



CONSTRUCTION EQUIPMENT

SPM606017 VOLVO L120H 632860 - DIESEL ENGINE



Sample No: VCP432769
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SPM606017



SAMPLE INFORMATION

Sample Number	VCP432769	VCP370518	VCP397642	VCP376997
Sample Date	06 Sep 2023	06 Jun 2023	08 Feb 2023	16 Jul 2022
Machine Hours	5768	4936	4349	3246
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	ABNORMAL

ORANGE COUNTY SOLID WASTE
 5901 YOUNG PINE ROAD
 ORLANDO, FL
 US 32829
 Contact: MICHAEL BEEBE
 michael.beebe@ocfl.net
 T: (407)836-6652
 F: (407)836-6650



OIL CONDITION

Visc @ 100°C	cSt	14.4	14.1	13.9	13.8
Base Number (BN)	mg KOH/g	7.5	9.1	9.8	10.4
Oxidation (PA)	%	91	79	80	89



CONTAMINATION

Soot %	%	1.2	0.8	0.5	0.3
Nitration (PA)	%	92	79	67	76
Sulfation (PA)	%	67	63	62	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	▲ 44	▲ 21	20	▲ 26
Sodium	ppm	4	2	2	2
Potassium	ppm	0	0	0	0



WEAR METALS

Iron	ppm	46	24	22	16
Copper	ppm	3	1	2	2
Lead	ppm	5	0	1	1
Tin	ppm	1	<1	1	1
Aluminum	ppm	▲ 19	9	8	8
Chromium	ppm	1	<1	<1	<1
Molybdenum	ppm	49	50	47	46
Nickel	ppm	0	0	<1	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	2150	1657	1791	1778
Magnesium	ppm	537	455	545	531
Zinc	ppm	1348	1017	1271	1178
Phosphorus	ppm	1119	907	975	928
Barium	ppm	0	0	0	0
Boron	ppm	20	28	37	28

Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Depot: ORAORL
Unique No: 10648381
Signed: Sean Felton
Report Date: 19 Sep 2023

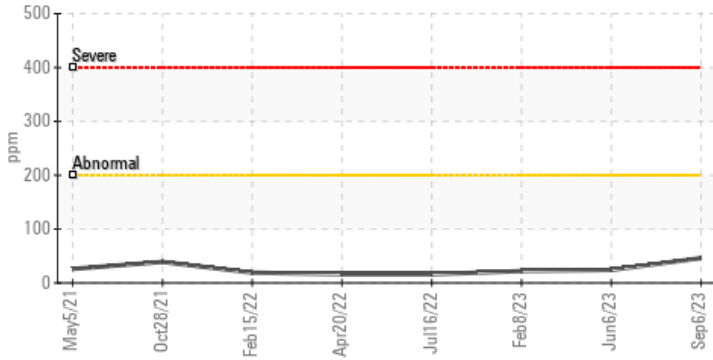


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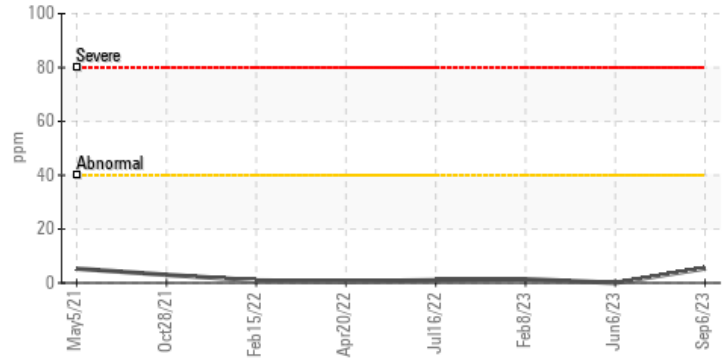


GRAPHS

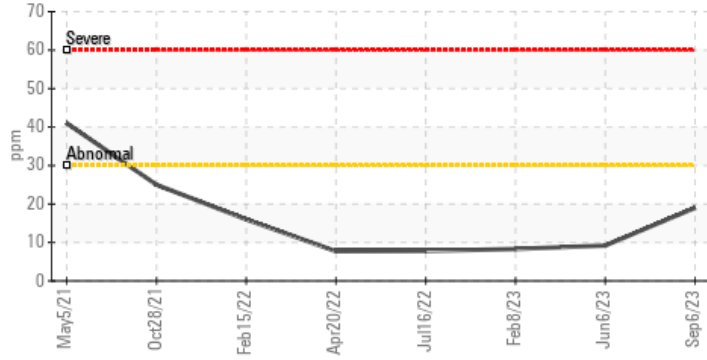
Iron (ppm)



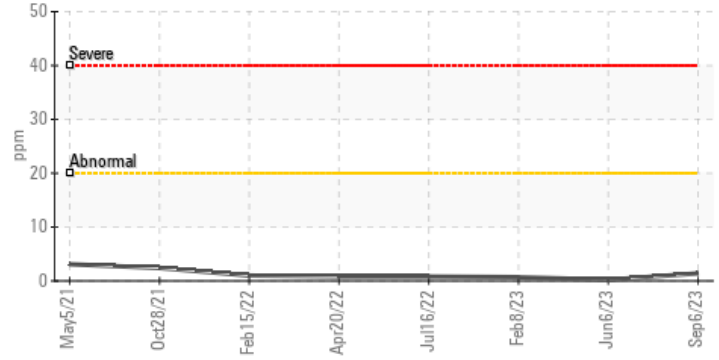
Lead (ppm)



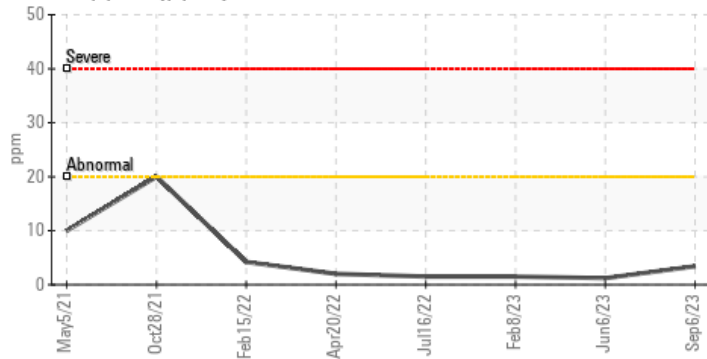
Aluminum (ppm)



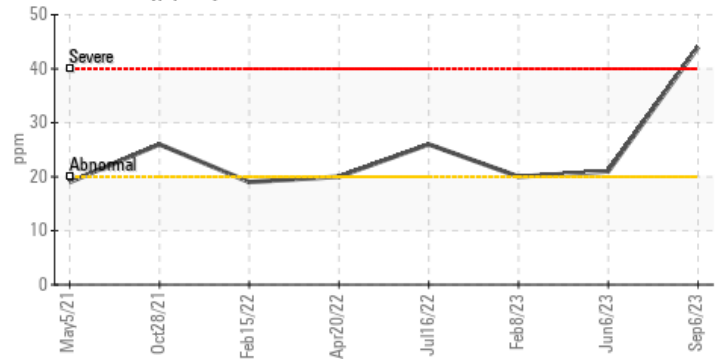
Chromium (ppm)



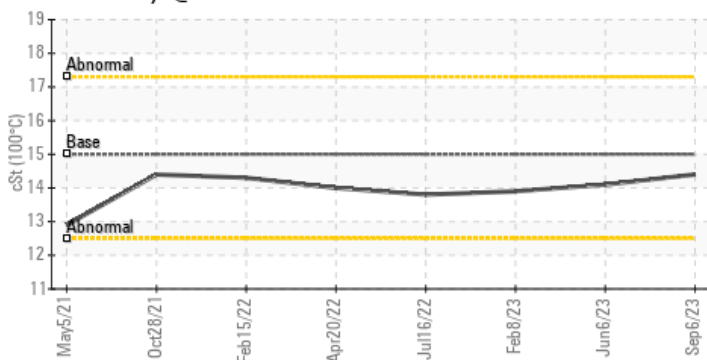
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

