



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL



Area
TMR-Punta Gorda [SWA400459-30]

Machine Id
467142 VOLVO L90H 624974

Component
Diesel Engine

Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP433591	VCP353639	VCP344092
Sample Date		Client Info		18 Dec 2023	18 Jun 2022	24 Jan 2022
Machine Age	hrs	Client Info		81421	5881	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Changed	Changed
Filter Changed		Client Info		Not Chngd	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	5	12	5
Chromium	ppm	ASTM D5185m	>10	<1	1	<1
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	2	<1
Aluminum	ppm	ASTM D5185m	>10	14	16	5
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>15	2	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Light fuel dilution occurring.

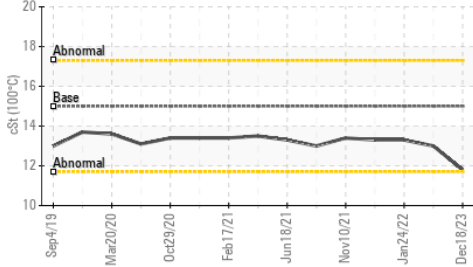
Silicon	ppm	ASTM D5185m	>20	13	7	7
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel	%	ASTM D3524	>6.0	▲ 3.2	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	5.9	7.1	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	21.2	22.9
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

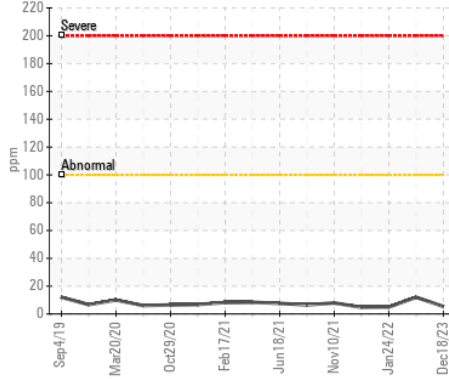
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		4	2	2
Boron	ppm	ASTM D5185m	2.5	112	49	54
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	61	56	42
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	516	529	453
Calcium	ppm	ASTM D5185m	2057	1624	1639	1541
Phosphorus	ppm	ASTM D5185m	935	1024	910	840
Zinc	ppm	ASTM D5185m	1223	1179	1133	1003
Sulfur	ppm	ASTM D5185m	4079	3109	2924	2660
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	18.7	20.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.2	9.8	11.5
Visc @ 100°C	cSt	ASTM D445	15.0	▲ 11.8	13.0	13.3

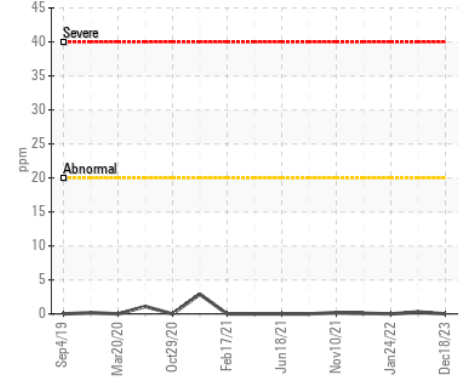
▲ Viscosity @ 100°C



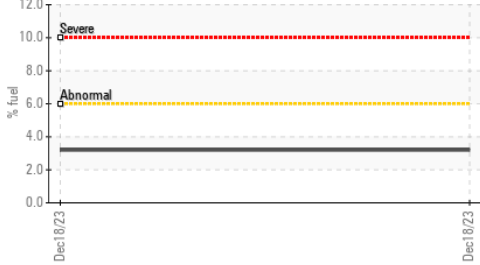
Iron (ppm)



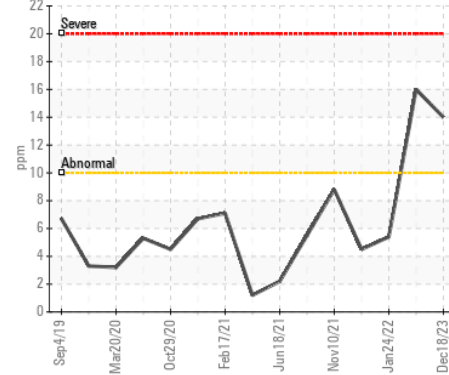
Lead (ppm)



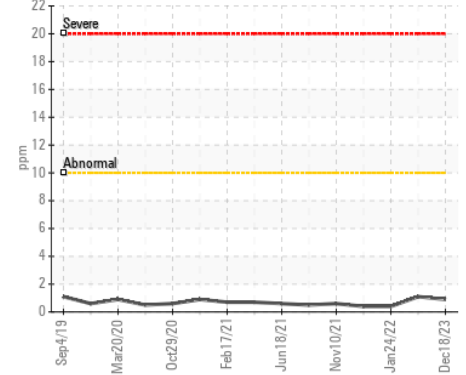
▲ Fuel Dilution



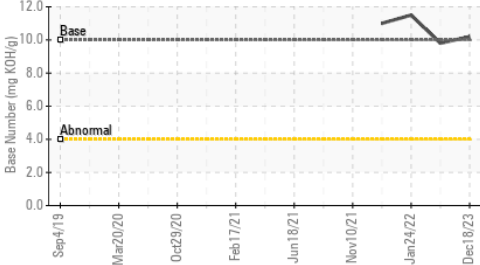
Aluminum (ppm)



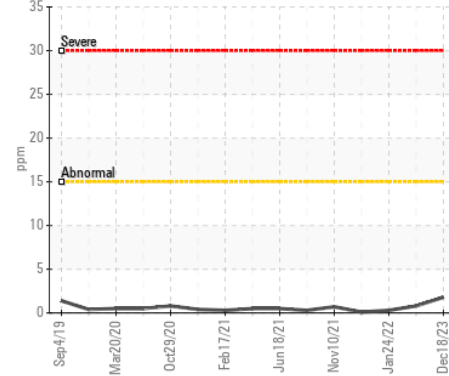
Chromium (ppm)



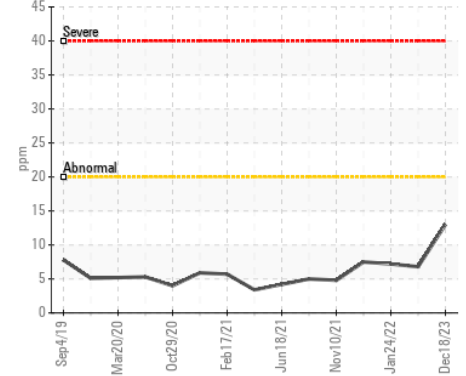
Base Number



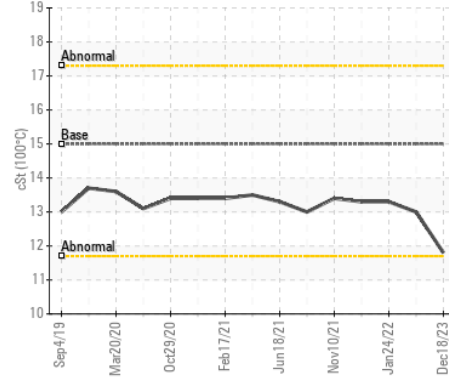
Copper (ppm)



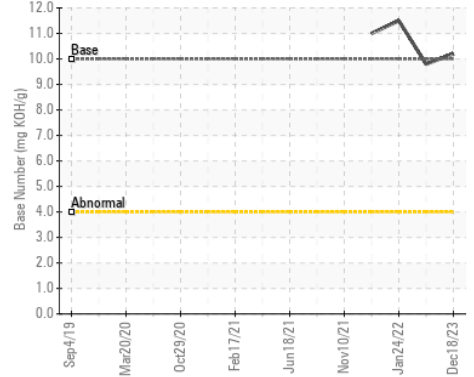
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : VCP433591
 Lab Number : 06043789
 Unique Number : 10804397
 Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel, TBN)

TRADEMARK METALS RECYCLING - PUNTA GORDA
 5005 DALEWOOD STREET
 PUNTA GORDA, FL
 US 33982
 Contact: RYAN BOWDEN

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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 F: (941)575-4458