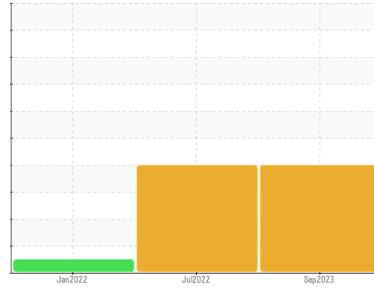




Machine Id
1612-5419-6003

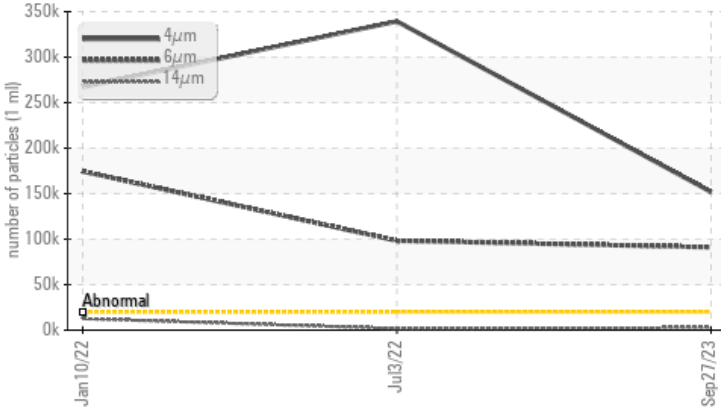
Component
Gearbox
Fluid

PETRO CANADA SYNDURO SHB ISO150 (5 LTR)



COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	SEVERE	NORMAL
Particles >4µm	ASTM D7647	>20000	▲ 151919	● 339343	267083
Particles >6µm	ASTM D7647	>5000	● 91059	● 98246	174523
Particles >14µm	ASTM D7647	>640	▲ 2649	▲ 1691	12607
Particles >21µm	ASTM D7647	>160	▲ 226	207	1666
Oil Cleanliness	ISO 4406 (c)	>21/19/16	● 24/24/19	● 26/24/18	25/25/21

Customer Id: INCVOS
Sample No.: PC0070666
Lab Number: 02590404
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 recommend you service the filters on this component.
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 Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

03 Jul 2022 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 severely high. Oil Cleanliness are severely high. Particles >14µm 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



10 Jan 2022 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. Please specify the component make and model with your next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Viscosity of sample indicates oil is within ISO 150 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

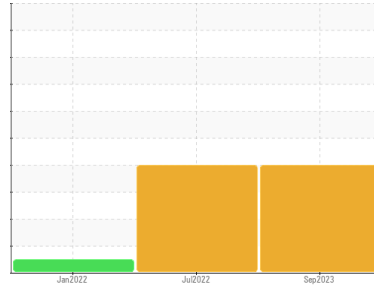




Machine Id
1612-5419-6003

Component
Gearbox

Fluid
PETRO CANADA SYNDURO SHB ISO150 (5 LTR)



DIAGNOSIS

Recommendation

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.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 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		PC0070666	PC0040014	PC0039895
Sample Date	Client Info		27 Sep 2023	03 Jul 2022	10 Jan 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	N/A	N/A
Sample Status			SEVERE	SEVERE	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		59	1	36
Iron	ppm	ASTM D5185(m) >200	73	97	230
Chromium	ppm	ASTM D5185(m) >15	<1	0	<1
Nickel	ppm	ASTM D5185(m) >15	<1	0	<1
Titanium	ppm	ASTM D5185(m)	0	<1	<1
Silver	ppm	ASTM D5185(m)	<1	0	0
Aluminum	ppm	ASTM D5185(m) >25	1	1	3
Lead	ppm	ASTM D5185(m) >100	0	<1	<1
Copper	ppm	ASTM D5185(m) >200	<1	4	2
Tin	ppm	ASTM D5185(m) >25	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	history1	history2
Boron	ppm	ASTM D5185(m)	2	<1	<1
Barium	ppm	ASTM D5185(m) 5.0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	2
Magnesium	ppm	ASTM D5185(m) 5.0	6	4	12
Calcium	ppm	ASTM D5185(m) 5.0	3	2	7
Phosphorus	ppm	ASTM D5185(m) 100	143	42	27
Zinc	ppm	ASTM D5185(m) 5.0	4	3	3
Sulfur	ppm	ASTM D5185(m) 1900	6005	2275	1798
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

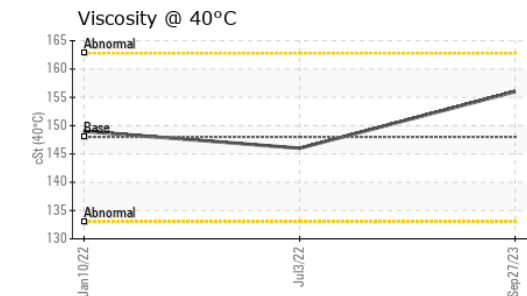
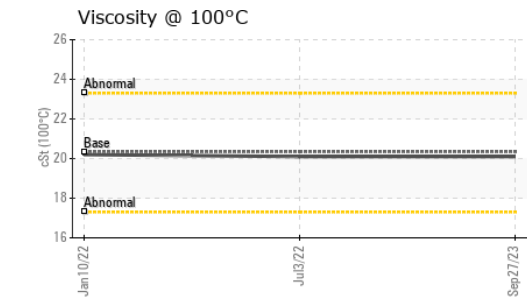
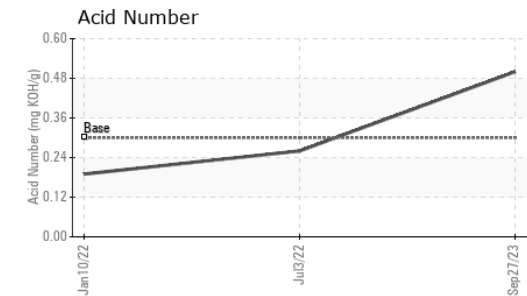
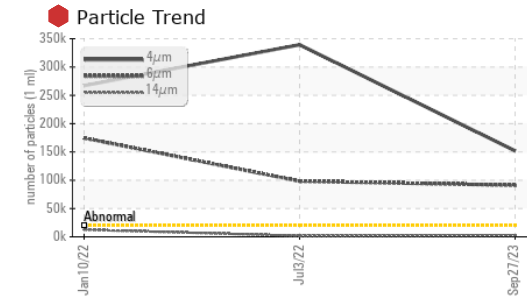
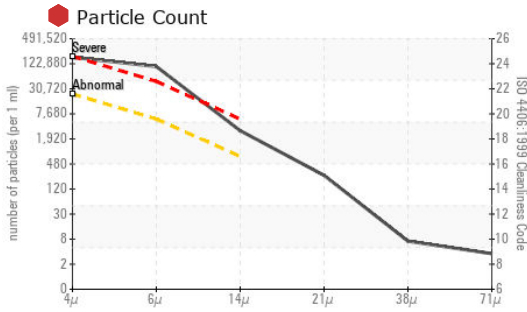
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >50	20	6	11
Sodium	ppm	ASTM D5185(m)	37	39	106
Potassium	ppm	ASTM D5185(m) >20	1	2	5

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 151919	● 339343	267083
Particles >6µm	ASTM D7647	>5000	● 91059	● 98246	174523
Particles >14µm	ASTM D7647	>640	▲ 2649	▲ 1691	12607
Particles >21µm	ASTM D7647	>160	▲ 226	207	1666
Particles >38µm	ASTM D7647	>40	6	1	32
Particles >71µm	ASTM D7647	>10	3	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	● 24/24/19	● 26/24/18	25/25/21

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0070666
Lab Number : 02590404
Unique Number : 5659470
Test Package : IND 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)

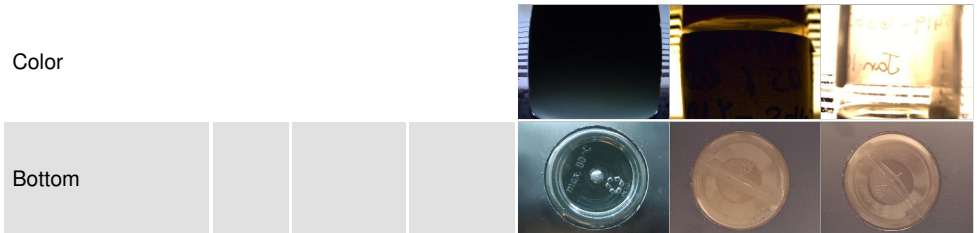
To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.3	0.50	0.26	0.19

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	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	MILKY
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)	148	156	146	149
Visc @ 100°C	cSt	ASTM D7279(m)	20.34	20.1	20.1	20.2
Viscosity Index (VI)	Scale	ASTM D2270*	159	149	159	157

SAMPLE IMAGES		method	limit/base	current	history1	history2
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Vale - Voisey's Bay
 Voisey's Bay Mine Site, P.O. Box 7001, Str. C Happy Valley
 Goose Bay, NL
 CA A0P 1C0
 Contact: Robert Feltham
 robert.feltham@vale.com

T:
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