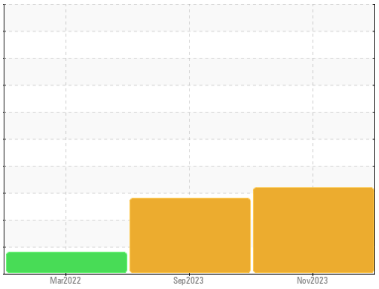
PROBLEM SUMMARY

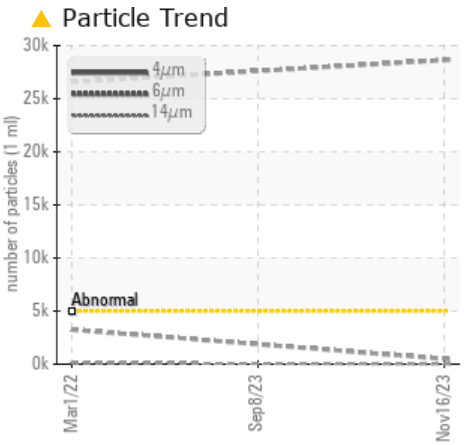
Machine Id
CATERPILLAR D6 8186 (S/N JJ601001)
Component
Hydraulic System
Fluid
PETRO CANADA DURATRAN XL SYN BLEND (--- QTS)

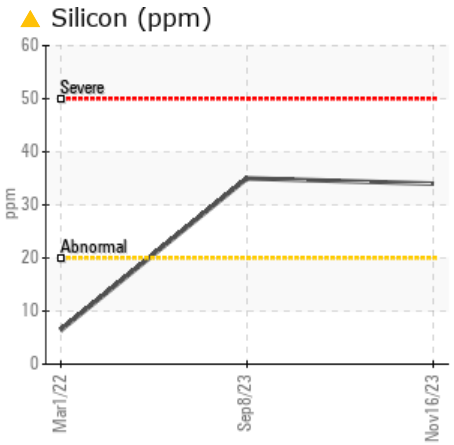
Sample Rating Trend

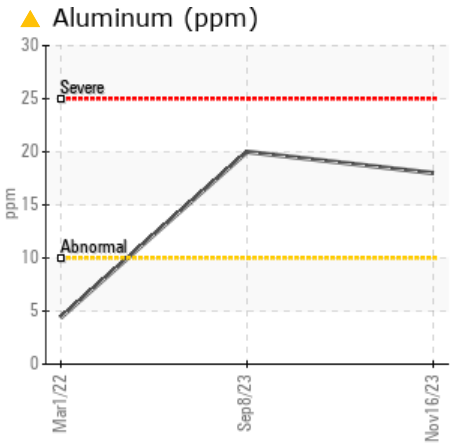


DIRT

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Aluminum	ppm	ASTM D5185m	>10	▲ **18**	▲ 20	4
Silicon	ppm	ASTM D5185m	>20	▲ **34**	▲ 35	6
Particles >4µm		ASTM D7647	>5000	▲ **28638**	---	▲ 26585
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/16/12**	---	▲ 22/19/14

Customer Id: TRANEW
Sample No.: WC0863008
Lab Number: 06012325
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

08 Sep 2023 Diag: Jonathan Hester

DIRT

We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

01 Mar 2022 Diag: Don Baldridge

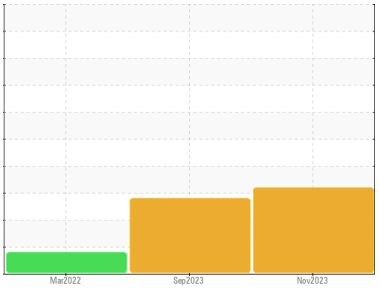
ISO

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a high 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

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
CATERPILLAR D6 8186 (S/N JJ601001)
Component
Hydraulic System
Fluid
PETRO CANADA DURATRAN XL SYN BLEND (--- QTS)

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0863008**	WC0837011	WC0674205
Sample Date		Client Info		**16 Nov 2023**	08 Sep 2023	01 Mar 2022
Machine Age	hrs	Client Info		**4000**	3472	510
Oil Age	hrs	Client Info		**4000**	3472	510
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	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	**25**	16	4
Chromium	ppm	ASTM D5185m	>10	**2**	2	0
Nickel	ppm	ASTM D5185m	>10	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>10	▲ **18**	▲ 20	4
Lead	ppm	ASTM D5185m	>10	**2**	2	0
Copper	ppm	ASTM D5185m	>75	**17**	12	8
Tin	ppm	ASTM D5185m	>10	**<1**	<1	0
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

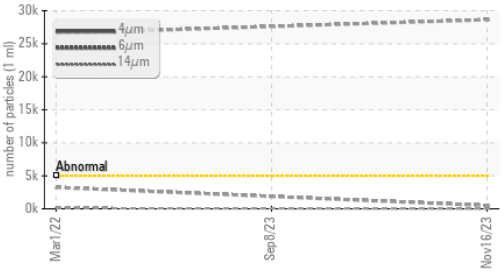
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	112	**8**	0	0
Barium	ppm	ASTM D5185m	1	**0**	0	0
Molybdenum	ppm	ASTM D5185m	1	**<1**	<1	0
Manganese	ppm	ASTM D5185m	1	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	10	**0**	12	0
Calcium	ppm	ASTM D5185m	3500	**738**	461	198
Phosphorus	ppm	ASTM D5185m	1200	**709**	746	779
Zinc	ppm	ASTM D5185m	1400	**878**	965	882
Sulfur	ppm	ASTM D5185m	2370	**2064**	2214	1456

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	▲ **34**	▲ 35	6
Sodium	ppm	ASTM D5185m		**13**	7	0
Potassium	ppm	ASTM D5185m	>20	**1**	<1	0

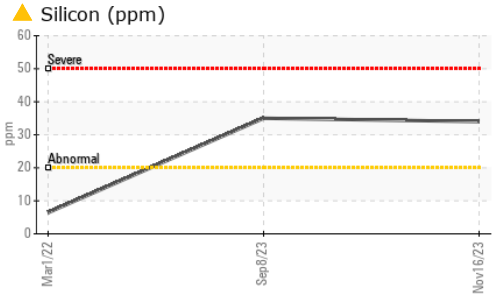
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **28638**	---	▲ 26585
Particles >6µm		ASTM D7647	>1300	**500**	---	▲ 3248
Particles >14µm		ASTM D7647	>160	**21**	---	99
Particles >21µm		ASTM D7647	>40	**6**	---	25
Particles >38µm		ASTM D7647	>10	**0**	---	1
Particles >71µm		ASTM D7647	>3	**0**	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/16/12**	---	▲ 22/19/14

OIL ANALYSIS REPORT

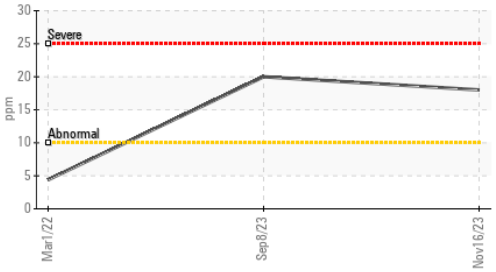
Particle Trend



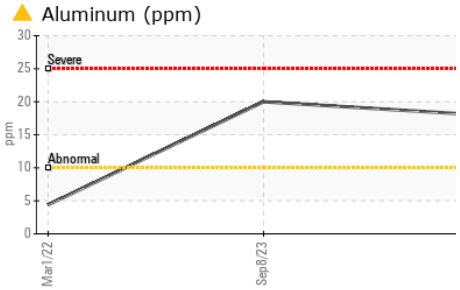
Silicon (ppm)



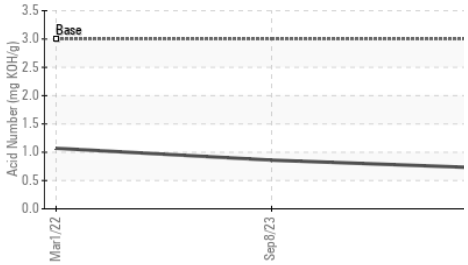
Aluminum (ppm)



Aluminum (ppm)



Acid Number



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	3.0	**0.72**	0.86	1.07

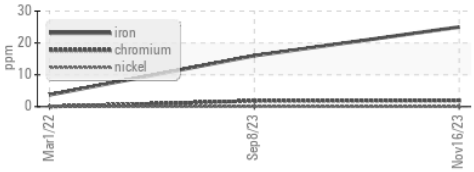
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	▲ MODER	LIGHT
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.85	**40.0**	40.5	42.2

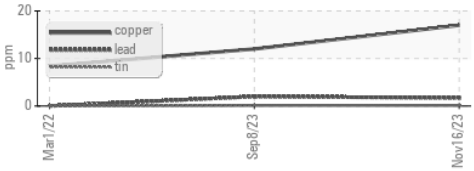
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

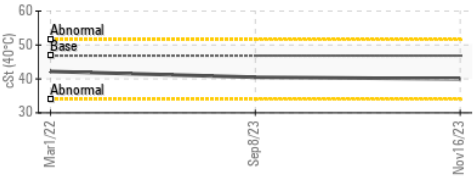
Ferrous Alloys



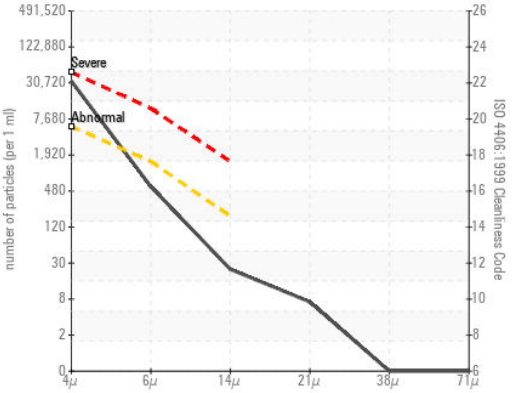
Non-ferrous Metals



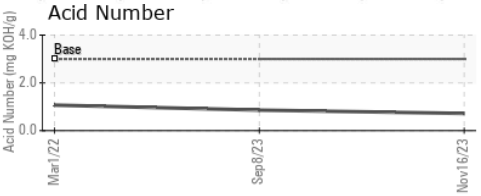
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0863008 **Received** : 20 Nov 2023
Lab Number : 06012325 **Diagnosed** : 22 Nov 2023
Unique Number : 10751469 **Diagnostician** : Don Baldridge
Test Package : CONST (Additional Tests: PrtCount)

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)

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