



# LUBE PLUS+

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**HYUNDAI HL980A LB-61 - HYUNDAI (S/N 0000146)**

Component  
**Diesel Engine**

Fluid  
**FLEETLINE SUPERFLEET XHD 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LP0000766</b>	LP0000763	---
Sample Date		Client Info		<b>26 Dec 2023</b>	20 Nov 2023	---
Machine Age	hrs	Client Info		<b>511</b>	279	---
Oil Age	hrs	Client Info		<b>233</b>	279	---
Filter Age	hrs	Client Info		<b>233</b>	279	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>0</b>	7	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>2</b>	3	---
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

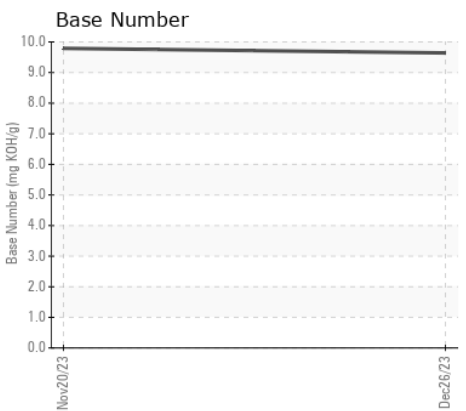
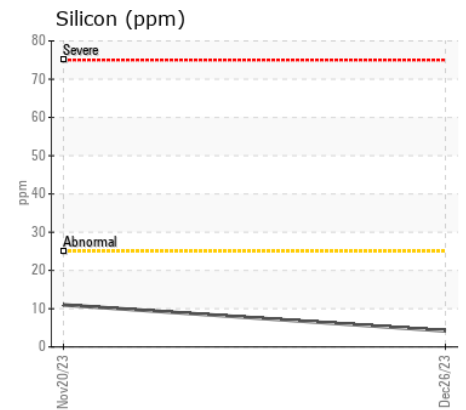
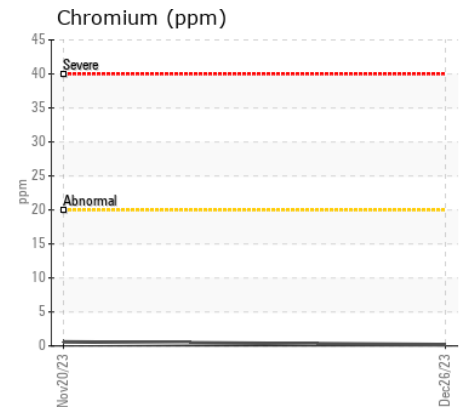
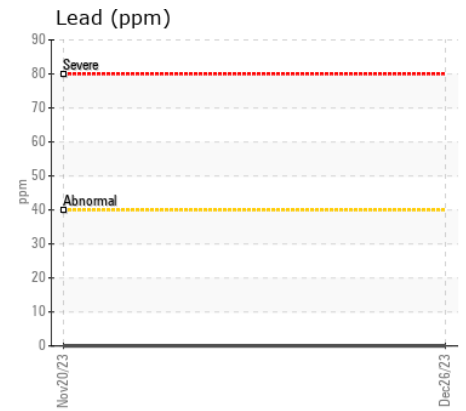
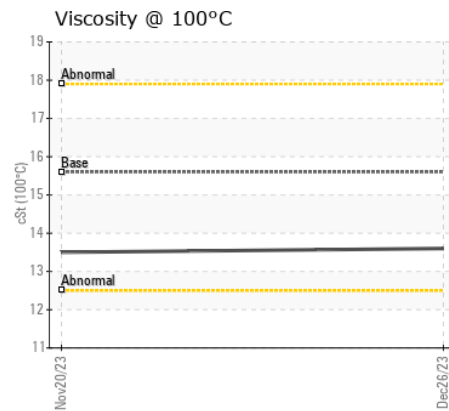
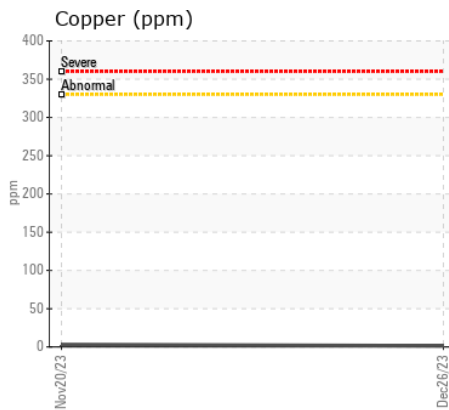
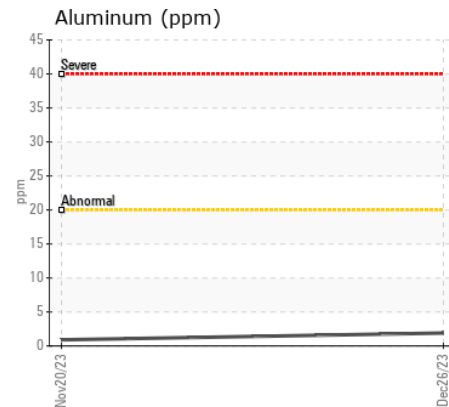
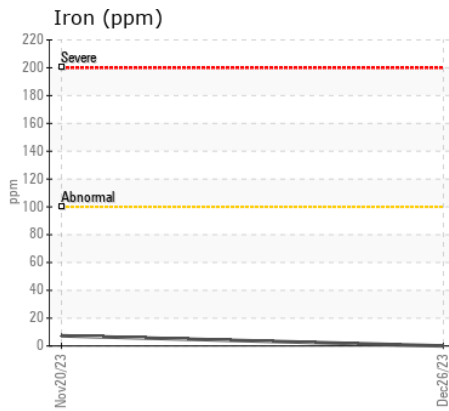
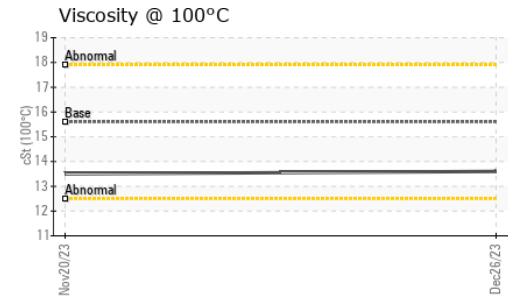
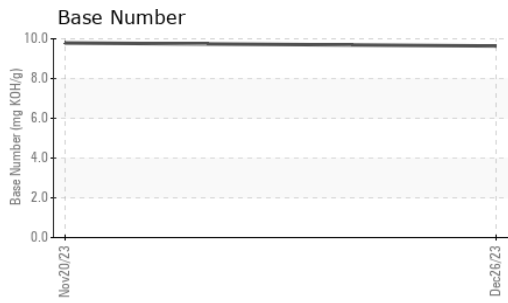
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	11	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.9</b>	6.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.3</b>	16.9	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>0</b>	2	---
Boron	ppm	ASTM D5185m		<b>20</b>	6	---
Barium	ppm	ASTM D5185m		<b>0</b>	4	---
Molybdenum	ppm	ASTM D5185m		<b>38</b>	9	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>116</b>	100	---
Calcium	ppm	ASTM D5185m		<b>2013</b>	2127	---
Phosphorus	ppm	ASTM D5185m		<b>913</b>	946	---
Zinc	ppm	ASTM D5185m		<b>1100</b>	1085	---
Sulfur	ppm	ASTM D5185m		<b>3363</b>	3548	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.0</b>	10.4	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.64</b>	9.79	---
Visc @ 100°C	cSt	ASTM D445	15.6	<b>13.6</b>	13.5	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LP0000766 **Received** : 16 Jan 2024  
**Lab Number** : 06061389 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832771 **Diagnostician** : Don Baldridge  
**Test Package** : MOB 2

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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)