

# **OIL ANALYSIS REPORT**

Sample Rating Trend



#### Machine Id

**KENWORTH 16** 

# Diesel Engine

Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

### 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.

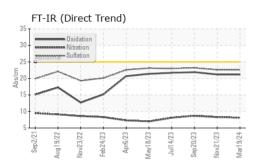
# Fluid Condition

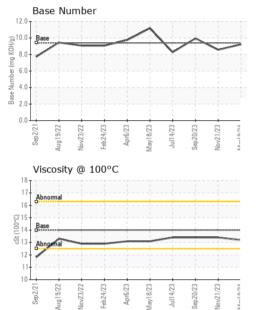
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

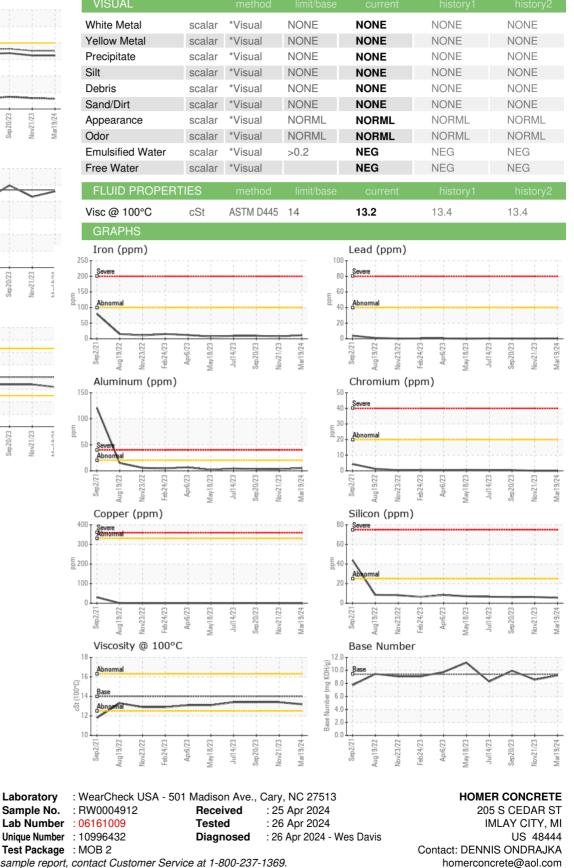
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RW0004912	RW0002961	RW0002956
Sample Date		Client Info		19 Mar 2024	21 Nov 2023	20 Sep 2023
Machine Age	mls	Client Info		135200	125158	114782
Oil Age	mls	Client Info		10042	10376	10554
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	8	9
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	3	3
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 48	history1 38	history2 37
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	48	38	37
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	48 0	38 0	37 4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	48 0 42	38 0 42	37 4 46
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	48 0 42 <1	38 0 42 <1	37 4 46 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	48 0 42 <1 572	38 0 42 <1 560	37 4 46 <1 501
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	48 0 42 <1 572 1944	38 0 42 <1 560 1991	37 4 46 <1 501 1688
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	48 0 42 <1 572 1944 874	38 0 42 <1 560 1991 865	37 4 46 <1 501 1688 775
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	48 0 42 <1 572 1944 874 1025	38 0 42 <1 560 1991 865 1040	37 4 46 <1 501 1688 775 908
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 Imit/base	48 0 42 <1 572 1944 874 1025 3265	38 0 42 <1 560 1991 865 1040 3290	37 4 46 <1 501 1688 775 908 2541
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 Imit/base	48 0 42 <1 572 1944 874 1025 3265 current	38 0 42 <1 560 1991 865 1040 3290 history1	37 4 46 <1 501 1688 775 908 2541 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	48 0 42 <1 572 1944 874 1025 3265 current 6	38 0 42 <1 560 1991 865 1040 3290 history1 6	37 4 46 <1 501 1688 775 908 2541 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	48 0 42 <1 572 1944 874 1025 3265 <u>current</u> 6 2	38 0 42 <1 560 1991 865 1040 3290 history1 6 2	37 4 46 <1 501 1688 775 908 2541 <b>history2</b> 6 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 2 5 2 5 2 0	48 0 42 <1 572 1944 874 1025 3265 current 6 2 11	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8	37 4 46 <1 501 1688 775 908 2541 history2 6 0 16
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	48 0 42 <1 572 1944 874 1025 3265 current 6 2 11 1	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8 8	37 4 46 <1 501 1688 775 908 2541 history2 6 0 16 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	0 0 0 0 limit/base >25 >20 limit/base >3	48 0 42 <1 572 1944 874 1025 3265 current 6 2 11 current 0.5	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8 8 history1 0.4	37 4 46 <1 501 1688 775 908 2541 history2 6 0 16 history2 0.4
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	0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	48 0 42 <1 572 1944 874 1025 3265 <i>current</i> 6 2 11 <i>current</i> 0.5 8.1	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8 <b>history1</b> 0.4 8.3	37 4 46 <1 501 1688 775 908 2541 history2 6 0 16 history2 0.4 8.7
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 D7844 *ASTM D7844	0 0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	48 0 42 <1 572 1944 874 1025 3265 Current 6 2 11 Current 0.5 8.1 22.6	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8 <u>history1</u> 0.4 8.3 22.6	37 4 46 <1 501 1688 775 908 2541 history2 6 0 16 history2 0.4 8.7 23.2 history2
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	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	48 0 42 <1 572 1944 874 1025 3265 <b>current</b> 6 2 11 <b>current</b> 0.5 8.1 22.6	38 0 42 <1 560 1991 865 1040 3290 history1 6 2 8 history1 0.4 8.3 22.6 history1	37 4 46 <1 501 1688 775 908 2541 <b>history2</b> 6 0 16 <b>history2</b> 0.4 8.7 23.2



# **OIL ANALYSIS REPORT**







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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Certificate 12367

Laboratory

Sample No.

Contact/Location: DENNIS ONDRAJKA - HOMIML

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