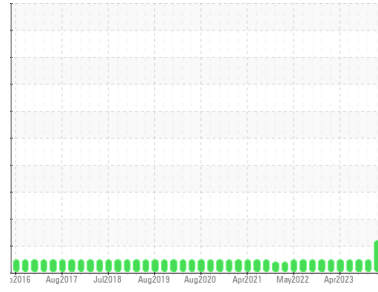


OIL ANALYSIS REPORT

Area
TEAM 1
Machine Id
122651 Motor Outboard
Component
Bearing
Fluid
PETRO CANADA TURBOFLO R&O 32 (4 LTR)

Sample Rating Trend



WEAR



DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. The fluid was specified as PETRO CANADA TURBOFLO R&O 32, however, a fluid match indicates that this fluid is ISO 32 R&O Hydraulic Oil. Please confirm the oil type and grade on your next sample.

Wear

Copper ppm levels are abnormal. A sharp increase in the copper level is noted. Bearing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0080432	PC0076935	PC0069900
Sample Date	Client Info			03 Jul 2024	22 Jan 2024	06 Oct 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>2	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	0
Lead	ppm	ASTM D5185(m)	>20	6	18	17
Copper	ppm	ASTM D5185(m)	>20	▲ 46	4	4
Tin	ppm	ASTM D5185(m)	>20	<1	1	<1
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

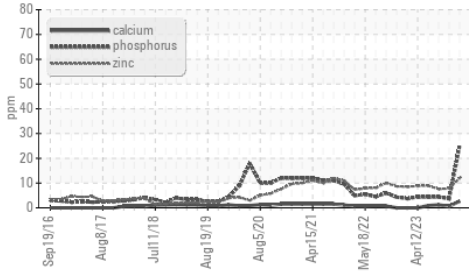
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1	0	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		0	0	0
Calcium	ppm	ASTM D5185(m)	0	3	<1	1
Phosphorus	ppm	ASTM D5185(m)	4	● 25	4	4
Zinc	ppm	ASTM D5185(m)	0	12	8	8
Sulfur	ppm	ASTM D5185(m)		190	154	160
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

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

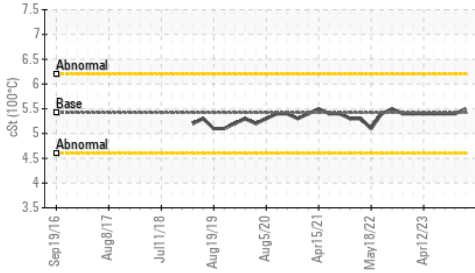
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.15	0.07	0.07	0.09

OIL ANALYSIS REPORT

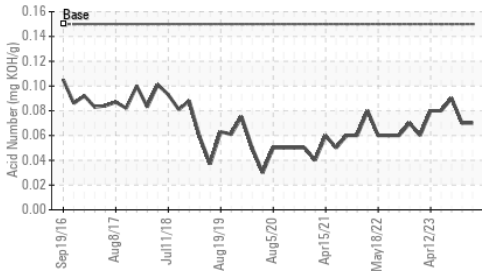
Additives



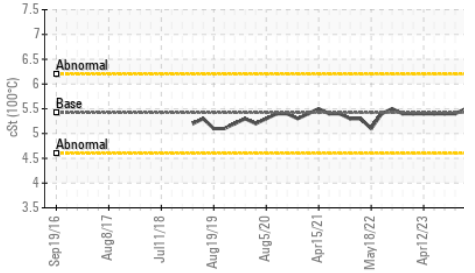
Viscosity @ 100°C



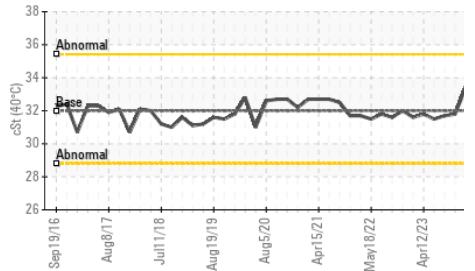
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C

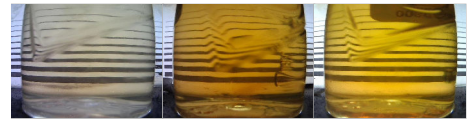


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

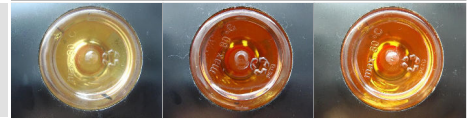
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32.0	33.4	31.8
Visc @ 100°C	cSt	ASTM D7279(m)	5.42	5.5	5.4
Viscosity Index (VI)	Scale	ASTM D2270*	103	99	103

SAMPLE IMAGES

Color

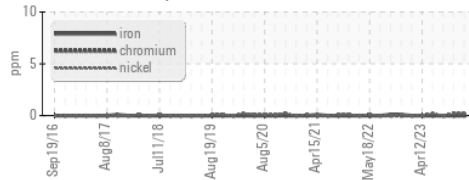


Bottom

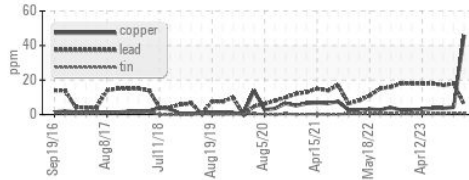


GRAPHS

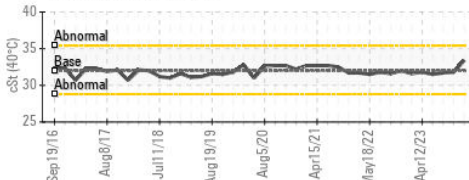
Ferrous Alloys



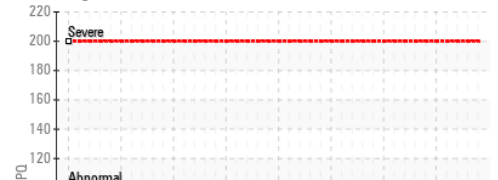
Non-ferrous Metals



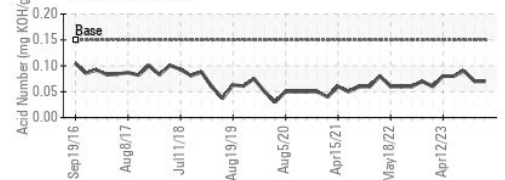
Viscosity @ 40°C



PQ



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080432 **Received** : 10 Jul 2024
Lab Number : 02647019 **Tested** : 10 Jul 2024
Unique Number : 5812571 **Diagnosed** : 11 Jul 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, TAN Man, VI)

Dryden Fibre
 Box 3001, 1 Duke Street
 Dryden, ON
 CA P8N 2Z7

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.

Contact: Adebukola Adekanye
 aadekanye@drydenfibre.ca
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 F: (807)223-9176