MOBIL LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

Machine Id
ROADTEC 2611300
Component
Right Gearbox
Fluid
SAE 80W90 (--- GAL)

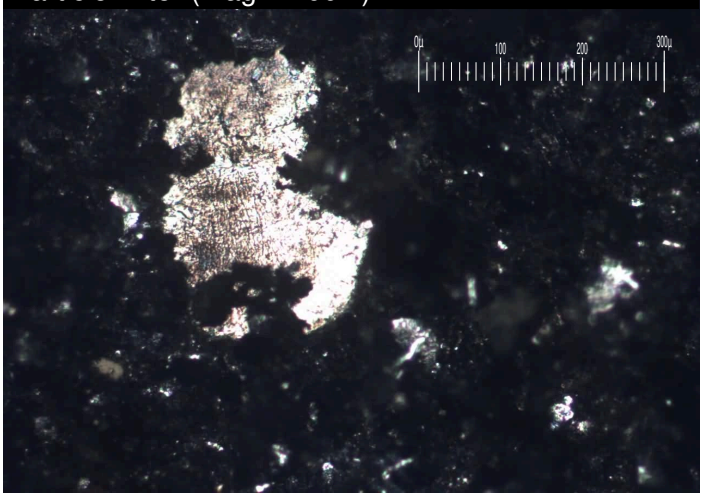
RECOMMENDATION

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. We recommend an early resample to monitor this condition.

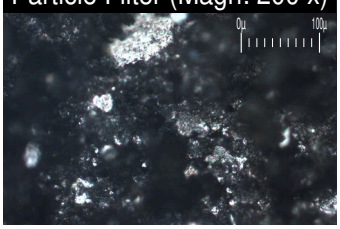
WEAR

Iron ppm levels are severe. PQ levels are severe. Wear particle analysis indicates that the ferrous rolling, ferrous black oxides, ferrous black oxides and ferrous rubbing particles are abnormal. Moderate concentration of visible metal present. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

Particle Filter (Magn: 100 x)



Particle Filter (Magn: 200 x)



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**PC0043112**	PC0043105	---
Sample Date		Client Info		**05 Jan 2023**	19 Jan 2022	---
Machine Age	hrs	Client Info		**6300**	5600	---
Oil Age	hrs	Client Info		**200**	500	---
Filter Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	Changed	---
Filter Changed		Client Info		**N/A**	N/A	---
Sample Status				**SEVERE**	ABNORMAL	---
PQ		ASTM D8184*		▲ **2823**	129	---
Iron	ppm	ASTM D5185(m)	>200	▲ **2013**	▲ 1691	---
Chromium	ppm	ASTM D5185(m)	>10	**2**	2	---
Nickel	ppm	ASTM D5185(m)	>10	**1**	1	---
Titanium	ppm	ASTM D5185(m)		**0**	0	---
Silver	ppm	ASTM D5185(m)		**0**	0	---
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	<1	---
Lead	ppm	ASTM D5185(m)	>50	**0**	0	---
Copper	ppm	ASTM D5185(m)	>200	**<1**	<1	---
Tin	ppm	ASTM D5185(m)	>10	**0**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
White Metal	scalar	Visual*	NONE	▲ **MODER**	NONE	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Ferrous Rubbing	Scale 0-10	ASTM D7684*		▲ **7**		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		▲ **4**		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		▲ **2**		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				

CONTAMINANTS

There is no indication of any contamination in the oil.

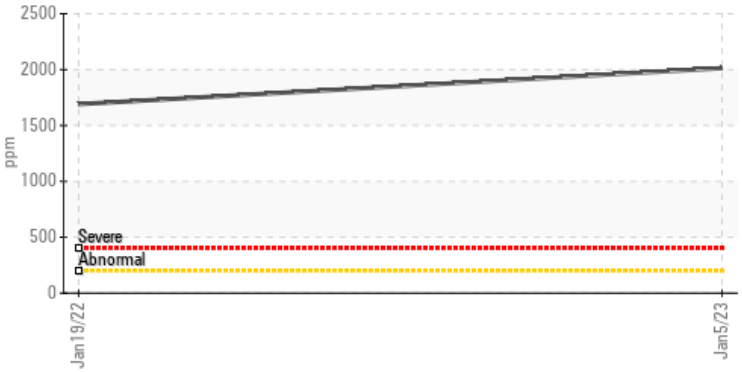
Silicon	ppm	ASTM D5185(m)	>50	**6**	6	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	---
Water		WC Method	>0.2	**NEG**	NEG	---
Silt	scalar	Visual*	NONE	**NONE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	LIGHT	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**NORML**	NORML	---
Odor	scalar	Visual*	NORML	**NORML**	BURNT	---
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	---
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*				
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*				

OIL CONDITION

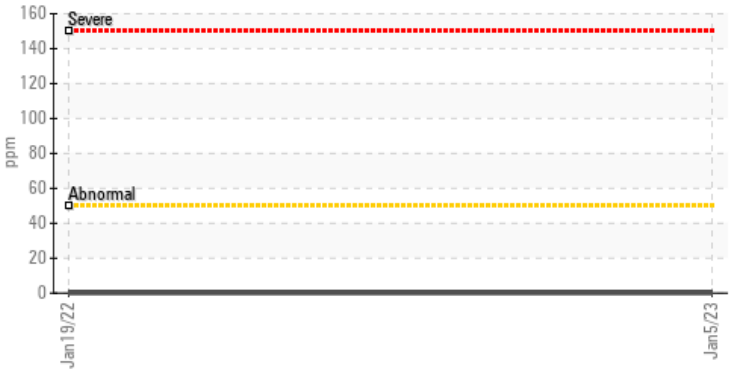
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)	>50	**1**	0	---
Boron	ppm	ASTM D5185(m)	200	**73**	13	---
Barium	ppm	ASTM D5185(m)	0	**0**	0	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	---
Manganese	ppm	ASTM D5185(m)		**15**	8	---
Magnesium	ppm	ASTM D5185(m)	0	**0**	0	---
Calcium	ppm	ASTM D5185(m)	20	**4**	23	---
Phosphorus	ppm	ASTM D5185(m)	1000	**386**	299	---
Zinc	ppm	ASTM D5185(m)	20	**2**	17	---
Sulfur	ppm	ASTM D5185(m)	22000	**6337**	22346	---
Visc @ 40°C	cSt	ASTM D7279(m)	135	**194**	148	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	**23.3**	14.9	---
Viscosity Index (VI)	Scale	ASTM D2270*	112	**147**	100	---
Lubricant Degradation	Scale 0-10	ASTM D7684*				

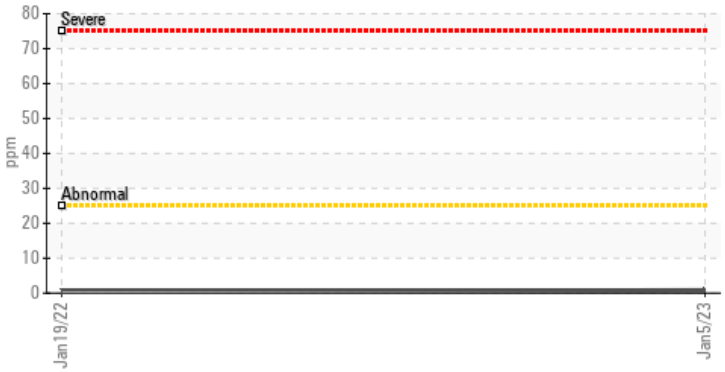
▲ Iron (ppm)



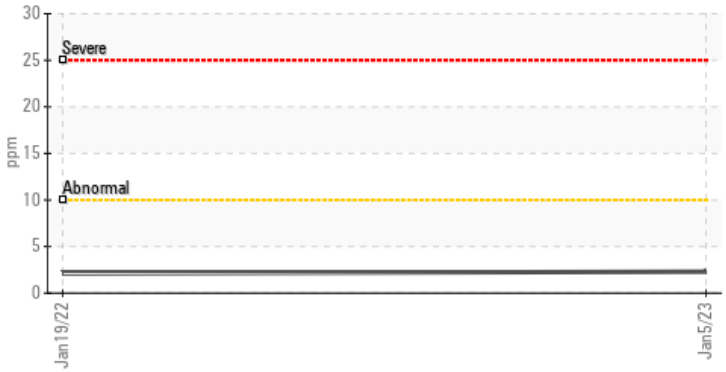
Lead (ppm)



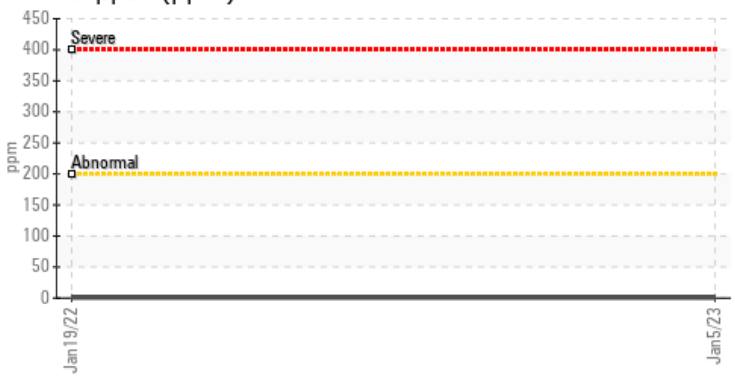
Aluminum (ppm)



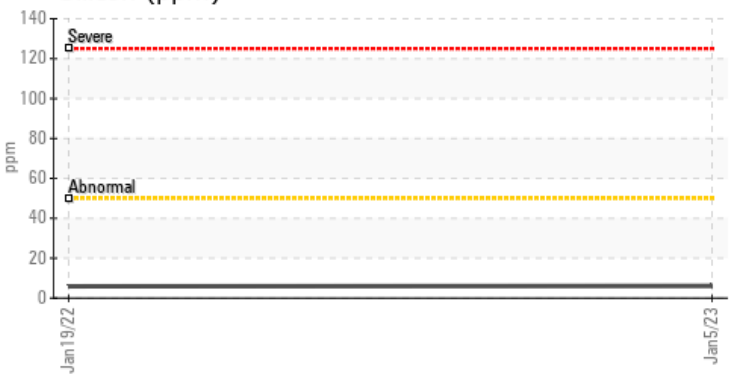
Chromium (ppm)



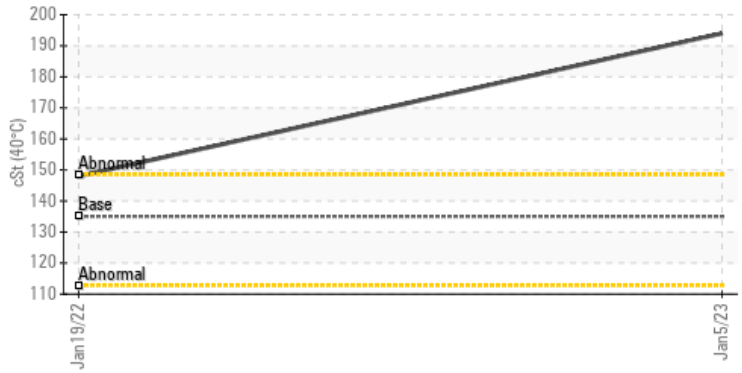
Copper (ppm)



Silicon (ppm)



Viscosity @ 40°C



▲ PQ

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0043112
Lab Number : 02534399
Unique Number : 5515398
Test Package : MOB 1 (Additional Tests: A-Ferr, Bottom, BottomAnalysis, FilterPatch, KV100, PQ, Oil)

Received : 19 Jan 2023
Tested : 23 Jan 2023
Diagnosed : 25 Jan 2023 - Kevin Marson

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.

LAVIS CONTRACTING
37462A HURON ROAD
CLINTON, ON
CA N0M 1L0
Contact: Doug Francis
dfrancis@lavis.ca
T: (519)482-3694
F: (519)482-7886

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