	709	745
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.25	0.24	0.30
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	31.8	31.8	31.9



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0759188
Lab Number : 02608984
Unique Number : 5710070
Test Package : MAR 2

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.