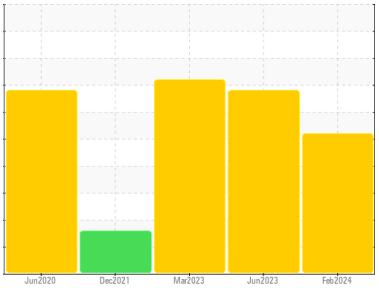
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
Or562
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (75 LTR)

DIAGNOSIS

▲ Recommendation

Check seals and/or filters for points of contaminant entry. We advise that you check all areas where dirt can enter the system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation. Please specify the component make and model with your next sample.

Wear

The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All component wear rates are normal.

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0113376**	GFL0056409	GFL0056464
Sample Date		Client Info		**22 Feb 2024**	14 Jun 2023	16 Mar 2023
Machine Age	hrs	Client Info		**21863**	20535	19981
Oil Age	hrs	Client Info		**1328**	1554	1500
Oil Changed		Client Info		**Filtered**	Changed	Not Changd
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**27**	▲ 36	▲ 38
Chromium	ppm	ASTM D5185(m)	>10	**4**	7	8
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>10	**15**	● 18	● 18
Lead	ppm	ASTM D5185(m)	>10	**0**	2	<1
Copper	ppm	ASTM D5185(m)	>75	**14**	12	11
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	6	8
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	<1	0
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**9**	8	8
Calcium	ppm	ASTM D5185(m)	50	**172**	190	186
Phosphorus	ppm	ASTM D5185(m)	330	**589**	670	655
Zinc	ppm	ASTM D5185(m)	430	**767**	769	750
Sulfur	ppm	ASTM D5185(m)	760	**1375**	1525	1464
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	▲ **36**	▲ 44	▲ 41
Sodium	ppm	ASTM D5185(m)		**11**	14	18
Potassium	ppm	ASTM D5185(m)	>20	**5**	6	6

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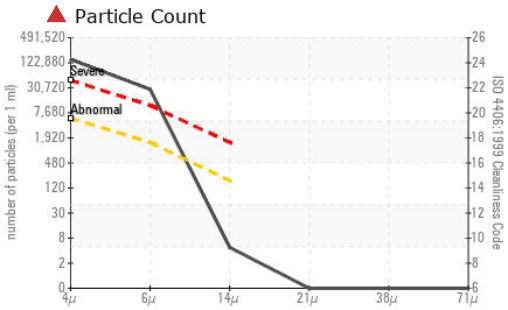

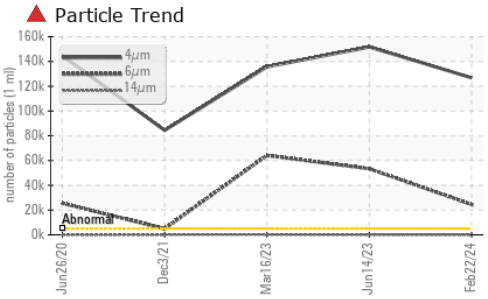

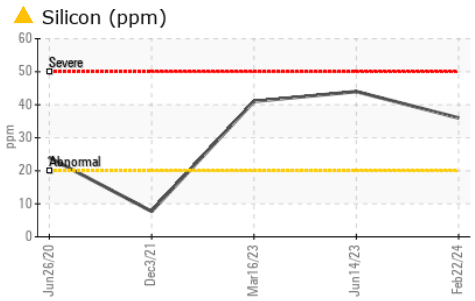

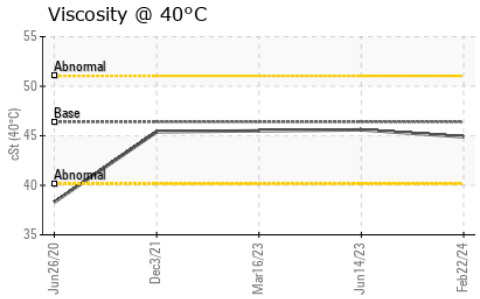

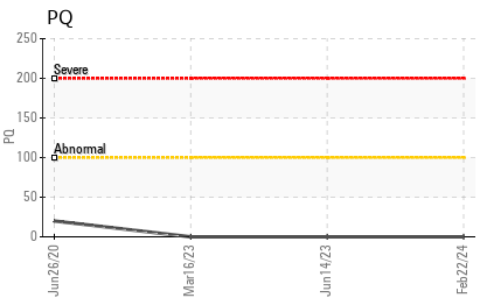

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ **126811**	▲ 151754	▲ 135683
Particles >6µm	ASTM D7647	>1300	▲ **24477**	▲ 53337	▲ 64150
Particles >14µm	ASTM D7647	>160	**4**	38	● 169
Particles >21µm	ASTM D7647	>40	**0**	4	4
Particles >38µm	ASTM D7647	>10	**0**	0	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ **24/22/9**	▲ 24/23/12	▲ 24/23/15

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	**VLITE**	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*	>0.1	**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)	46.4	**44.9**	45.6	45.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113376
Lab Number : 02623758
Unique Number : 5748877
Test Package : MOB 1 (Additional Tests: PQ, PrtCount)
Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 22 Mar 2024 - Kevin Marson

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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