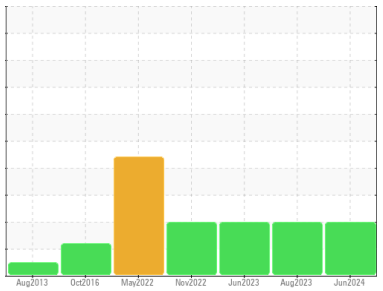
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
Port Steering Gear (S/N T2P01011)
Component
Port Steering
Fluid
PETRO CANADA HYDREX MV 32 (114 LTR)

DIAGNOSIS

Recommendation
The fluid change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates (2 to 100 microns in size) present in the fluid.

Fluid Condition
The AN level is acceptable for this fluid. The fluid is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0829982**	WC0829977	WC0754148
Sample Date		Client Info		**05 Jun 2024**	09 Aug 2023	21 Jun 2023
Machine Age	hrs	Client Info		**19920**	18400	18000
Oil Age	hrs	Client Info		**920**	18400	18000
Oil Changed		Client Info		**Changed**	Not Changd	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**<1**	3	3
Chromium	ppm	ASTM D5185(m)	>15	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	**<1**	0	0
Lead	ppm	ASTM D5185(m)	>10	**0**	<1	1
Copper	ppm	ASTM D5185(m)	>50	**3**	12	14
Tin	ppm	ASTM D5185(m)	>5	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	<1	0

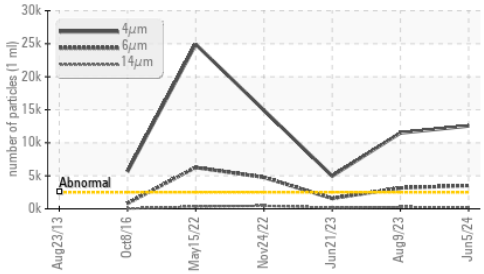
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**<1**	4	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	1	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**1**	<1	1
Calcium	ppm	ASTM D5185(m)	50	**45**	31	37
Phosphorus	ppm	ASTM D5185(m)	330	**318**	390	362
Zinc	ppm	ASTM D5185(m)	430	**403**	398	399
Sulfur	ppm	ASTM D5185(m)	760	**790**	1043	947
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Sodium	ppm	ASTM D5185(m)		**<1**	<1	1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

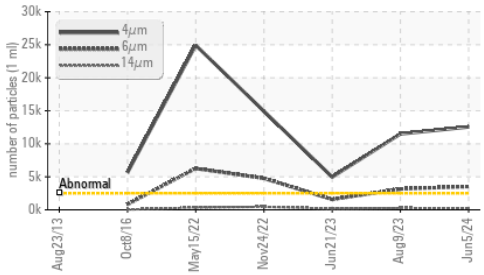
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **12549**	▲ 11492	● 4969
Particles >6µm		ASTM D7647	>640	▲ **3523**	▲ 3157	▲ 1578
Particles >14µm		ASTM D7647	>80	▲ **255**	▲ 267	▲ 171
Particles >21µm		ASTM D7647	>20	▲ **61**	▲ 62	▲ 46
Particles >38µm		ASTM D7647	>4	**6**	2	2
Particles >71µm		ASTM D7647	>3	**2**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/19/15**	▲ 21/19/15	▲ 19/18/15

OIL ANALYSIS REPORT

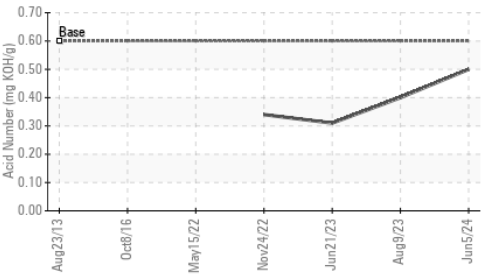
Particle Trend



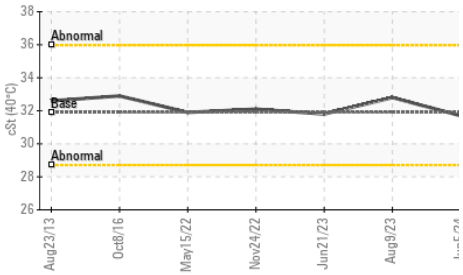
Particle Trend



Acid Number



Viscosity @ 40°C

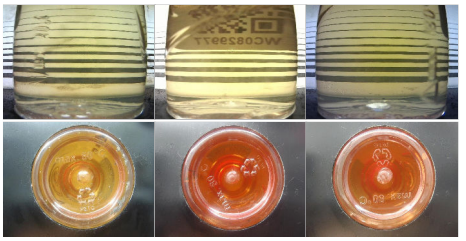


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.50**	0.40	0.31

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
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*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

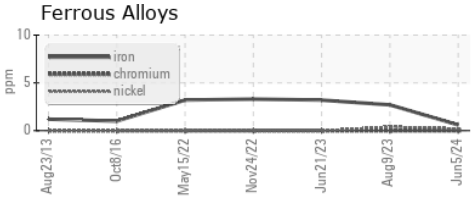
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	**31.7**	32.8	31.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

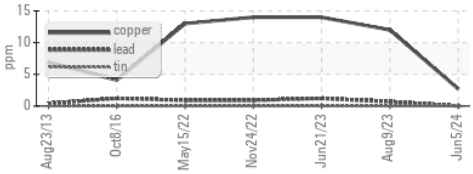


GRAPHS

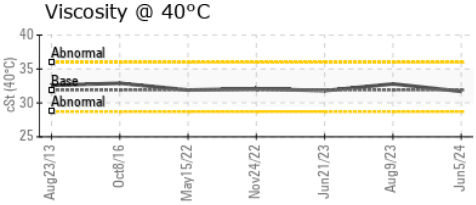
Ferrous Alloys



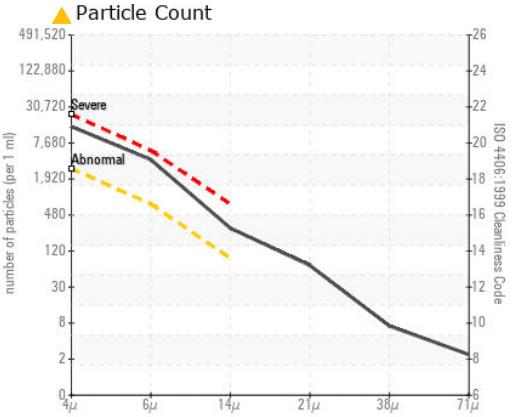
Non-ferrous Metals



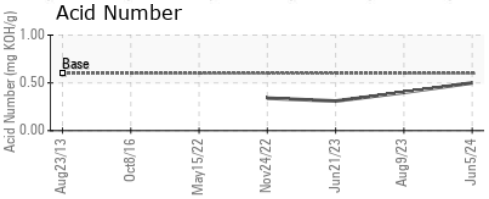
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0829982 **Received** : 20 Jun 2024
Lab Number : 02643279 **Tested** : 21 Jun 2024
Unique Number : 5800818 **Diagnosed** : 21 Jun 2024 - Wes Davis
Test Package : MAR 2 (Additional Tests: PrtCount, TAN Man)

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.

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