

OIL ANALYSIS REPORT



DAVID JOHNSTONE 13098 NO UNIT VPA050552 - STARBOARD DIESEL ENGINE

Sample No: VPA050552

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA050552	---	---	---
Sample Date	25 Jun 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

Bridgeview Marine Services
 PO Box 22044, Twin Lake Postal Outlet
 SARNIA, ON
 CA N7S 6J4
 Contact: Keegan Wade
 keegan@bvmsca
 T: (519)491-7402
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OIL CONDITION

Visc @ 40°C	cSt	▲ 89.0	---	---	---
Visc @ 100°C	cSt	▲ 11.1	---	---	---
Viscosity Index (VI)	Scale	▲ 111	---	---	---
Oxidation (PA)	%	32	---	---	---

Diagnosis

We recommend that you change the oil. We recommend an early resample to monitor this condition. Tin ppm levels are abnormal. Piston wear is indicated. We have assumed that this component is not breaking in (age of component not reported). Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.7	---	---	---
Nitration (PA)	%	40	---	---	---
Sulfation (PA)	%	43	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	▲ 1.9	---	---	---
Silicon	ppm	■ 19	---	---	---
Sodium	ppm	■ 5	---	---	---
Potassium	ppm	■ 2	---	---	---

WEAR METALS

Iron	ppm	■ 71	---	---	---
Copper	ppm	■ 13	---	---	---
Lead	ppm	■ 5	---	---	---
Tin	ppm	▲ 27	---	---	---
Aluminum	ppm	■ 2	---	---	---
Chromium	ppm	■ 4	---	---	---
Molybdenum	ppm	■ 26	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	■ 1	---	---	---
Silver	ppm	■ <1	---	---	---
Manganese	ppm	■ 1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

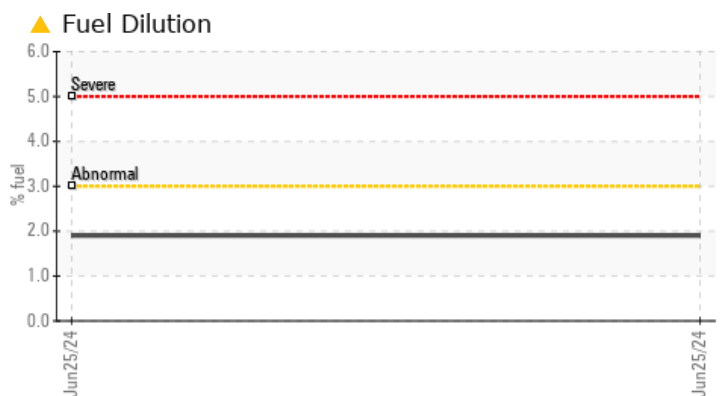
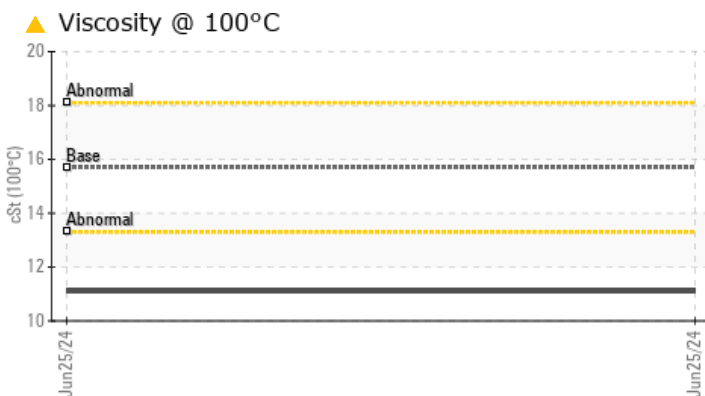
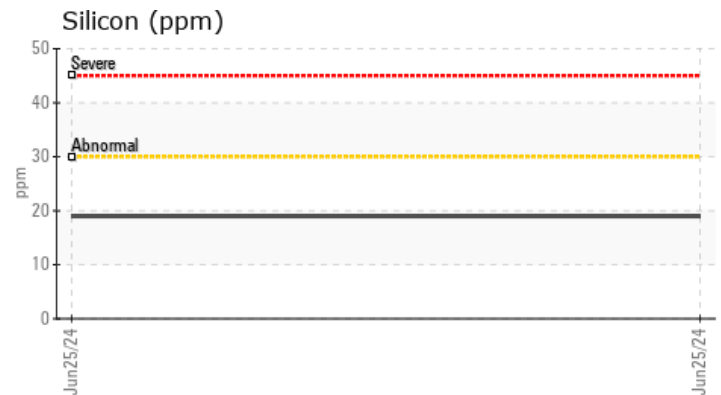
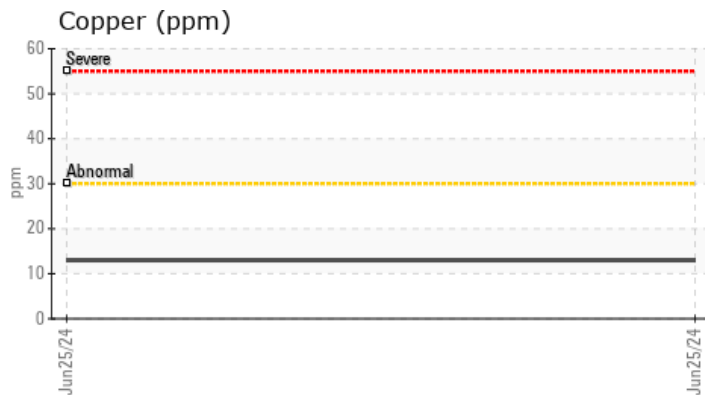
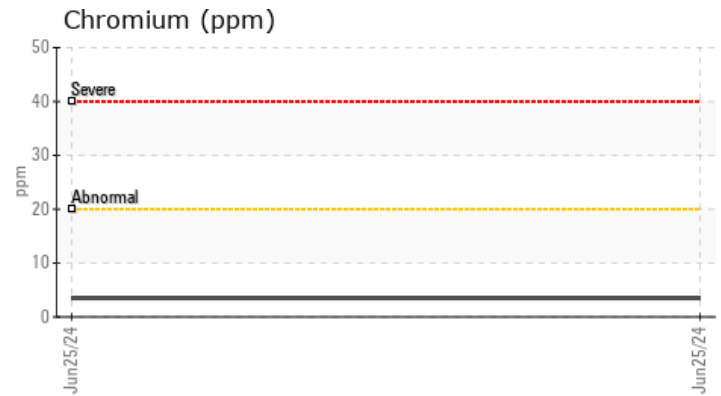
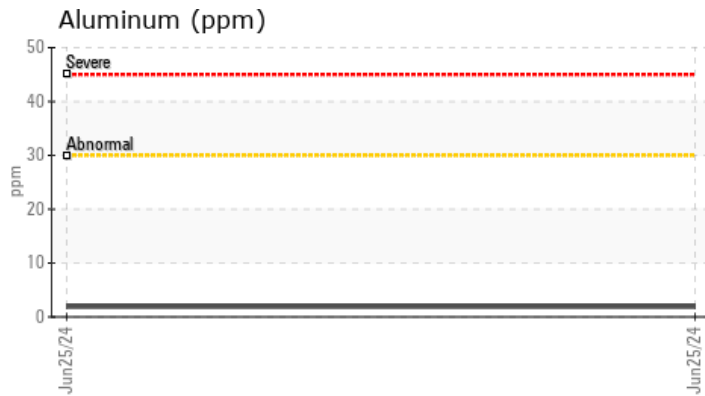
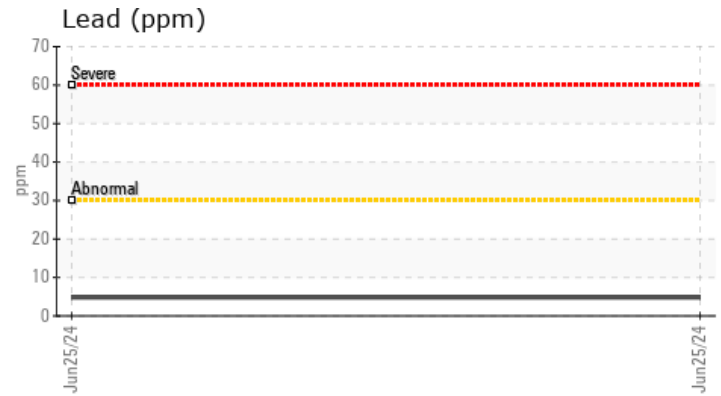
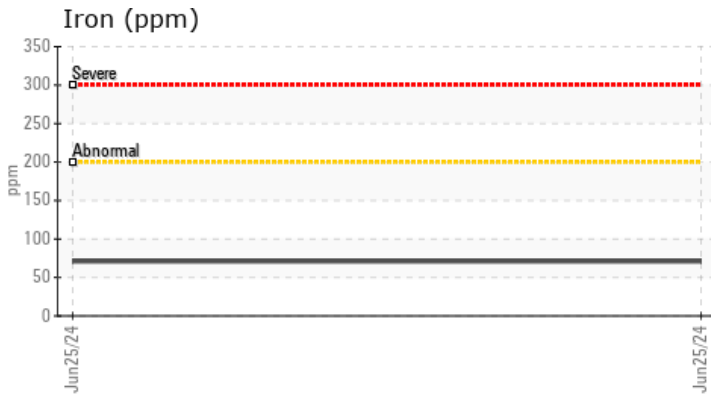
Calcium	ppm	■ 2272	---	---	---
Magnesium	ppm	68	---	---	---
Zinc	ppm	■ 927	---	---	---
Phosphorus	ppm	■ 844	---	---	---
Barium	ppm	■ <1	---	---	---
Boron	ppm	2	---	---	---

Depot: VP627399
Unique No: 5801620
Signed: Kevin Marson
Report Date: 27 Jun 2024

OIL ANALYSIS REPORT



GRAPHS



OIL ANALYSIS REPORT

VOLVO PENTA

DAVID JOHNSTONE 13098 DAVID JOHNSTONE - PORT DIESEL ENGINE

Sample No: VPA050560

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA050560	---	---	---
Sample Date	25 Jun 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

OIL CONDITION

Visc @ 40°C	cSt	▲ 94.1	---	---	---
Visc @ 100°C	cSt	▲ 11.4	---	---	---
Viscosity Index (VI)	Scale	▲ 108	---	---	---
Oxidation (PA)	%	30	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.4	---	---	---
Nitration (PA)	%	38	---	---	---
Sulfation (PA)	%	41	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	■ 0.7	---	---	---
Silicon	ppm	■ 21	---	---	---
Sodium	ppm	■ 4	---	---	---
Potassium	ppm	■ 2	---	---	---

WEAR METALS

Iron	ppm	■ 76	---	---	---
Copper	ppm	■ 11	---	---	---
Lead	ppm	■ 7	---	---	---
Tin	ppm	▲ 38	---	---	---
Aluminum	ppm	■ 2	---	---	---
Chromium	ppm	■ 5	---	---	---
Molybdenum	ppm	■ 26	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	■ <1	---	---	---
Silver	ppm	■ <1	---	---	---
Manganese	ppm	■ <1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	■ 2264	---	---	---
Magnesium	ppm	75	---	---	---
Zinc	ppm	■ 935	---	---	---
Phosphorus	ppm	■ 835	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	3	---	---	---

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Diagnosis

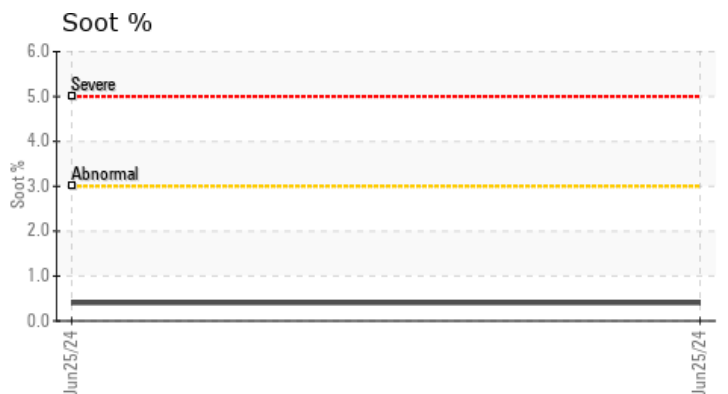
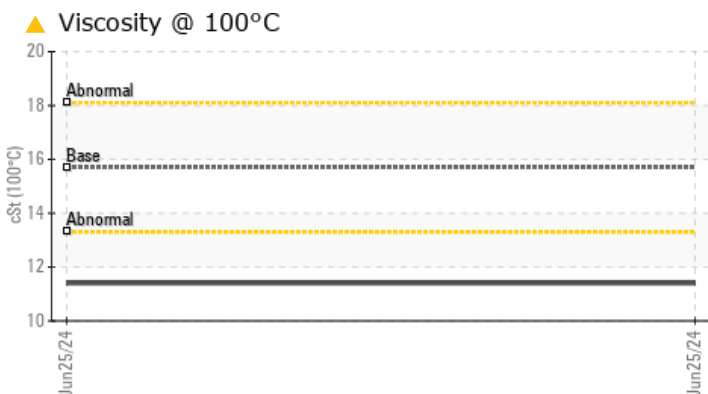
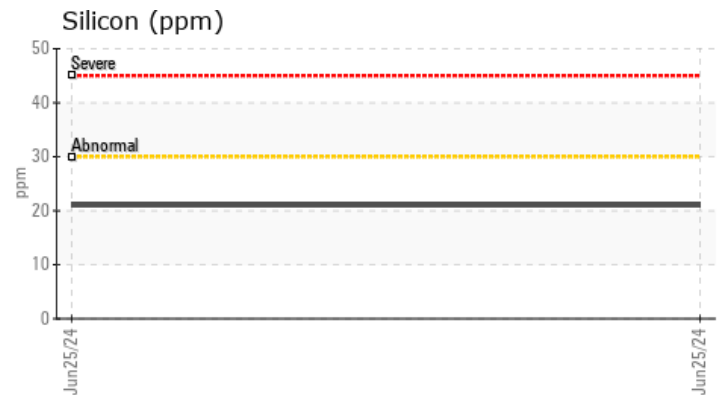
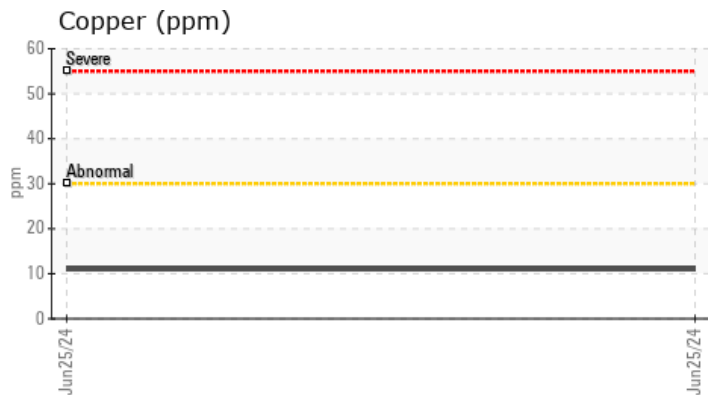
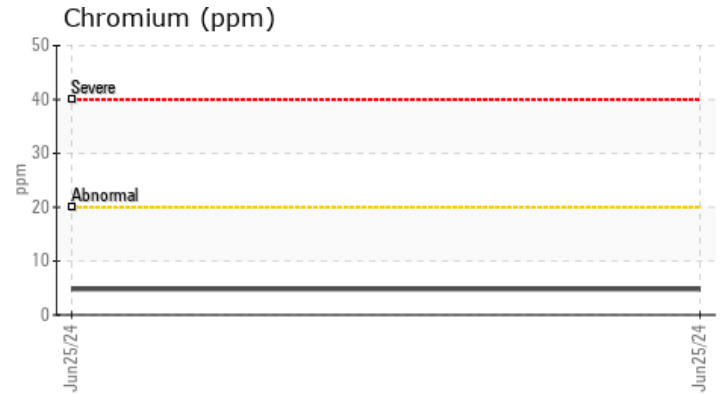
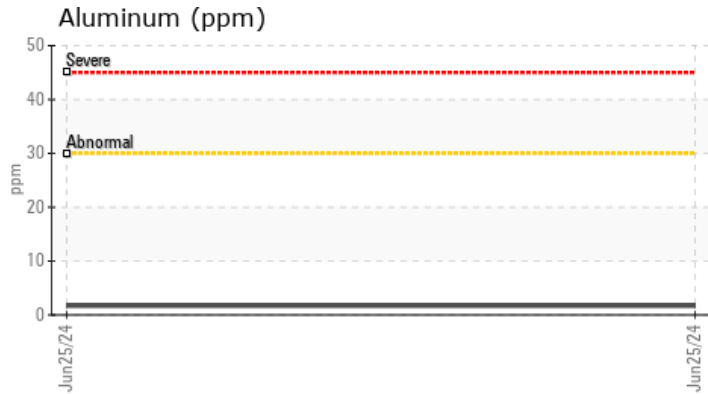
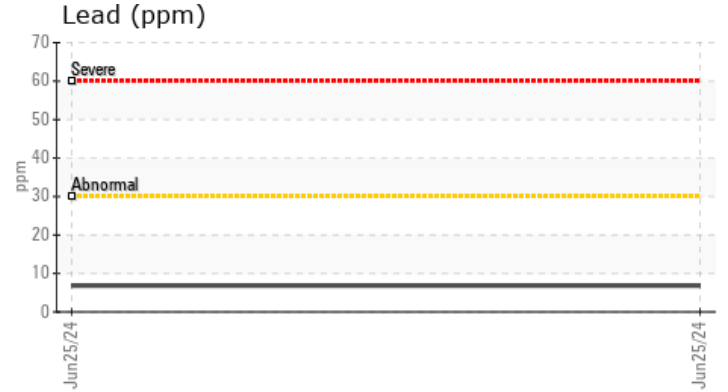
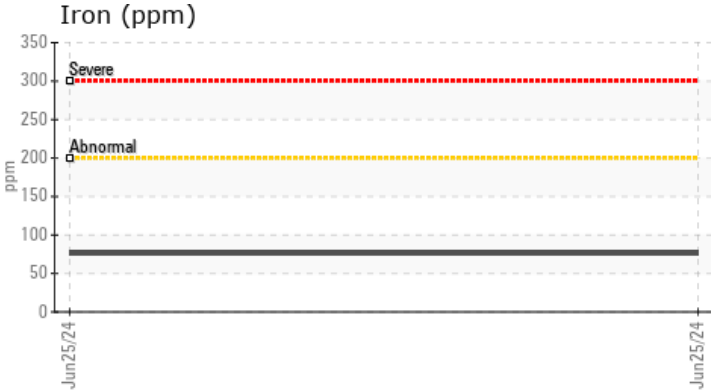
We recommend that you change the oil at the next available stoppage or outage. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. The fluid was specified as SHELL ROTELLA T 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample. Tin ppm levels are abnormal. Piston wear is indicated. We have assumed that this component is not breaking in (age of component not reported). Fuel content negligible. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: VP627399
Unique No: 5801621
Signed: Kevin Marson
Report Date: 27 Jun 2024

OIL ANALYSIS REPORT



GRAPHS



OIL ANALYSIS REPORT

VOLVO PENTA

DAVID JOHNSTONE 13098 NO UNIT VPA050700 - STARBOARD GEAR UNIT

Sample No: VPA050700

Oil Type: SHELL ROTELLA T 30

SAMPLE INFORMATION

Sample Number	VPA050700	---	---	---
Sample Date	25 Jun 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

OIL CONDITION

Visc @ 40°C	cSt	117	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 4	---	---	---
Sodium	ppm	■ 46	---	---	---
Potassium	ppm	■ 3	---	---	---

WEAR METALS

PQ		■ 4	---	---	---
Iron	ppm	■ 29	---	---	---
Copper	ppm	102	---	---	---
Lead	ppm	▲ 736	---	---	---
Tin	ppm	■ 0	---	---	---
Aluminum	ppm	■ 1	---	---	---
Chromium	ppm	■ 0	---	---	---
Molybdenum	ppm	■ <1	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	2	---	---	---
Manganese	ppm	■ <1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	778	---	---	---
Magnesium	ppm	1009	---	---	---
Zinc	ppm	■ 1181	---	---	---
Phosphorus	ppm	■ 1079	---	---	---
Barium	ppm	■ <1	---	---	---
Boron	ppm	■ 41	---	---	---

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Diagnosis

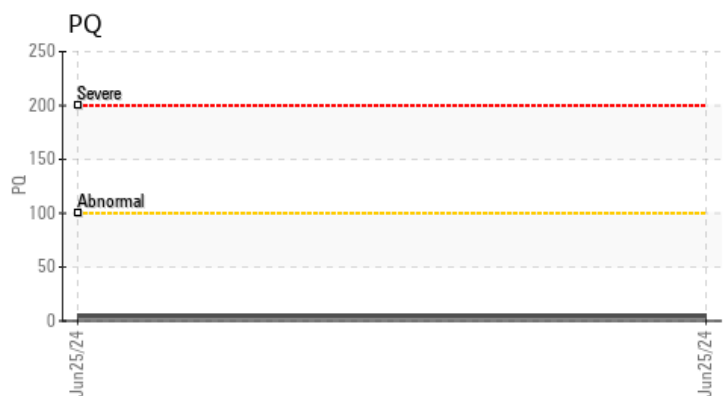
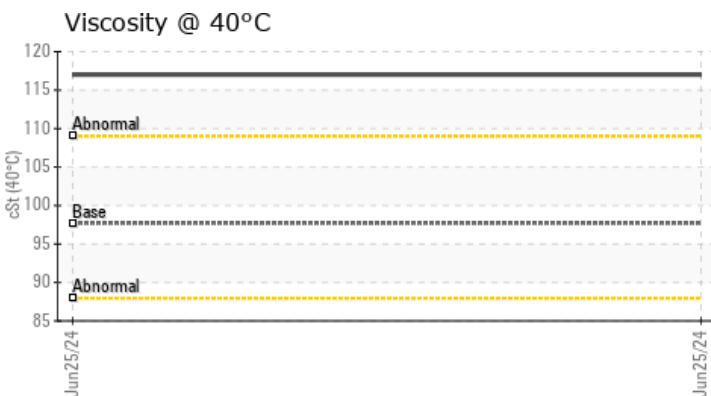
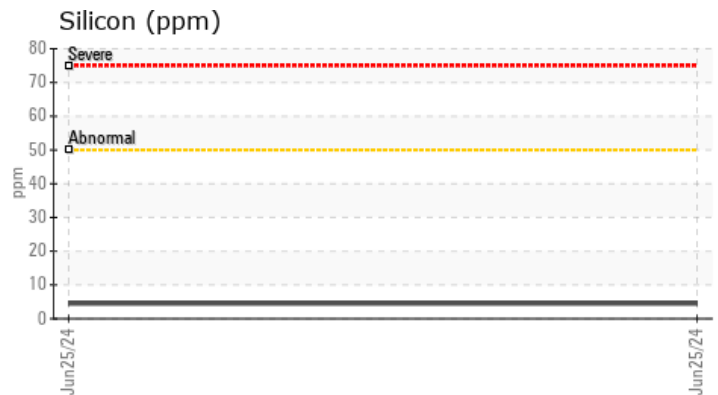
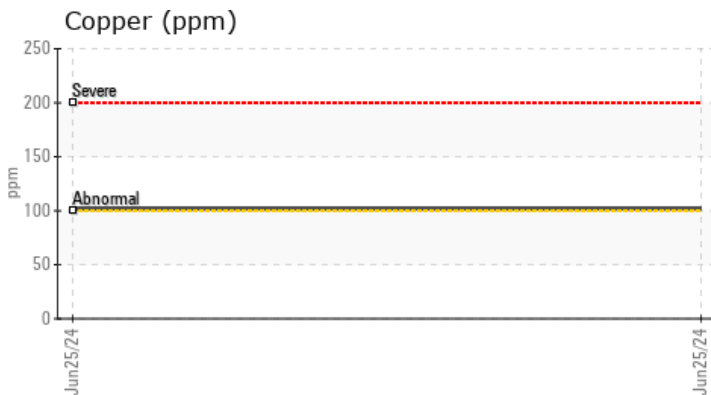
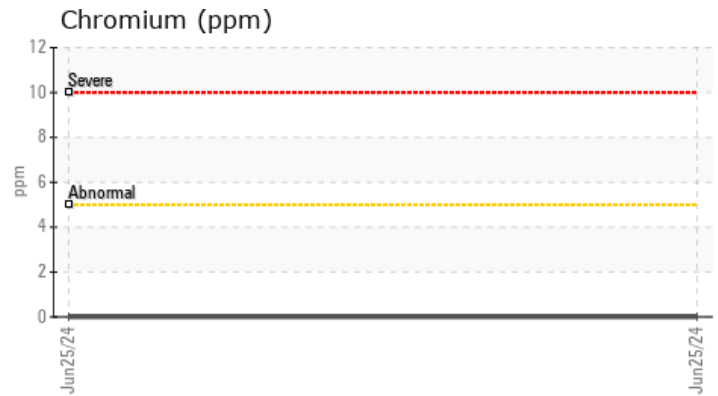
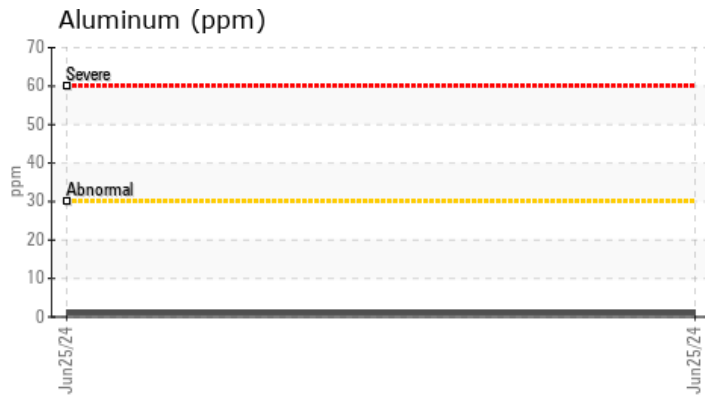
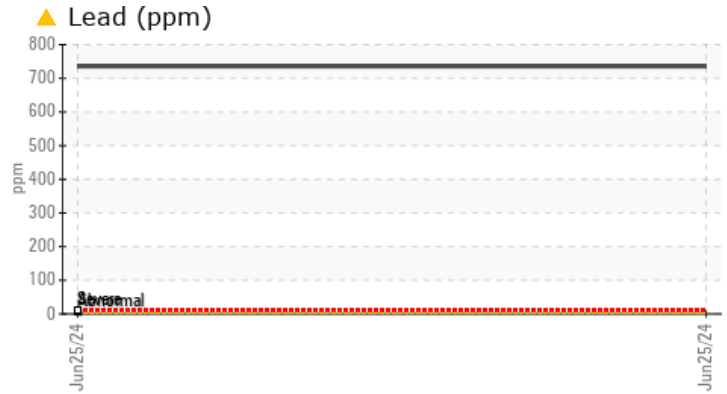
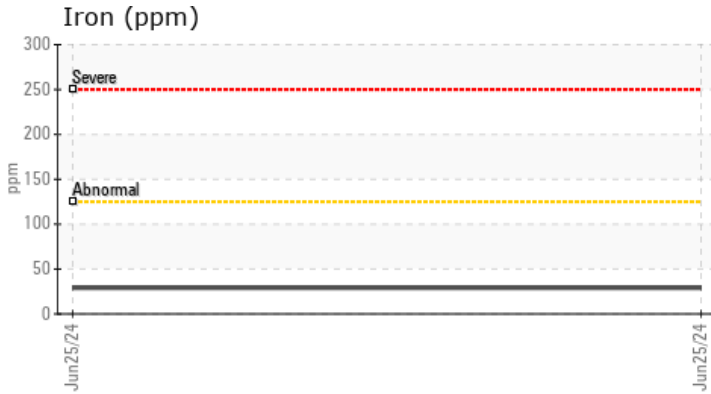
We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Lead ppm levels are abnormal. There is no indication of any contamination in the oil. The oil viscosity is higher than typical. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: VP627399
Unique No: 5801782
Signed: Kevin Marson
Report Date: 27 Jun 2024

OIL ANALYSIS REPORT

VOLVO PENTA

GRAPHS



OIL ANALYSIS REPORT

VOLVO PENTA

DAVID JOHNSTONE 13098 NO UNIT VPA050566 - PORT GEAR UNIT

Sample No: VPA050566

Oil Type: SHELL ROTELLA T 30

SAMPLE INFORMATION

Sample Number	VPA050566	---	---	---
Sample Date	25 Jun 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ATTENTION	---	---	---

OIL CONDITION

Visc @ 40°C	cSt	█ 107	---	---	---
-------------	-----	-------	-----	-----	-----

CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 7	---	---	---
Sodium	ppm	█ 19	---	---	---
Potassium	ppm	█ 1	---	---	---

WEAR METALS

PQ		█ 2	---	---	---
Iron	ppm	█ 26	---	---	---
Copper	ppm	█ 35	---	---	---
Lead	ppm	● 323	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ <1	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	1	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	█ 1521	---	---	---
Magnesium	ppm	451	---	---	---
Zinc	ppm	█ 1016	---	---	---
Phosphorus	ppm	█ 1003	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 37	---	---	---

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Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Lead ppm levels are noted. All other component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Depot: VP627399
Unique No: 5801783
Signed: Kevin Marson
Report Date: 27 Jun 2024

OIL ANALYSIS REPORT



GRAPHS

