MOB I VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
MCCLOSKEY 86949 - VARIABLE SPEED
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Oil and 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

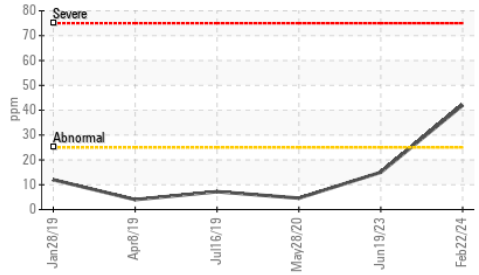
Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

FLUID CONDITION

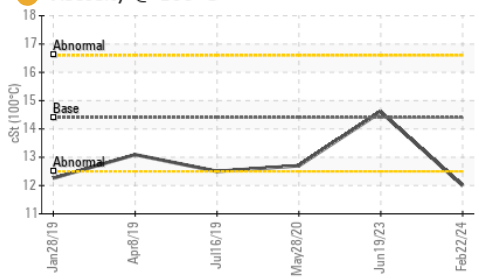
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA056298	VPA040775	VPA259086
Sample Date		Client Info		22 Feb 2024	19 Jun 2023	28 May 2020
Machine Age	hrs	Client Info		290	3930	1549
Oil Age	hrs	Client Info		290	100	369
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	29	27	55
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	<1	1
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	30	<1	<1
Tin	ppm	ASTM D5185m	>15	3	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 42	15	5
Potassium	ppm	ASTM D5185m	>20	6	1	3
Fuel	%	ASTM D3524	>5	0.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.2	5.9	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	20.2	21
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>216	2	1	2
Boron	ppm	ASTM D5185m	250	29	112	45
Barium	ppm	ASTM D5185m	10	2	0	0
Molybdenum	ppm	ASTM D5185m	100	68	58	42
Manganese	ppm	ASTM D5185m		4	<1	<1
Magnesium	ppm	ASTM D5185m	450	862	724	526
Calcium	ppm	ASTM D5185m	3000	1170	1429	1331
Phosphorus	ppm	ASTM D5185m	1150	955	1009	868
Zinc	ppm	ASTM D5185m	1350	1175	1207	948
Sulfur	ppm	ASTM D5185m	4250	3356	3755	2818
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	15.8	17.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.1	9.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	● 12.0	14.6	12.7

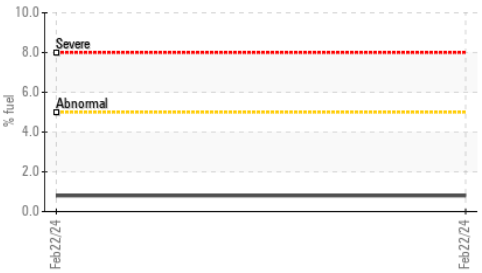
Silicon (ppm)



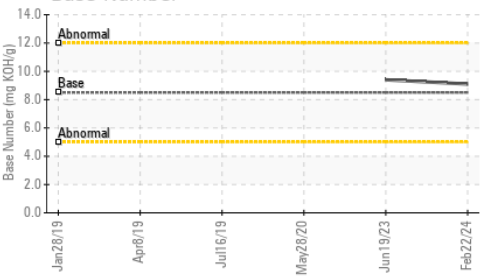
Viscosity @ 100°C



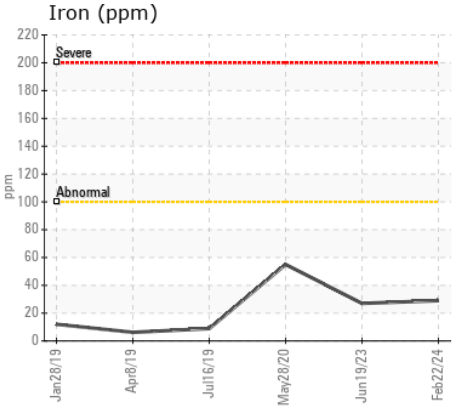
Fuel Dilution



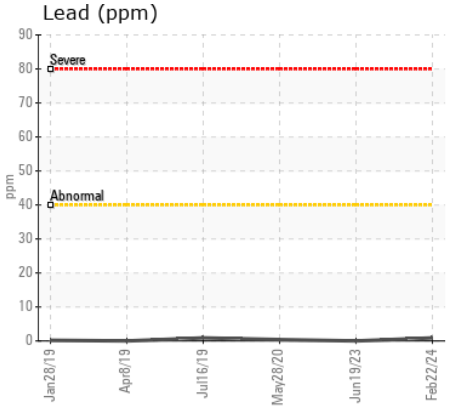
Base Number



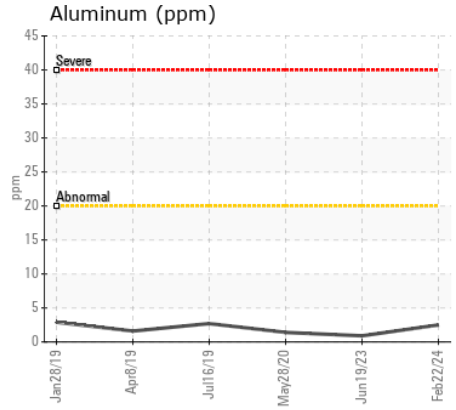
Iron (ppm)



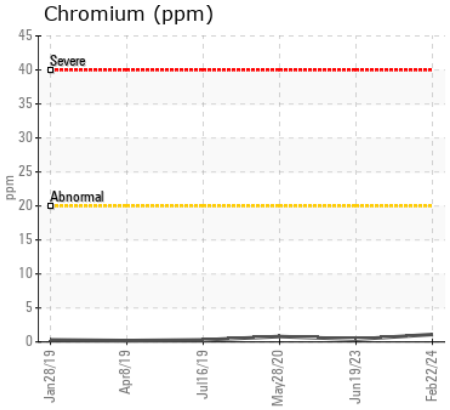
Lead (ppm)



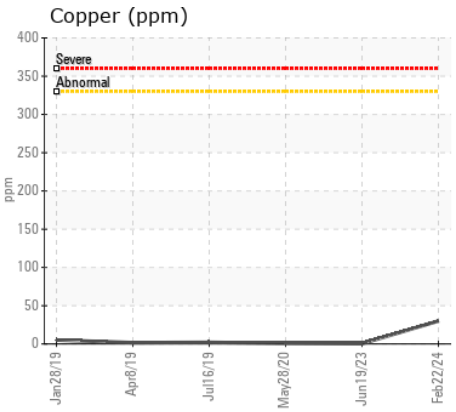
Aluminum (ppm)



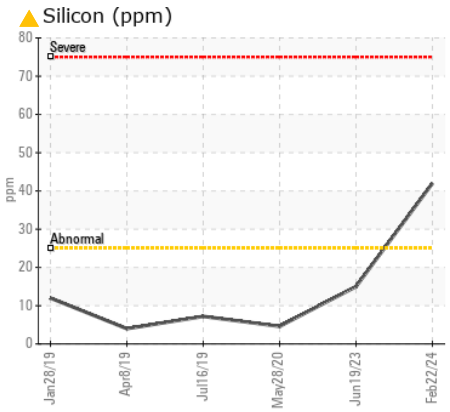
Chromium (ppm)



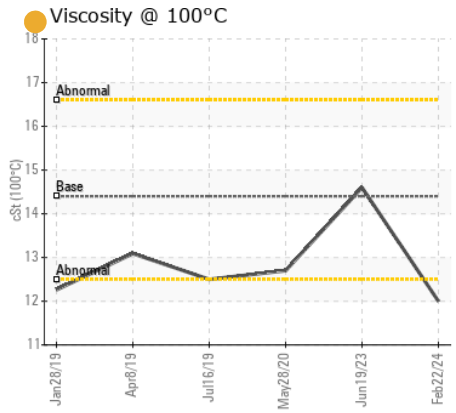
Copper (ppm)



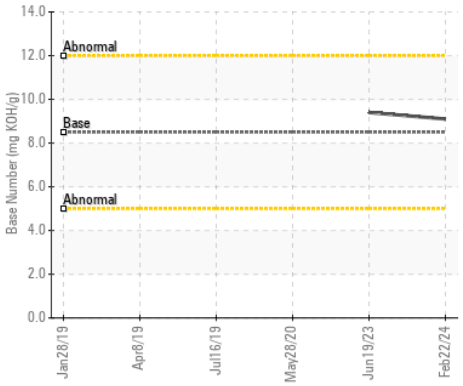
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA056298
Lab Number : 06102665
Unique Number : 10900895
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 28 Feb 2024
Tested : 04 Mar 2024
Diagnosed : 04 Mar 2024 - Jonathan Hester

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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