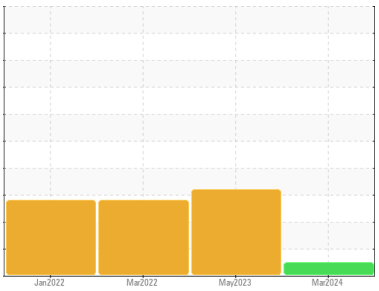
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
Off-Road
Machine Id
E453
Component
Hydraulic System
Fluid
PETRO CANADA DURATRAN (--- GAL)

DIAGNOSIS

Recommendation
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
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0090480**	PCA0090823	PCA0066804
Sample Date		Client Info		**22 Mar 2024**	02 May 2023	22 Mar 2022
Machine Age	hrs	Client Info		**11370**	9395	6838
Oil Age	hrs	Client Info		**11370**	9395	6838
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**NORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**17**	25	▲ 29
Chromium	ppm	ASTM D5185m	>10	**6**	8	9
Nickel	ppm	ASTM D5185m	>10	**<1**	0	0
Titanium	ppm	ASTM D5185m		**1**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>10	**3**	4	3
Lead	ppm	ASTM D5185m	>10	**1**	0	0
Copper	ppm	ASTM D5185m	>75	**6**	6	7
Tin	ppm	ASTM D5185m	>10	**1**	0	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	110	**76**	33	● 16
Barium	ppm	ASTM D5185m	0.0	**1**	0	0
Molybdenum	ppm	ASTM D5185m	0.0	**8**	5	5
Manganese	ppm	ASTM D5185m	1	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	13	**63**	46	21
Calcium	ppm	ASTM D5185m	3610	**2537**	1259	● 301
Phosphorus	ppm	ASTM D5185m	1192	**903**	691	● 506
Zinc	ppm	ASTM D5185m	1455	**1096**	778	● 445
Sulfur	ppm	ASTM D5185m	2641	**2773**	1737	● 827

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**15**	11	10
Sodium	ppm	ASTM D5185m		**0**	3	4
Potassium	ppm	ASTM D5185m	>20	**2**	<1	0

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	**4108**	583	3730
Particles >6µm	ASTM D7647	>1300	**170**	317	98
Particles >14µm	ASTM D7647	>160	**14**	54	8
Particles >21µm	ASTM D7647	>40	**3**	18	2
Particles >38µm	ASTM D7647	>10	**0**	3	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	**19/15/11**	16/15/13	19/14/10

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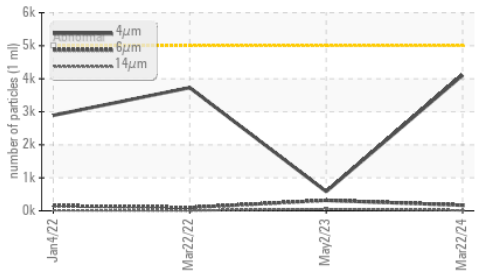
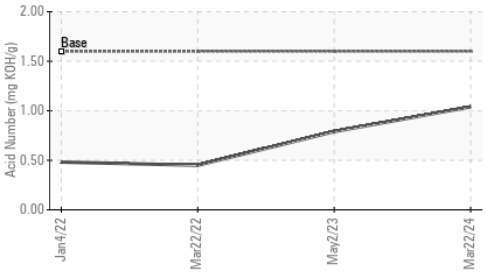
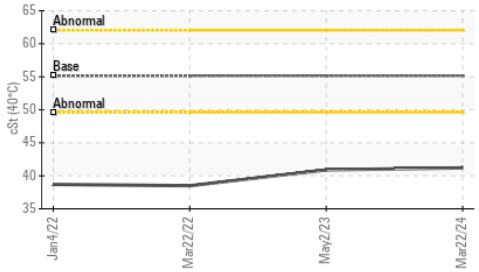
Particle Trend



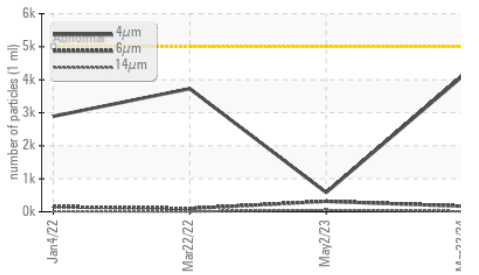
Acid Number



Viscosity @ 40°C



Particle Trend



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.6	**1.04**	0.79	0.45

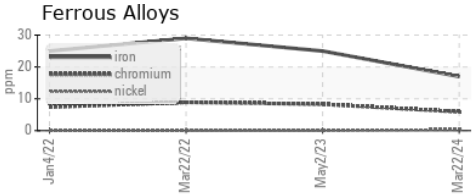
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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**	▲ 0.2%	NEG
Free Water	scalar	*Visual		**NEG**	▲ 1.0	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	55.14	**41.2**	40.9	38.5

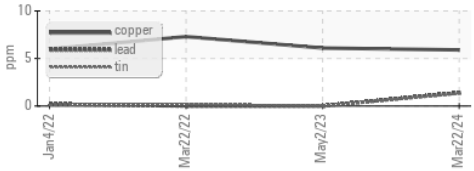
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

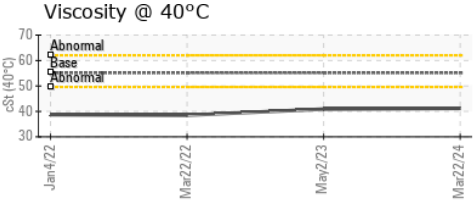
Ferrous Alloys



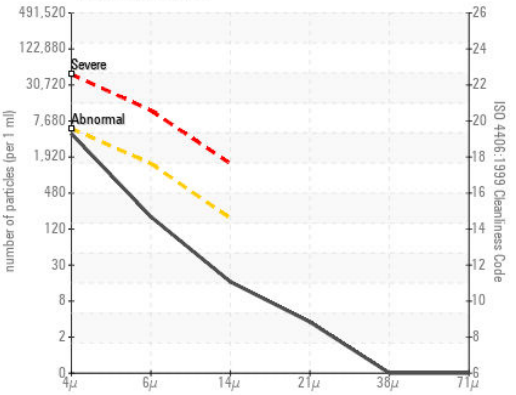
Non-ferrous Metals



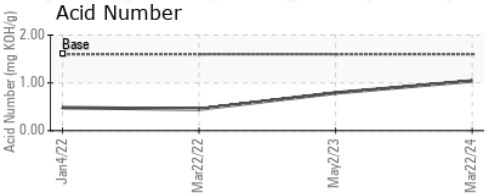
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090480
Lab Number : 06129362
Unique Number : 10943513
Test Package : MOB 2

Received : 26 Mar 2024
Tested : 27 Mar 2024
Diagnosed : 27 Mar 2024 - Wes Davis

WIN Waste Innovations - Shop # - Taunton
565 WINTHROP ST
TAUNTON, MA
US 02780
Contact: Dave Wilson
dwilson@win-waste.com
T:
F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)