



CONSTRUCTION EQUIPMENT

MARTIN MARIETTA VOLVO A60H 350249 - DIESEL ENGINE



Sample No: VCP392633
Oil Type: CHEVRON 15W40
Job No: MARTIN MARIETTA



SAMPLE INFORMATION

Sample Number	VCP392633	VCP411271	---	---
Sample Date	03 Aug 2023	09 Mar 2023	---	---
Machine Hours	2004	1029	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	ATTENTION	ABNORMAL	---	---

ROMCO INC - AUSTIN BRANCH
 1150 WEST OLD SETTLERS BOULEVARD
 ROUNDROCK, TX
 US 78681
 Contact: ED MAYES
 EMAYES@ROMCO.COM
 T: (737)204-9402
 F: (512)388-2673



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.7	▲ 10.3	---	---
Base Number (BN)	mg KOH/g	■ 8.2	■ 5.4	---	---
Oxidation (PA)	%	65	70	---	---

Diagnosis

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. 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

Soot %	%	■ 0.4	■ 0.5	---	---
Nitration (PA)	%	61	89	---	---
Sulfation (PA)	%	63	64	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 2.7	---	---
Silicon	ppm	■ 5	▲ 28	---	---
Sodium	ppm	■ 2	■ 2	---	---
Potassium	ppm	■ 0	■ 3	---	---



WEAR METALS

Iron	ppm	■ 5	■ 30	---	---
Copper	ppm	■ 15	■ 214	---	---
Lead	ppm	■ <1	■ <1	---	---
Tin	ppm	■ 1	■ 4	---	---
Aluminum	ppm	■ 1	■ 4	---	---
Chromium	ppm	■ <1	■ 2	---	---
Molybdenum	ppm	■ 116	■ 99	---	---
Nickel	ppm	■ <1	■ 4	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ <1	■ 2	---	---
Vanadium	ppm	0	<1	---	---



ADDITIVES

Calcium	ppm	■ 1461	■ 2099	---	---
Magnesium	ppm	■ 632	■ 120	---	---
Zinc	ppm	■ 813	■ 1075	---	---
Phosphorus	ppm	■ 679	■ 864	---	---
Barium	ppm	■ 0	■ 2	---	---
Boron	ppm	■ 247	■ 38	---	---

Depot: VOLVO0088
Unique No: 10669351
Signed: Jonathan Hester
Report Date: 28 Sep 2023

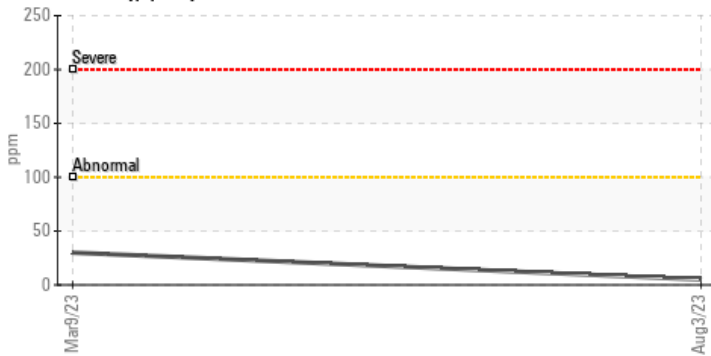


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GRAPHS

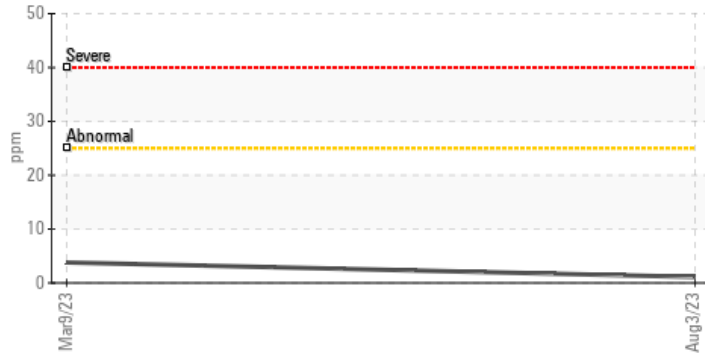
Iron (ppm)



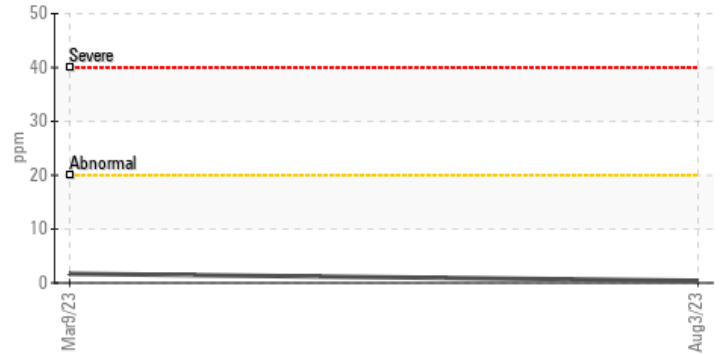
Lead (ppm)



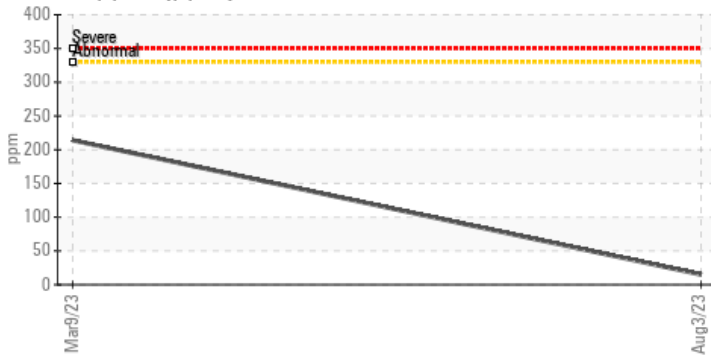
Aluminum (ppm)



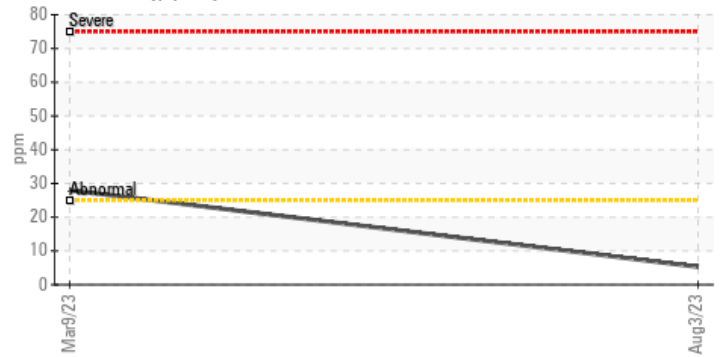
Chromium (ppm)



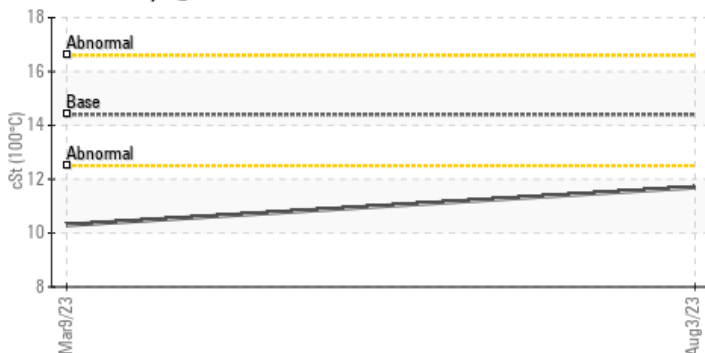
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

