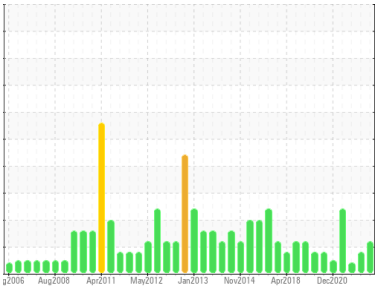
PROBLEM SUMMARY

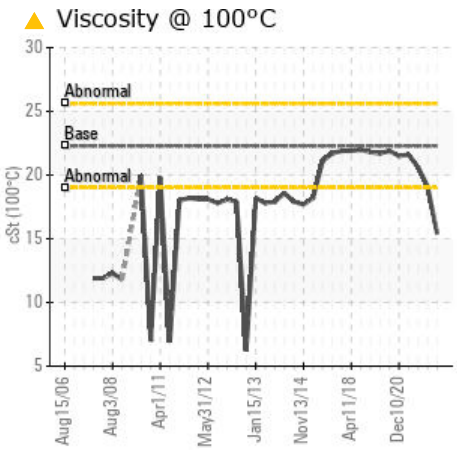
Sample Rating Trend

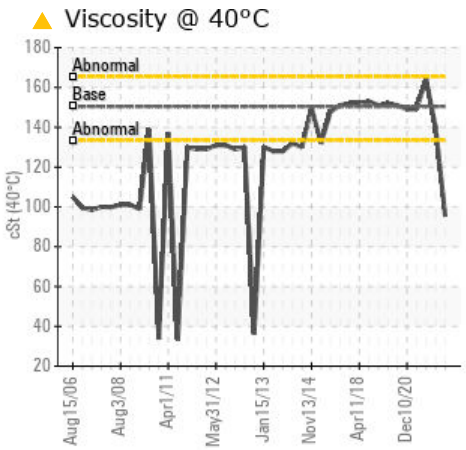


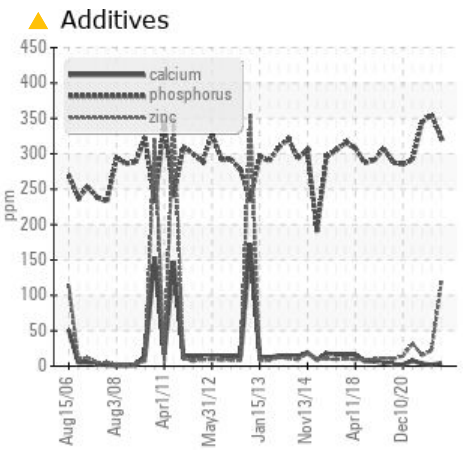
VISCOSITY

Area
1460
Machine Id
1460-5666-4001 - HG Ni THICKENER MECH PLANETARY
Component
Reduction Gear
Fluid
PETRO CANADA ENDURATEX XL 68/220 (20 LTR)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ATTENTION	ATTENTION
Zinc	ppm	ASTM D5185(m)		▲ **116**	22	15
Visc @ 40°C	cSt	ASTM D7279(m)	150.4	▲ **95.4**	140	164
Visc @ 100°C	cSt	ASTM D7279(m)	22.28	▲ **15.4**	19.1	20.6

Customer Id: INCVOS
Sample No.: PC0057974
Lab Number: 02568901
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

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
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

20 Oct 2021 Diag: Kevin Marson

WEAR

Resample at the next service interval to monitor.Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

20 Jun 2021 Diag: Wes Davis

ISO

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

17 Mar 2021 Diag: Wes Davis

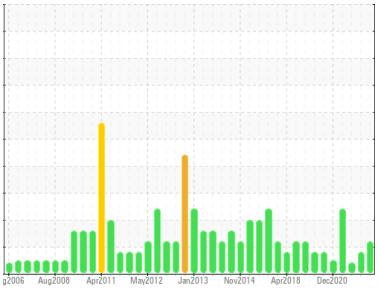
ISO

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. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Particles >6µm are severely high. Particles >4µm are abnormally high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Area
1460
Machine Id
1460-5666-4001 - HG Ni THICKENER MECH PLANETARY
Component
Reduction Gear
Fluid
PETRO CANADA ENDURATEX XL 68/220 (20 LTR)

DIAGNOSIS

▲ Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

▲ Fluid Condition

Viscosity of sample indicates oil is within ISO 100 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**PC0057974**	PC0030028	PC0040209
Sample Date		Client Info		**26 Jun 2023**	20 Oct 2021	20 Jun 2021
Machine Age	mths	Client Info		**0**	0	0
Oil Age	mths	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

WEAR METALS		method	limit/base	current	history 1	history 2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>150	**113**	▲ 204	102
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**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	0	<1
Lead	ppm	ASTM D5185(m)	>100	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>50	**4**	2	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**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

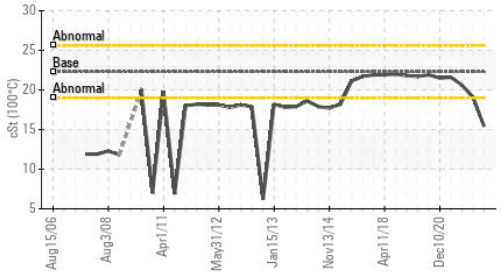
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)		**5**	9	10
Barium	ppm	ASTM D5185(m)		**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**<1**	<1	<1
Manganese	ppm	ASTM D5185(m)		**<1**	1	<1
Magnesium	ppm	ASTM D5185(m)		**<1**	0	<1
Calcium	ppm	ASTM D5185(m)		**4**	2	3
Phosphorus	ppm	ASTM D5185(m)	240	**323**	355	345
Zinc	ppm	ASTM D5185(m)		▲ **116**	22	15
Sulfur	ppm	ASTM D5185(m)	4060	**4127**	5342	5253
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>50	**2**	1	1
Sodium	ppm	ASTM D5185(m)		**<1**	0	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	<1	<1

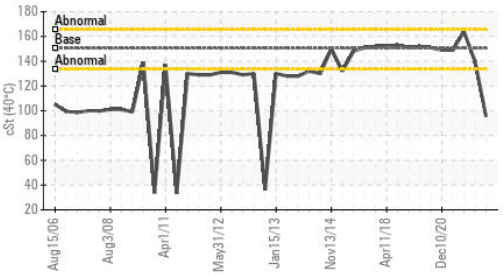
FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>20000	**159099**	176785	▲ 35083
Particles >6µm		ASTM D7647	>5000	**57972**	34501	2579
Particles >14µm		ASTM D7647	>640	**441**	299	28
Particles >21µm		ASTM D7647	>160	**49**	12	7
Particles >38µm		ASTM D7647	>40	**5**	0	1
Particles >71µm		ASTM D7647	>10	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**24/23/16**	25/22/15	▲ 22/19/12

OIL ANALYSIS REPORT

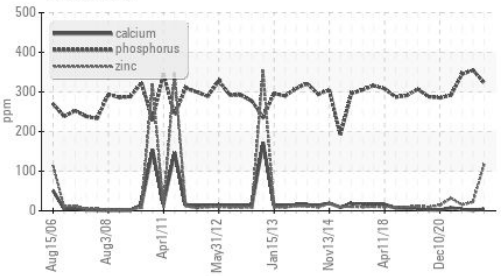
Viscosity @ 100°C



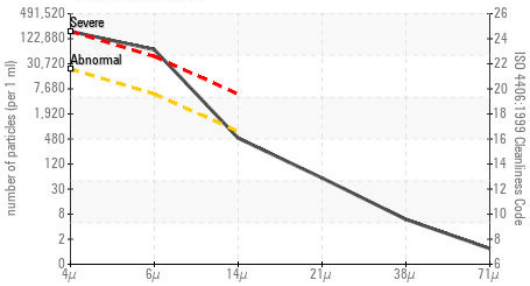
Viscosity @ 40°C



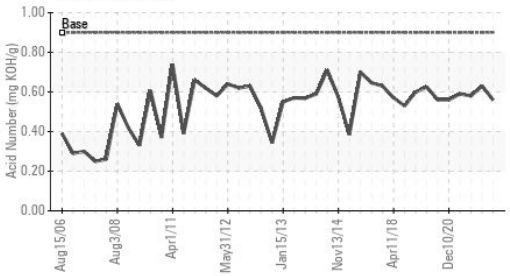
Additives



Particle Count



Acid Number



FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.9	**0.56**	0.63	0.58

VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	**NONE**	VLITE	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	**NONE**	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	VLITE	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	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	150.4	▲ **95.4**	140	164
Visc @ 100°C	cSt	ASTM D7279(m)	22.28	▲ **15.4**	19.1	20.6
Viscosity Index (VI)	Scale	ASTM D2270*	176	**171**	155	147

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0057974 **Received** : 10 Jul 2023
Lab Number : 02568901 **Diagnosed** : 12 Jul 2023
Unique Number : 5605947 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)

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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