

OIL ANALYSIS REPORT

Sample Rating Trend





Area ARIZONA Machine for VOLVO 4874

Component Diesel Engine Fluid

NAPA Motor Oil 15W40 (--- QTS)

DIAGNOSIS	

Recommendation Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

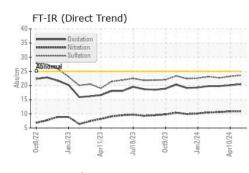
Fluid Condition

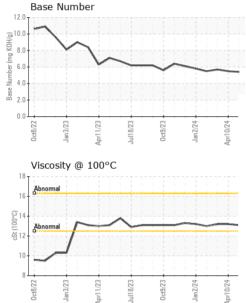
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info VC08395443 WC0839591 WC0839580 Sample Date Client Info 04 May 2024 10 Apr 2024 02 Mar 2024 Machine Age hrs Client Info 2557 2395 2176 Oil Age Client Info Not Changd Not Changd Not Changd Not Changd Sample Status Client Info Not Changd Not Changd Not Changd Not Changd CONTAMINATION method Infibes current history1 history2 Fuel WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Chromium ppm ASTM 05165 >2 6 6 4 Nickel ppm ASTM 05165 >2 6 6 4 Nickel ppm ASTM 05165 >2 6 6 4 Nickel <th>SAMPLE INFORM</th> <th>1ATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
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Sulfation Abs/.1mm *ASTM D7415 >30 23.6 23.2 22.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 20.1 19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	18 0 38 2 590 1544 902 1038 2729 current 12 4 18 28 current	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.5 20.1 19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	18 0 38 2 590 1544 902 1038 2729 current 12 4 18 20 0.9	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1 0.8	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2 0.7
Oxidation Abs/.1mm *ASTM D7414 >25 20.5 20.1 19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	18 0 38 2 590 1544 902 1038 2729 <i>current</i> 12 4 18 <i>current</i> 0.9 10.9	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1 0.8 10.9	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2 0.7 10.6
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	18 0 38 2 590 1544 902 1038 2729 <i>current</i> 12 4 18 <i>current</i> 0.9 10.9	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1 0.8 10.9	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2 0.7 10.6
Base Number (BN) mg KOH/g ASTM D2896 5.4 5.5 5.7	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >20 >3 >20 >30	18 0 38 2 590 1544 902 1038 2729 current 12 4 18 current 0.9 10.9 23.6	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1 0.8 10.9 23.2	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2 0.7 10.6 22.7
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >25 >20 limit/base >3 >20 >30 >30 limit/base	18 0 38 2 590 1544 902 1038 2729 current 12 4 18 current 0.9 10.9 23.6 current	19 0 37 2 619 1597 900 1087 3082 history1 11 4 16 history1 0.8 10.9 23.2 history1	20 0 37 2 575 1520 852 1014 2359 history2 9 0 10 10 history2 0.7 10.6 22.7 history2



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		13.1	13.2	13.2



Non-ferrous Metals

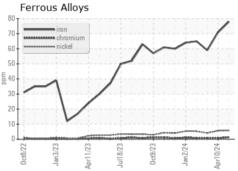
10

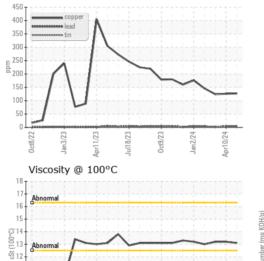
9

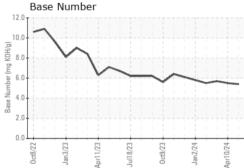
8

0ct8/22

Jan3/23







Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 LIBERTY DISPOSAL Sample No. : WC0935443 Received 6401 S EASTERN AVE : 09 May 2024 Lab Number : 06174894 Tested : 10 May 2024 OKLAHOMA CITY, OK Unique Number : 11020947 Diagnosed : 13 May 2024 - Angela Borella US 73149 Test Package : FLEET Contact: CATHY ROSA Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. c.rosa@ldi89.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Jul18/23

Apr11/23

an2/24

Apr10/24

Contact/Location: CATHY ROSA - SEAOKL

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