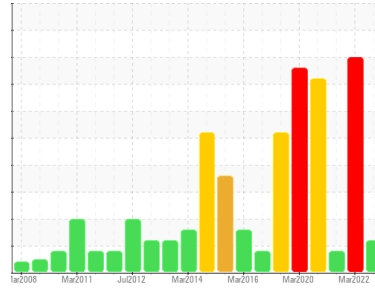
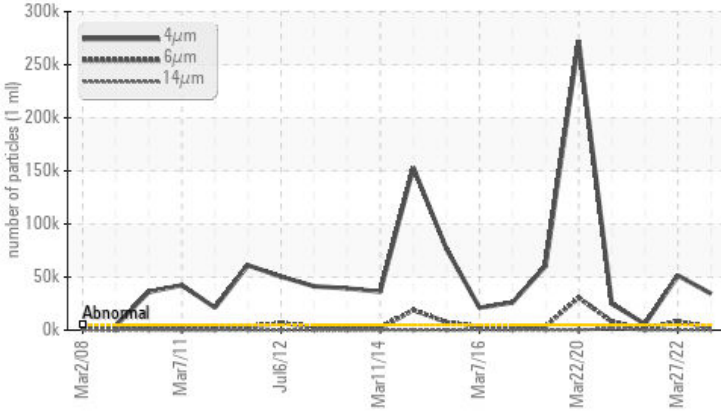


Machine Id
NIRO SOAVI HIGH PRESSURE PUMP LUBE SYSTEM (S/N 4995)
Component
Lube System
Fluid
PETRO CANADA ENDURATEX EP 220 (6 GAL)



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	SEVERE	ABNORMAL
Particles >4µm	ASTM D7647	>5000	▲ 34337	● 51438	▲ 5600
Particles >6µm	ASTM D7647	>1300	▲ 2461	▲ 8023	713
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/18/12	● 23/20/15	▲ 20/17/13

Customer Id: TAVTAV
Sample No.: PC0062605
Lab Number: 02596920
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	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

WATER



27 Mar 2022 Diag: Bill Quesnel

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We advise that you follow the water drain-off procedure for this component. 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. NOTE: Test values may be askew due high concentration of free water present in sample. All component wear rates are normal. Particles >4µm are severely high. ppm Water and water contamination levels are abnormal. Particles >6µm are abnormally high. Particles >14µm are notably high. There is a high concentration of water present in the oil. Excessive free water present. 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



VISCOSITY



19 Mar 2022 Diag: Kevin Marson

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA SYNDURO SHB ISO150, however, a fluid match indicates that this fluid is ISO 220 Gear Oil. Please confirm the oil type and grade on your next sample. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 220 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.

view report



ISO



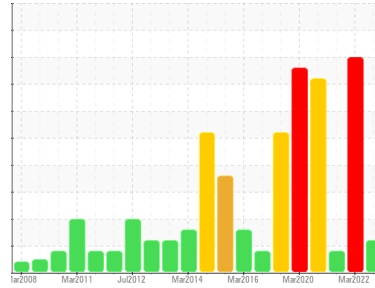
27 Mar 2021 Diag: Kevin Marson

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 recommend that you drain the oil from the component if this has not already been done. 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. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. The fluid was specified as PETRO CANADA SYNDURO SHB ISO150, however, a fluid match indicates that this fluid is ISO 220 Gear Oil. Please confirm the oil type and grade on your next sample. Moderate concentration of visible metal present. Cylinder wear is indicated. Particles >14µm are severely high. Particles >21µm are severely high. Particles >4µm are abnormally high. Particles >38µm are abnormally high. Particles >6µm are abnormally high. Viscosity of sample indicates oil is within ISO 220 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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



Machine Id
NIRO SOAVI HIGH PRESSURE PUMP LUBE SYSTEM (S/N 4995)
Component
Lube System
Fluid
PETRO CANADA ENDURATEX EP 220 (6 GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate 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	PC0062605	PC0051902	PC0051910
Sample Date	Client Info	30 Jul 2023	27 Mar 2022	19 Mar 2022
Machine Age	yrs Client Info	0	0	0
Oil Age	yrs Client Info	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >20	13	3	4
Chromium	ppm ASTM D5185(m) >20	0	0	0
Nickel	ppm ASTM D5185(m) >20	<1	0	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	<1	0	0
Aluminum	ppm ASTM D5185(m) >20	<1	<1	<1
Lead	ppm ASTM D5185(m) >20	<1	0	0
Copper	ppm ASTM D5185(m) >20	1	<1	<1
Tin	ppm ASTM D5185(m) >20	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)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 60	22	4	37
Barium	ppm ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm ASTM D5185(m) 0	0	0	<1
Manganese	ppm ASTM D5185(m) 0	0	0	0
Magnesium	ppm ASTM D5185(m) 0	1	<1	0
Calcium	ppm ASTM D5185(m) 0	4	1	2
Phosphorus	ppm ASTM D5185(m) 270	209	93	261
Zinc	ppm ASTM D5185(m) 0	23	5	3
Sulfur	ppm ASTM D5185(m) 11200	4820	2029	6117
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	3	2	4
Sodium	ppm ASTM D5185(m)	1	0	0
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1

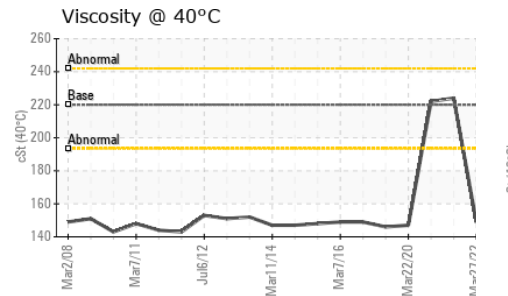
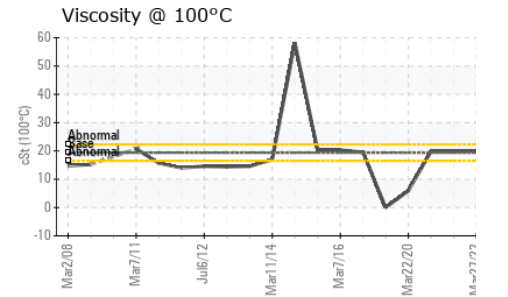
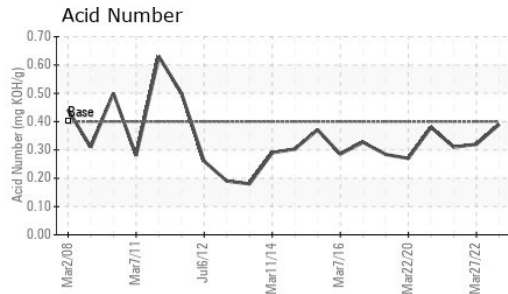
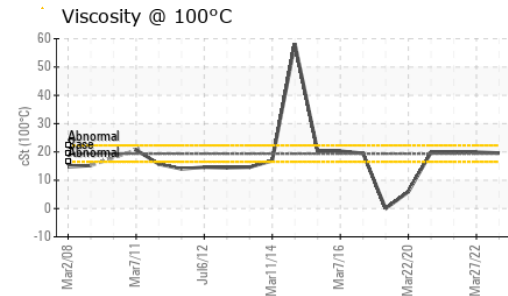
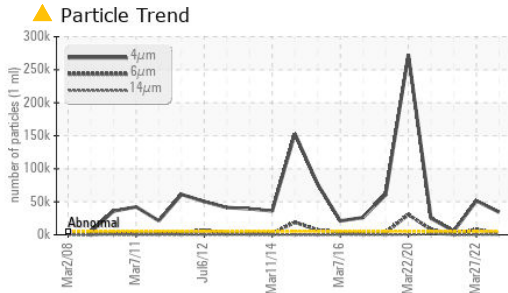
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 34337	◆ 51438	▲ 5600
Particles >6µm	ASTM D7647 >1300	▲ 2461	▲ 8023	713
Particles >14µm	ASTM D7647 >160	21	▲ 302	52
Particles >21µm	ASTM D7647 >40	6	56	11
Particles >38µm	ASTM D7647 >10	2	2	0
Particles >71µm	ASTM D7647 >3	1	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 22/18/12	◆ 23/20/15	▲ 20/17/13

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974* 0.40	0.39	0.32	0.31

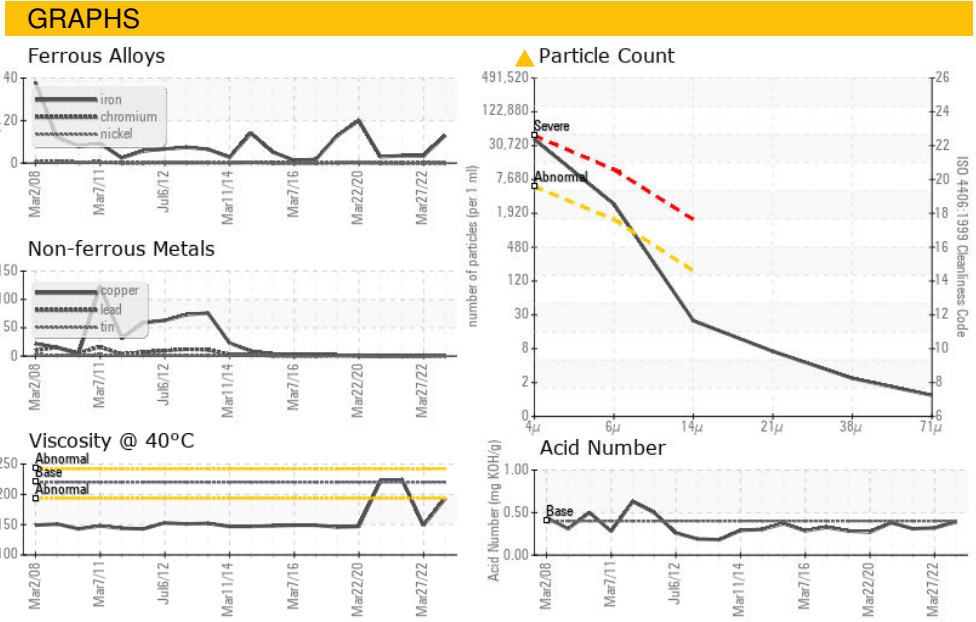
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	.2%
Free Water	scalar	Visual*		NEG	1%

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	193	▲ 224
Visc @ 100°C	cSt	ASTM D7279(m)	19.35	19.6	19.7
Viscosity Index (VI)	Scale	ASTM D2270*	99	116	100

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter			no image	no image	no image



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0062605 **Received** : 16 Nov 2023
Lab Number : 02596920 **Diagnosed** : 17 Nov 2023
Unique Number : 5682000 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: KV100, VI)

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 joseph.ross@saputo.com
 T: (519)655-2337
 F: (519)655-3449

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.