



CONSTRUCTION EQUIPMENT

W07014012 CT PERCELL VOLVO A40F 11629 - DIESEL ENGINE



Sample No: VCP409455
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: W07014012 CT PERCELL



SAMPLE INFORMATION

Sample Number	VCP409455	VCP245643	VCP205439	VCP211543
Sample Date	02 Jan 2024	23 Oct 2019	30 Mar 2019	22 Feb 2018
Machine Hours	8499	6140	5602	5086
Oil Hours	0	0	0	0
Oil Changed	N/A	Changed	Changed	Changed
Sample Status	MARGINAL	SEVERE	ABNORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.3	■ 12.8	■ 12.54	■ 12.88
Base Number (BN)	mg KOH/g	■ 8.6	---	---	---
Oxidation (PA)	%	67	68	76	■ 60

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.8	■ 0.4	■ 0.3	■ 0
Nitration (PA)	%	71	103	67	■ 42
Sulfation (PA)	%	58	62	59	■ 53
Glycol	%	NEG	● 0.10	NEG	NEG
Fuel	%	■ 0.3	<1.0	<1.0	<1.0
Silicon	ppm	■ 8	■ 10	■ 10	■ 8
Sodium	ppm	■ 2	▲ 1439	▲ 169	■ 8
Potassium	ppm	■ <1	▲ 581	■ 10	■ 1



WEAR METALS

Iron	ppm	■ 10	■ 19	■ 15	■ 8
Copper	ppm	■ 1	▲ 40	■ 6	■ 3
Lead	ppm	■ 1	■ 6	■ <1	■ <1
Tin	ppm	■ <1	■ 0	■ 1	■ <1
Aluminum	ppm	■ 4	■ 4	■ 4	■ 2
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 54	■ 82	■ 49	■ 38
Nickel	ppm	■ <1	■ 2	■ 1	■ <1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	■ 0	0	0	0
Manganese	ppm	■ <1	■ 1	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 1216	■ 1473	■ 1862	■ 1494
Magnesium	ppm	■ 899	■ 606	■ 594	■ 477
Zinc	ppm	■ 1355	■ 1077	■ 890	762
Phosphorus	ppm	■ 1141	■ 881	■ 772	■ 690
Barium	ppm	■ 0	■ 0	■ 0	■ <1
Boron	ppm	■ 11	■ 8	■ 39	■ 40

Depot: VOLVO8882
Unique No: 10820496
Signed: Jonathan Hester
Report Date: 12 Jan 2024

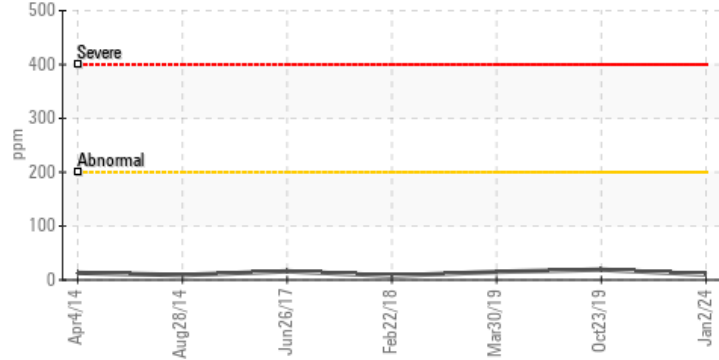


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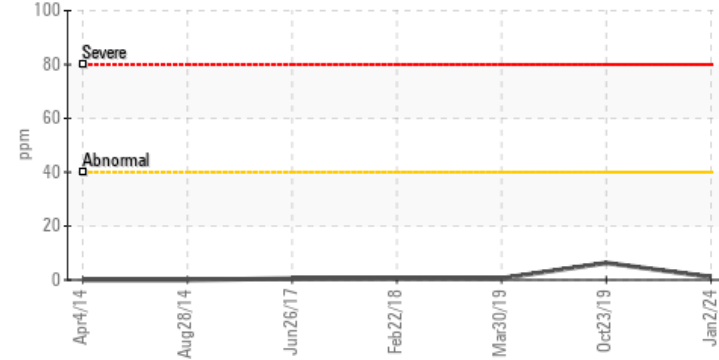


GRAPHS

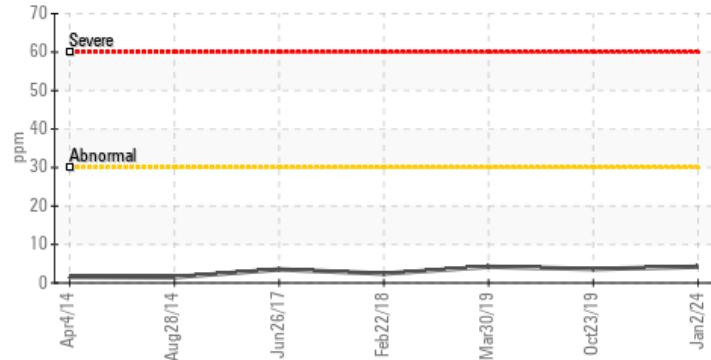
Iron (ppm)



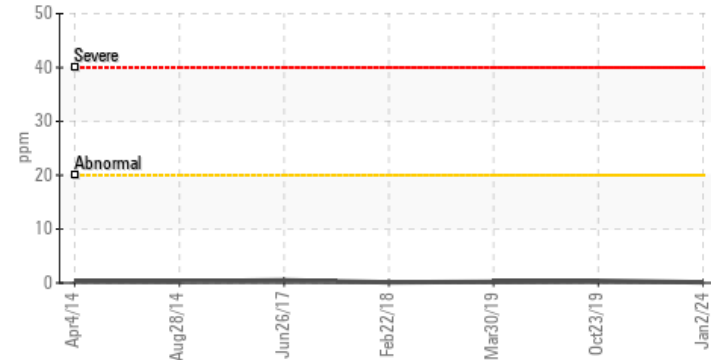
Lead (ppm)



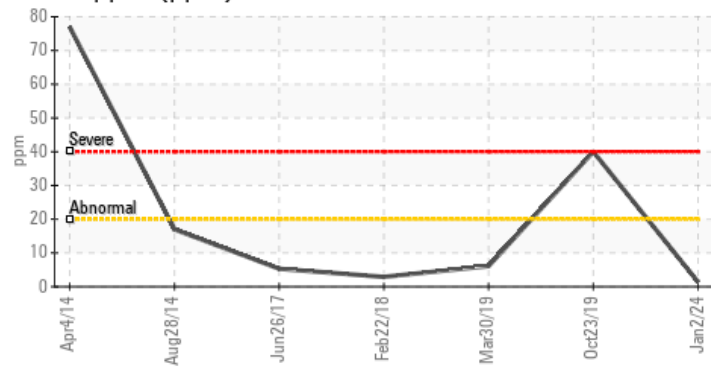
Aluminum (ppm)



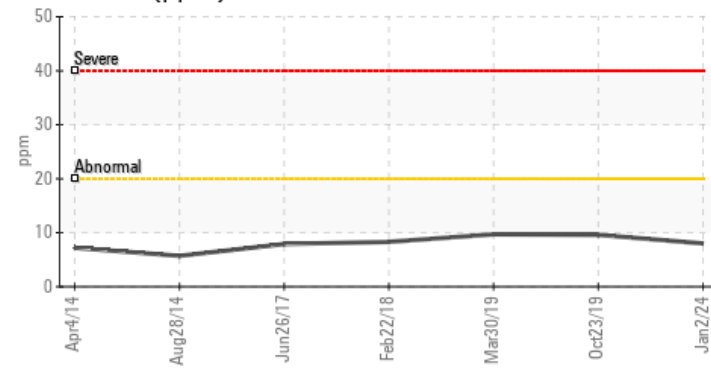
Chromium (ppm)



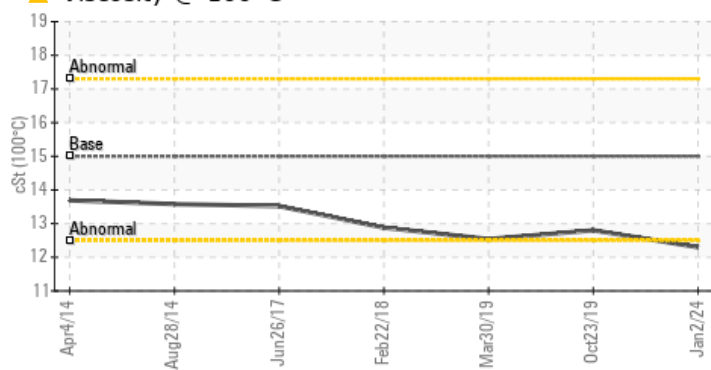
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

