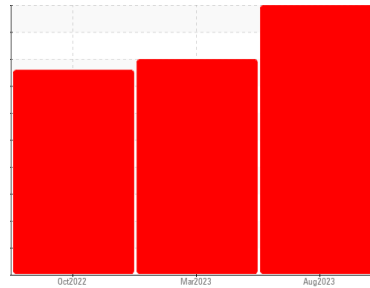




OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL



Machine Id
401076

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX MV 22 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. An inspection for the source(s) of wear may be warranted at this time. Resample in 30-45 days to monitor this situation. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF).

Wear

Moderate concentration of visible metal present. Cutting wear particles are caused by either hard protuberances (mis-aligned components, etc.), or abrasives entering the system and embedding themselves in softer materials (sand, etc.), and gouging out mating surfaces.

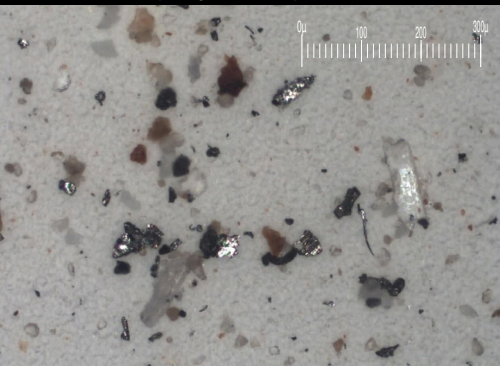
Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The viscosity of the oil is higher than normal, possibly indicating the addition of a heavier grade of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Particle Filter (Magn: 100 x)



SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0064993	GFL0065021	GFL0050057
Sample Date	Client Info		28 Aug 2023	29 Mar 2023	26 Oct 2022
Machine Age	hrs	Client Info	10308	10177	10037
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			SEVERE	SEVERE	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >20	20	24	22
Chromium	ppm	ASTM D5185(m) >10	1	1	1
Nickel	ppm	ASTM D5185(m) >10	0	<1	<1
Titanium	ppm	ASTM D5185(m)	<1	<1	<1
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >10	4	5	4
Lead	ppm	ASTM D5185(m) >10	0	0	<1
Copper	ppm	ASTM D5185(m) >75	<1	<1	<1
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	2	<1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	1	1	1
Manganese	ppm	ASTM D5185(m) 1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	26	26	25
Calcium	ppm	ASTM D5185(m) 50	73	79	74
Phosphorus	ppm	ASTM D5185(m) 330	367	369	366
Zinc	ppm	ASTM D5185(m) 430	434	442	420
Sulfur	ppm	ASTM D5185(m) 760	805	837	829
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

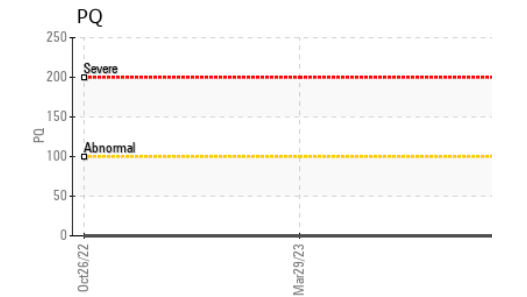
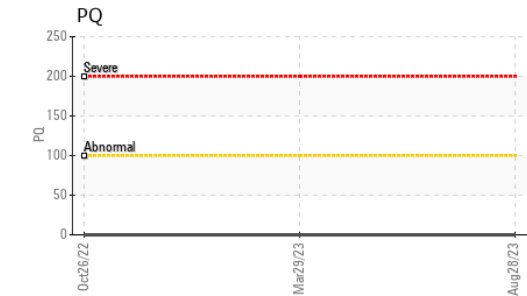
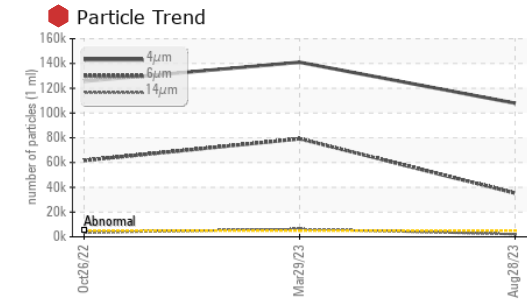
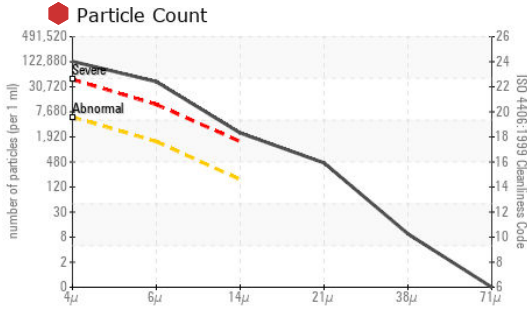
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	13	16	16
Sodium	ppm	ASTM D5185(m)	3	4	3
Potassium	ppm	ASTM D5185(m) >20	1	2	<1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	107884	140952	125618
Particles >6µm	ASTM D7647	>1300	35300	79209	61619
Particles >14µm	ASTM D7647	>160	2083	6233	3471
Particles >21µm	ASTM D7647	>40	401	1101	469
Particles >38µm	ASTM D7647	>10	8	34	3
Particles >71µm	ASTM D7647	>3	0	2	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	24/22/18	24/23/20	24/23/19



OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 556 - Whitecourt
Sample No. : GFL0064993 **Received** : 31 Aug 2023 4138 - 42 Street, Whitecourt, AB CA T7S 1P1
Lab Number : 02579701 **Diagnosed** : 01 Sep 2023
Unique Number : 5632761 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PQ, PrtCount, PrtFilter) Contact: Kash Wagoner kwagoner@gflenv.com

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.

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	LTMOD	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	LIGHT	NONE
Debris	scalar	Visual*	NONE	VLITE	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)	22.2	26.0	26.2	26.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS

