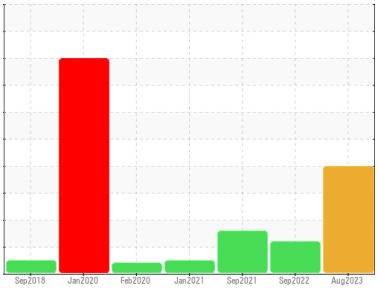
PROBLEM SUMMARY

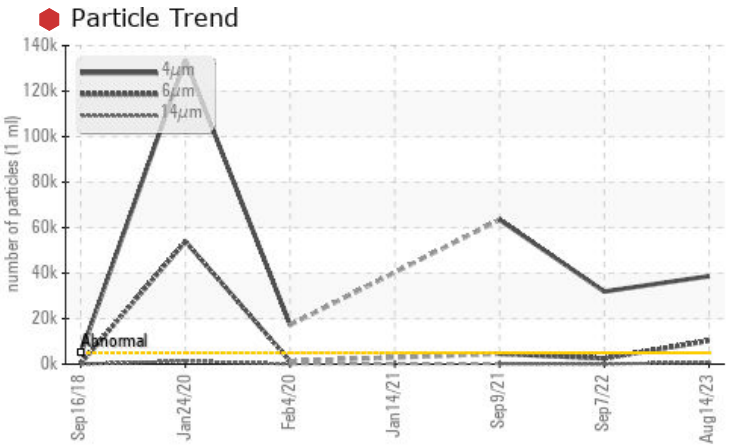
Sample Rating Trend



ISO

Machine Id
DOPPSTADT 93-13
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (120 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. 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. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	SEVERE
Particles >4µm		ASTM D7647	>5000	▲ **38654**	▲ 31919	⬢ 63465
Particles >6µm		ASTM D7647	>1300	⬢ **10273**	▲ 2516	▲ 4556
Particles >14µm		ASTM D7647	>160	▲ **771**	34	▲ 198
Particles >21µm		ASTM D7647	>40	▲ **205**	8	54
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **22/21/17**	▲ 22/19/12	⬢ 23/19/15

Customer Id: EQUMID
Sample No.: PC0061424
Lab Number: 02576439
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	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.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

07 Sep 2022 Diag: Kevin Marson

ISO

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm and oil cleanliness are abnormally high. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

09 Sep 2021 Diag: Wes Davis

ISO

Check seals and/or filters for points of contaminant entry. 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 brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. Particles >4µm are severely high. Particles >6µm are abnormally high. Particles >14µm are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

14 Jan 2021 Diag: Wes Davis

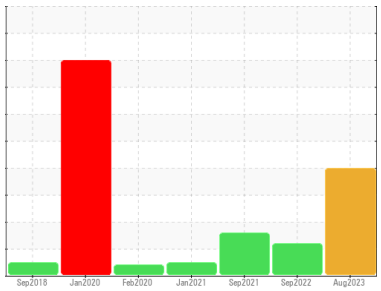
NORMAL

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.All component wear rates are normal. There is no indication of any contamination in the component(unconfirmed). The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
DOPPSTADT 93-13
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (120 LTR)

DIAGNOSIS

Recommendation
We advise that you check all areas where contaminants can enter the system. 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. Resample in 30-45 days to monitor this situation.

Wear
All component wear rates are normal.

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

Fluid Condition
The AN level is acceptable for this fluid. The oil 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		**PC0061424**	PC0052728	PC0010384
Sample Date		Client Info		**14 Aug 2023**	07 Sep 2022	09 Sep 2021
Machine Age	hrs	Client Info		**8297**	7681	5256
Oil Age	hrs	Client Info		**2000**	0	0
Oil Changed		Client Info		**N/A**	Not Changd	Not Changd
Sample Status				**SEVERE**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**5**	3	4
Chromium	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	0	<1
Lead	ppm	ASTM D5185(m)	>10	**<1**	1	1
Copper	ppm	ASTM D5185(m)	>75	**32**	28	42
Tin	ppm	ASTM D5185(m)	>10	**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)		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	1
Molybdenum	ppm	ASTM D5185(m)	0	**<1**	0	0
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**48**	51	22
Calcium	ppm	ASTM D5185(m)	50	**26**	23	41
Phosphorus	ppm	ASTM D5185(m)	330	**300**	300	294
Zinc	ppm	ASTM D5185(m)	430	**333**	328	343
Sulfur	ppm	ASTM D5185(m)	760	**728**	718	819
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

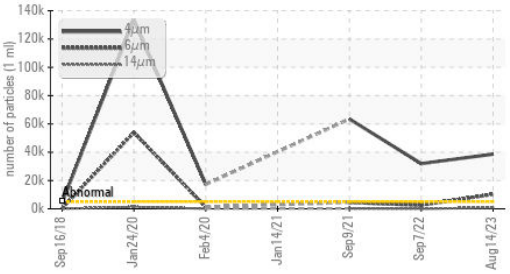
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Sodium	ppm	ASTM D5185(m)		**3**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**5**	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **38654**	▲ 31919	⬢ 63465
Particles >6µm		ASTM D7647	>1300	⬢ **10273**	▲ 2516	▲ 4556
Particles >14µm		ASTM D7647	>160	▲ **771**	34	▲ 198
Particles >21µm		ASTM D7647	>40	▲ **205**	8	54
Particles >38µm		ASTM D7647	>10	**6**	0	1
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **22/21/17**	▲ 22/19/12	⬢ 23/19/15

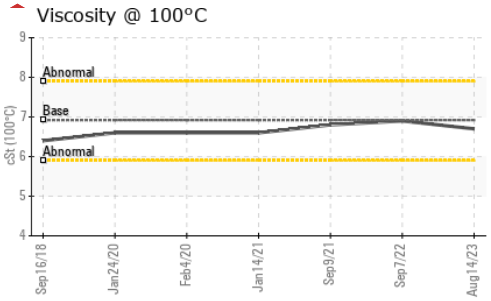
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	**0.34**	0.28	0.26

OIL ANALYSIS REPORT

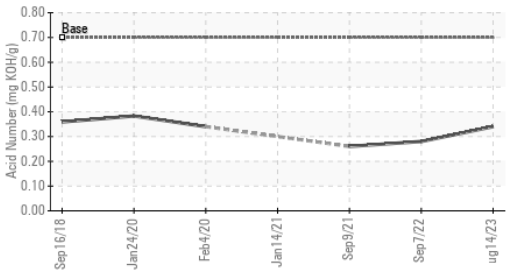
Particle Trend



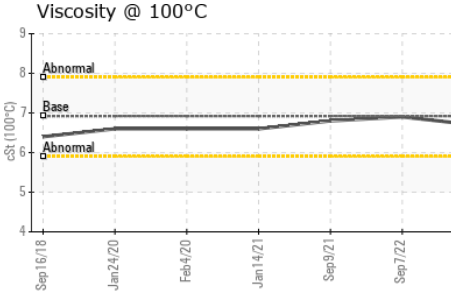
Viscosity @ 100°C



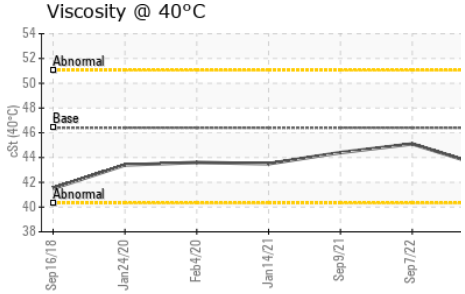
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C



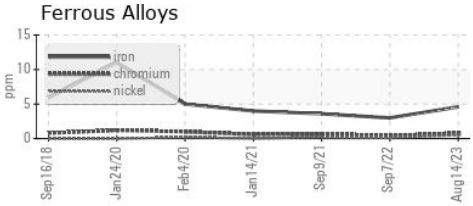
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**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	**43.3**	45.1	44.4
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	**6.7**	6.9	6.8
Viscosity Index (VI)	Scale	ASTM D2270*	104	**107**	108	107

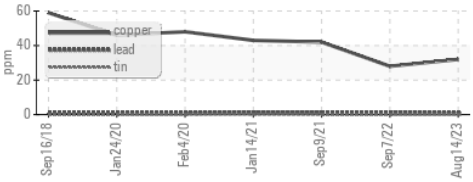
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

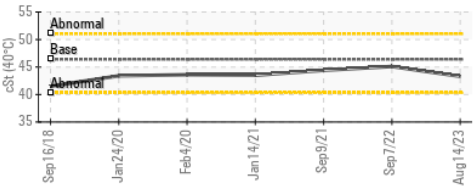
Ferrous Alloys



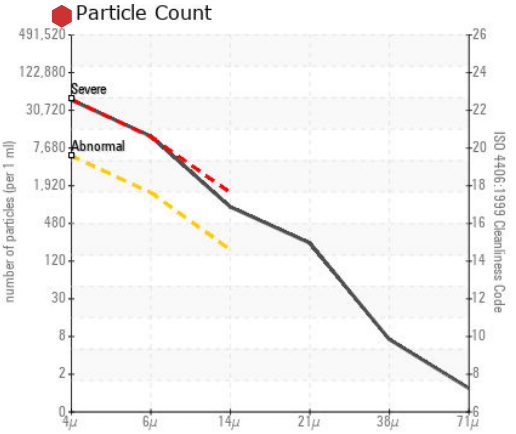
Non-ferrous Metals



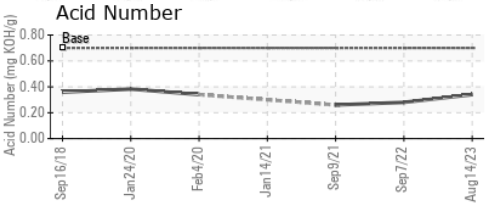
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **TRUCK AND EQUIPMENT SOLUTION**
Sample No. : PC0061424 **Received** : 17 Aug 2023 2 BERTRAM INDUSTRIAL PKWY.
Lab Number : 02576439 **Diagnosed** : 18 Aug 2023 MIDHURST, ON
Unique Number : 5629499 **Diagnostician** : Wes Davis CA L9X 1L2
Test Package : IND 2 (Additional Tests: KV100, VI) Contact: Julie Holden

To discuss this sample report, contact Customer Service at 1-800-268-2131. parts@tesbarrie.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (705)792-7620
Validity of results and interpretation are based on the sample and information as supplied. F: (705)725-5425