



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO 186
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LW0009169	LW0007819	LW0007412
Sample Date		Client Info		16 May 2024	21 Sep 2023	17 Jul 2023
Machine Age	mls	Client Info		1233181	1144000	1122000
Oil Age	mls	Client Info		50000	1122000	1099850
Filter Age	mls	Client Info		25000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	35	20	14
Chromium	ppm	ASTM D5185m	>20	1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	3	3	4
Lead	ppm	ASTM D5185m	>40	3	<1	<1
Copper	ppm	ASTM D5185m	>330	3	<1	<1
Tin	ppm	ASTM D5185m	>15	2	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

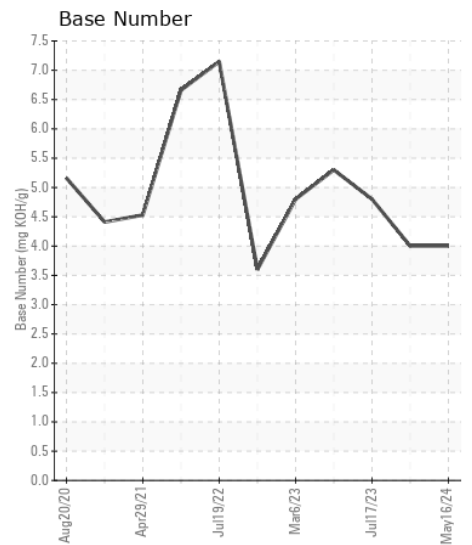
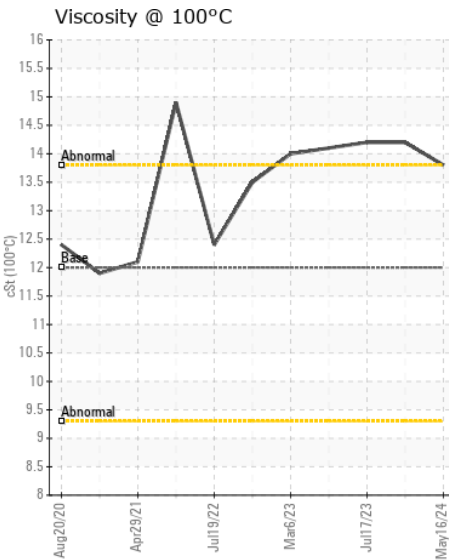
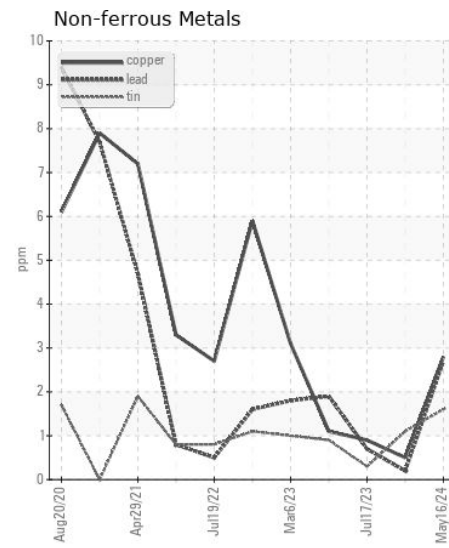
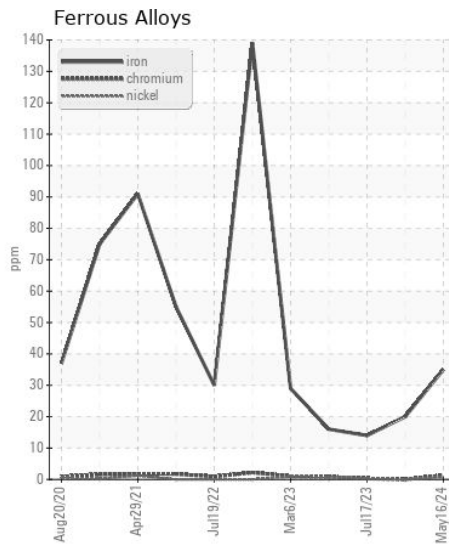
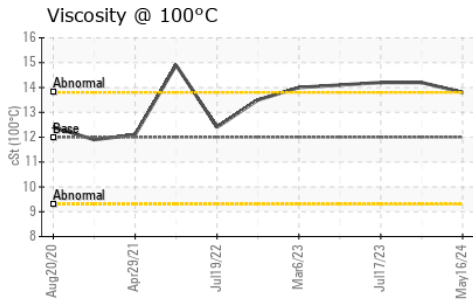
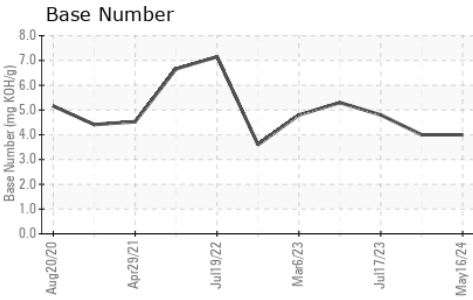
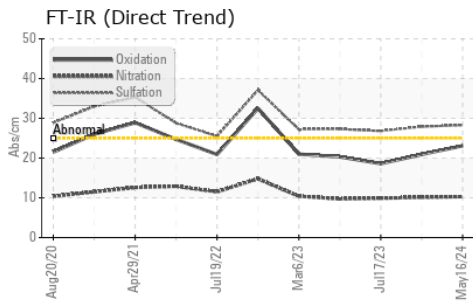
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	4	4
Potassium	ppm	ASTM D5185m	>20	22	6	9
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.3	10.1	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.3	27.9	26.8
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		32	12	10
Boron	ppm	ASTM D5185m	2	9	5	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	13	7	9
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	950	801	798	666
Calcium	ppm	ASTM D5185m	1050	1398	1383	1225
Phosphorus	ppm	ASTM D5185m	995	1124	1022	986
Zinc	ppm	ASTM D5185m	1180	1313	1264	1131
Sulfur	ppm	ASTM D5185m	2600	3586	3462	3413
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.1	20.9	18.6
Base Number (BN)	mg KOH/g	ASTM D2896		4.0	4.0	4.8
Visc @ 100°C	cSt	ASTM D445	12.00	13.8	14.2	14.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LW0009169
Lab Number : 06189901
Unique Number : 11046653
Test Package : FLEET

Received : 23 May 2024
Tested : 25 May 2024
Diagnosed : 29 May 2024 - Sean Felton

LIV TRANSPORTATION, INC
 9809 INDUSTRIAL DRIVE
 BRIDGEVIEW, IL
 US 60455

Contact: CHRIS BIELECKI
 CHRIS@LIVTRANSPORTATION.COM

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: