MOB I LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
MICHAUDVILLE
Machine Id
1170
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

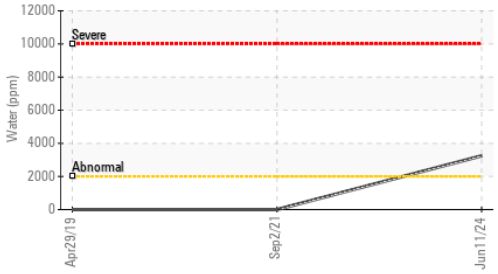
There is a light concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Test for glycol is negative. High amount of ingressed dirt has caused abrasive wear to the component.

FLUID CONDITION

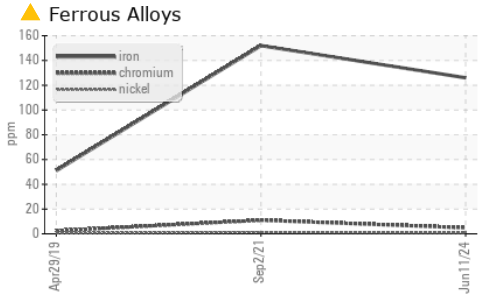
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0082911	PC0054224	PC0011460
Sample Date		Client Info		11 Jun 2024	02 Sep 2021	29 Apr 2019
Machine Age	hrs	Client Info		11708	11431	39122
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
PQ		ASTM D8184*		22	16	---
Iron	ppm	ASTM D5185(m)	>100	▲ 126	▲ 152	51
Chromium	ppm	ASTM D5185(m)	>20	5	11	2
Nickel	ppm	ASTM D5185(m)	>4	<1	1	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	10	23	44
Lead	ppm	ASTM D5185(m)	>40	4	22	1
Copper	ppm	ASTM D5185(m)	>330	38	138	7
Tin	ppm	ASTM D5185(m)	>15	<1	2	<1
Vanadium	ppm	ASTM D5185(m)		0	<1	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Silicon	ppm	ASTM D5185(m)	>25	▲ 26	▲ 76	4
Potassium	ppm	ASTM D5185(m)	>20	8	20	124
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.2	▲ 0.324	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 3247	---	---
Glycol	%	ASTM D7922*		0.0	0.0	0.0
Soot %	%	ASTM D7844*	>3	0.6	1.6	0.5
Nitration	Abs/cm	ASTM D7624*	>20	13.6	16.9	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.9	▲ 33.9	21.4
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	NEG	NEG
Sodium	ppm	ASTM D5185(m)		23	68	7
Boron	ppm	ASTM D5185(m)	2	7	54	12
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	60	22	60
Manganese	ppm	ASTM D5185(m)	0	2	4	<1
Magnesium	ppm	ASTM D5185(m)	950	906	157	847
Calcium	ppm	ASTM D5185(m)	1050	1329	2358	1142
Phosphorus	ppm	ASTM D5185(m)	995	1025	1060	931
Zinc	ppm	ASTM D5185(m)	1180	1243	1271	1145
Sulfur	ppm	ASTM D5185(m)	2600	2392	2867	2644
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.8	▲ 30.2	17.7
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	96.1	▲ 121	73.1
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	13.7	▲ 15.3	11.3
Viscosity Index (VI)	Scale	ASTM D2270*	144	144	131	146

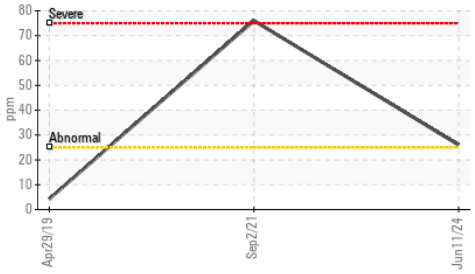
Water (KF)



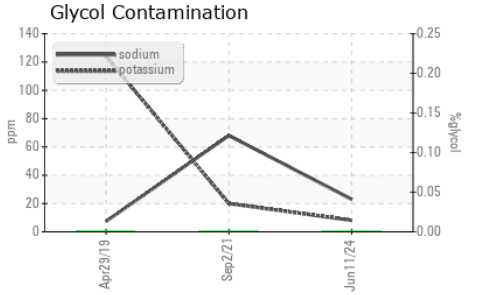
Ferrous Alloys



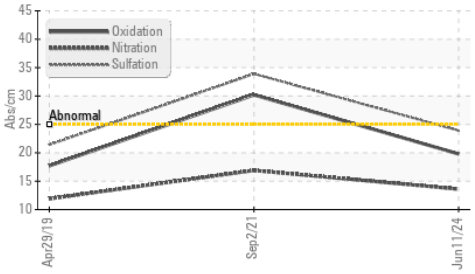
Silicon (ppm)



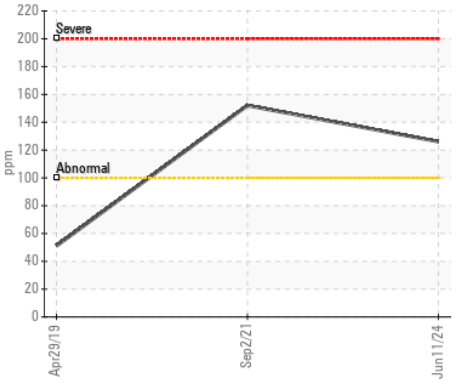
Glycol Contamination



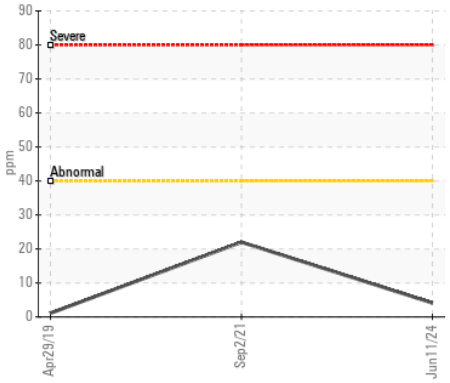
FT-IR (Direct Trend)



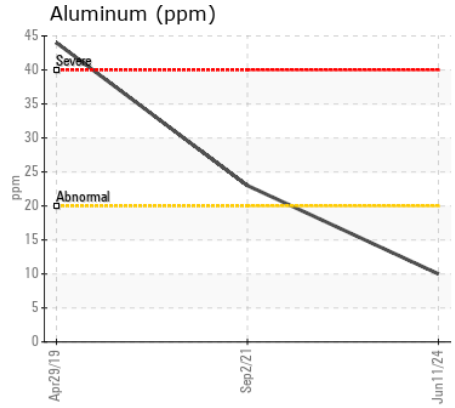
Iron (ppm)



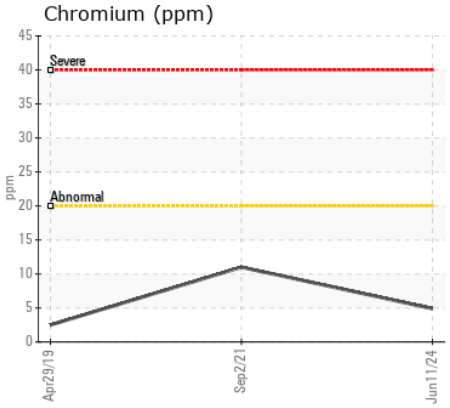
Lead (ppm)



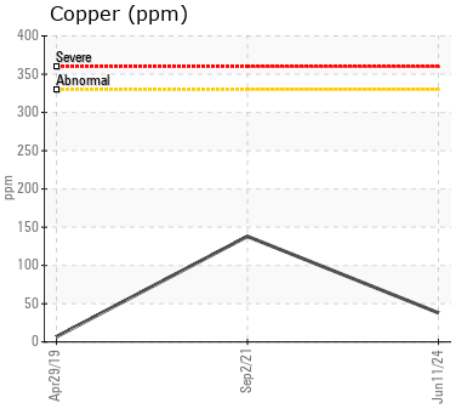
Aluminum (ppm)



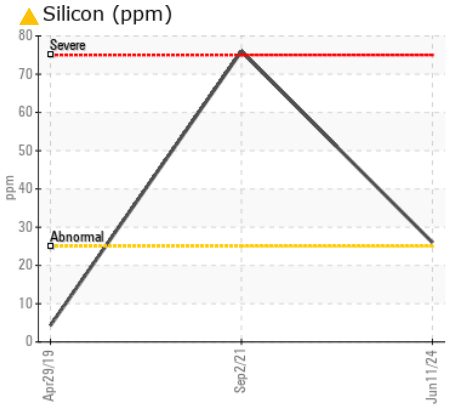
Chromium (ppm)



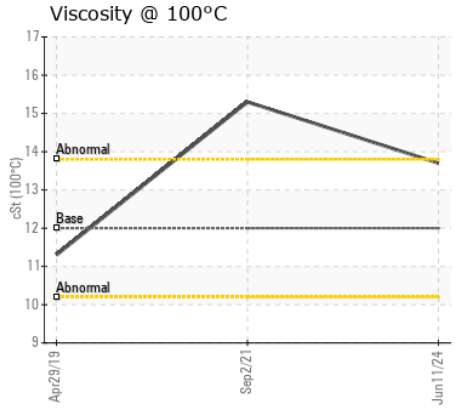
Copper (ppm)



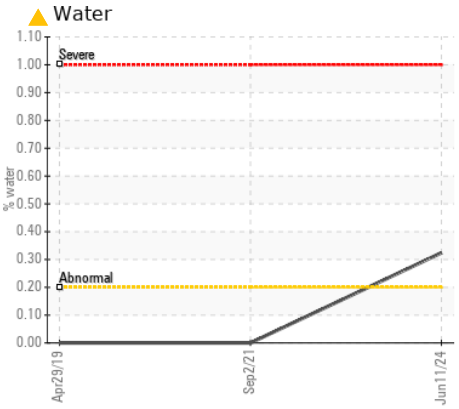
Silicon (ppm)



Viscosity @ 100°C



Water



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0082911
Lab Number : 02641370
Unique Number : 5798909
Test Package : MOB 1 (Additional Tests: Glycol, KF, KV40, PQ, VI, Visual)

Received : 12 Jun 2024
Tested : 13 Jun 2024
Diagnosed : 13 Jun 2024 - 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.

LES ENTREPRISES MICHAUDVILLE INC.
270 RUE BRUNET
MONT ST-HILAIRE, QC
CA J3H 0M6
Contact: Martin Trudel
mtrudel@michaudville.com
T:
F: