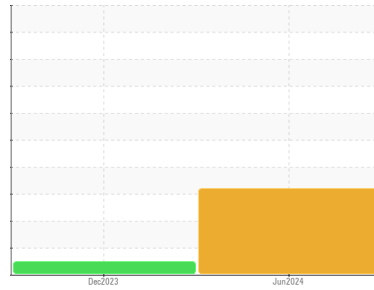


# OIL ANALYSIS REPORT

## Sample Rating Trend



Machine Id  
**VAN HOOL 61**  
 Component  
**Diesel Engine**  
 Fluid  
 **DIESEL ENGINE OIL SAE 40 (--- GAL)**

## DIAGNOSIS

**Recommendation**  
 We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

**Wear**  
 Aluminum and iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated.

**Contamination**  
 There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

**Fluid Condition**  
 The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PCA0127414</b>	PCA0082957	---
Sample Date	Client Info			<b>17 Jun 2024</b>	03 Dec 2023	---
Machine Age	mls	Client Info		<b>0</b>	0	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Oil Changed	Client Info			<b>N/A</b>	N/A	---
Sample Status				<b>ABNORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	---
Water	WC Method	>0.2		<b>NEG</b>	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>▲ 951</b>	41	---
Chromium	ppm	ASTM D5185m	>20	<b>12</b>	2	---
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>5</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>▲ 51</b>	18	---
Lead	ppm	ASTM D5185m	>40	<b>12</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>65</b>	6	---
Tin	ppm	ASTM D5185m	>15	<b>4</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---

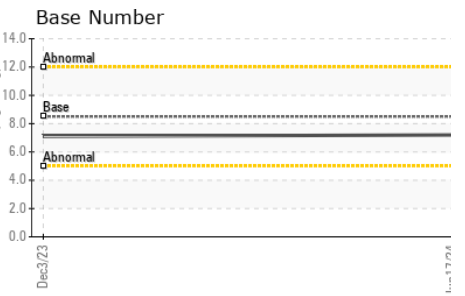
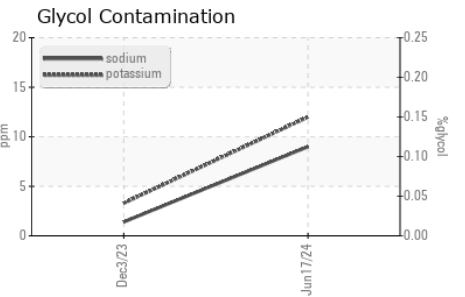
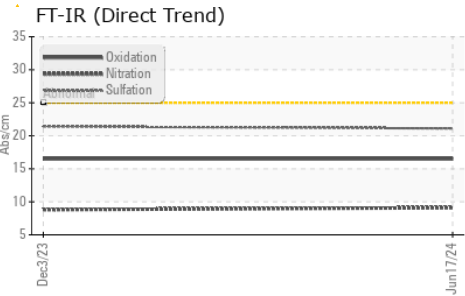
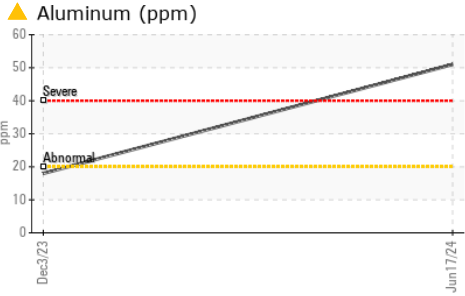
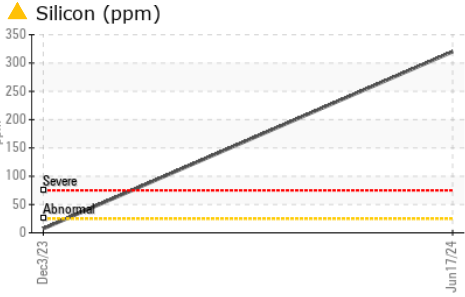
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>119</b>	3	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	2	---
Molybdenum	ppm	ASTM D5185m	100	<b>1</b>	68	---
Manganese	ppm	ASTM D5185m		<b>7</b>	<1	---
Magnesium	ppm	ASTM D5185m	450	<b>14</b>	877	---
Calcium	ppm	ASTM D5185m	3000	<b>3683</b>	1094	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1292</b>	908	---
Zinc	ppm	ASTM D5185m	1350	<b>1548</b>	1166	---
Sulfur	ppm	ASTM D5185m	4250	<b>14613</b>	3317	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>▲ 320</b>	7	---
Sodium	ppm	ASTM D5185m	>216	<b>9</b>	1	---
Potassium	ppm	ASTM D5185m	>20	<b>12</b>	3	---
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.7	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	8.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.4	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	16.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.2</b>	7.1	---

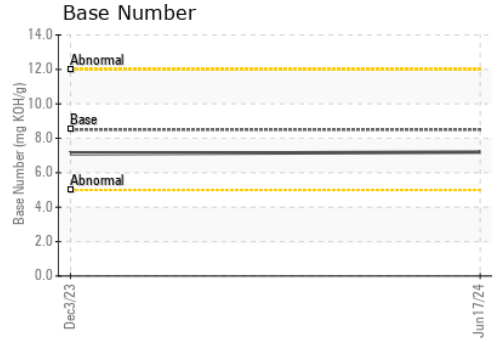
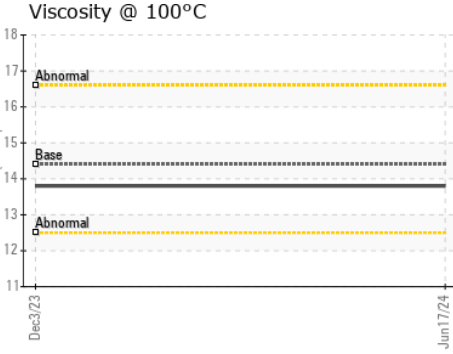
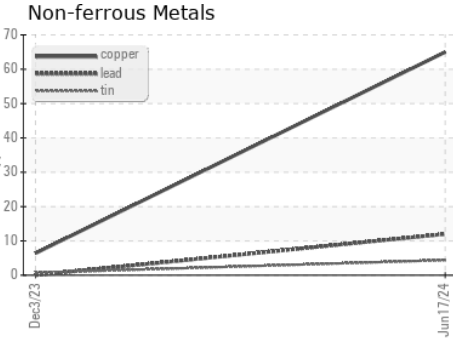
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	13.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0127414 **Received** : 17 Jun 2024  
**Lab Number** : **06212897** **Tested** : 19 Jun 2024  
**Unique Number** : 11085761 **Diagnosed** : 19 Jun 2024 - Angela Borella  
**Test Package** : FLEET ( Additional Tests: Glycol )

**NORTHFIELD LINES**  
 1034 GEMINI RD  
 EAGAN, MN  
 US 55121  
 Contact: Tyler Smith  
 TSmith@northfieldlines.com  
 T: (651)203-8888  
 F:

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)