



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2XR02318
Component
Right Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (27 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC909842	WC909841	WC991501
Sample Date		Client Info		10 Jan 2023	10 Jan 2022	15 Oct 2016
Machine Age	hrs	Client Info		1570	1496	1241
Oil Age	hrs	Client Info		80	50	75
Filter Age	hrs	Client Info		0	75	75
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	---	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	8	9	29
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	2
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	5	6	22
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

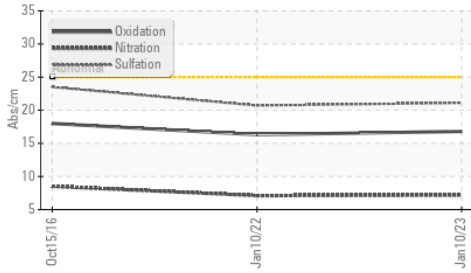
Silicon	ppm	ASTM D5185(m)	>25	1	1	4
Potassium	ppm	ASTM D5185(m)	>20	6	▲ 6	6
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>3	0	0	0.2
Nitration	Abs/cm	ASTM D7624*	>20	7.2	7.1	8.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.1	20.7	23.5
Silt	scalar	Visual*	NONE	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	VLITE	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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

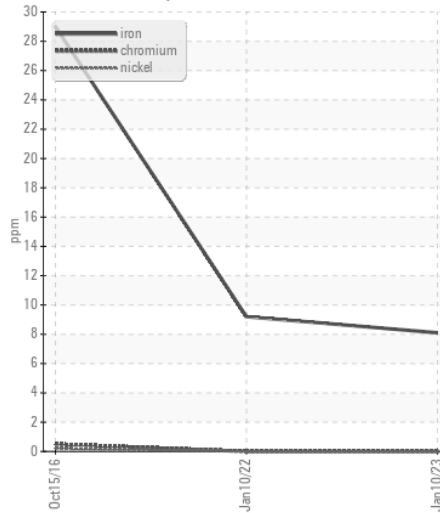
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>158	5	3	5
Boron	ppm	ASTM D5185(m)	250	145	145	30
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	0	1	2
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	10	40	24
Calcium	ppm	ASTM D5185(m)	3000	1975	1952	2414
Phosphorus	ppm	ASTM D5185(m)	1150	885	871	1002
Zinc	ppm	ASTM D5185(m)	1350	1032	1043	1244
Sulfur	ppm	ASTM D5185(m)	4250	2644	2672	3398
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.8	16.3	18.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.6	14.4	15.6

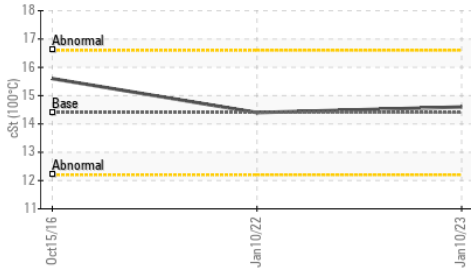
FT-IR (Direct Trend)



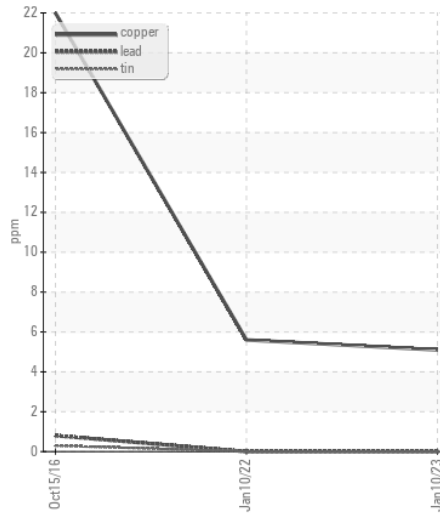
Ferrous Alloys



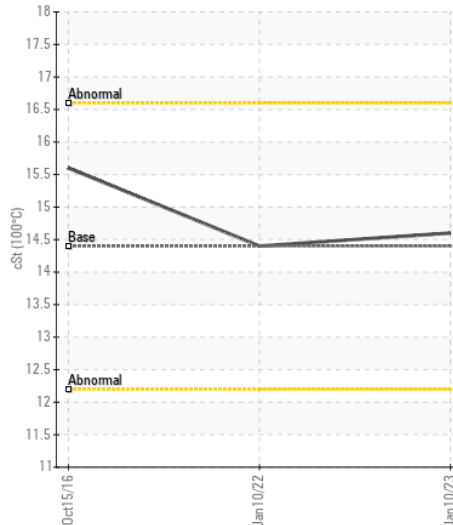
Viscosity @ 100°C



Non-ferrous Metals



Viscosity @ 100°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC909842
Lab Number : 02637122
Unique Number : 5786284
Test Package : MAR 1
Received : 23 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

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.

BRADY METCALFE
 31 Absalom Street E
 Mildmay, ON
 CA N0G 2J0
 Contact: BRADY
 bmetcalfe@gemsysinc.on.ca
 T: (647)212-1778
 F: