



Machine Id  
**HYUNDA L-28**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### WEAR

All component wear rates are normal.

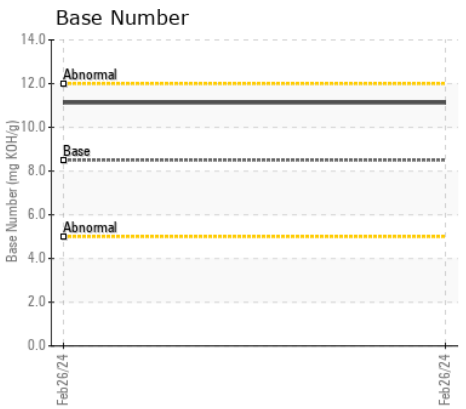
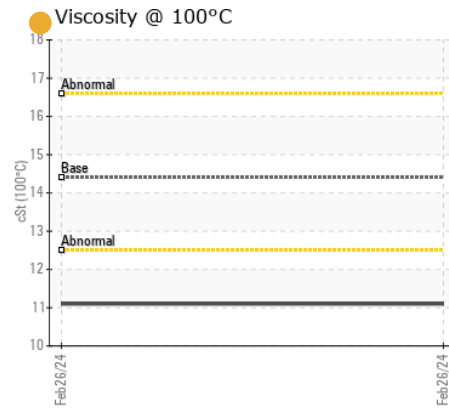
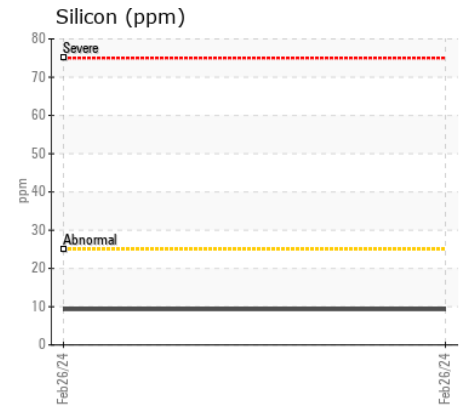
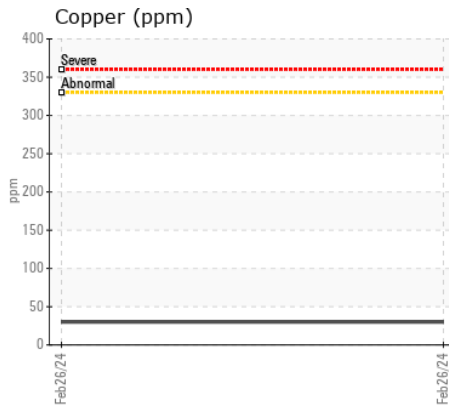
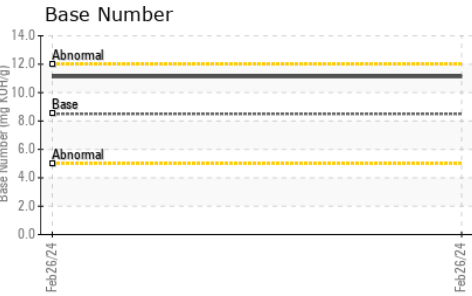
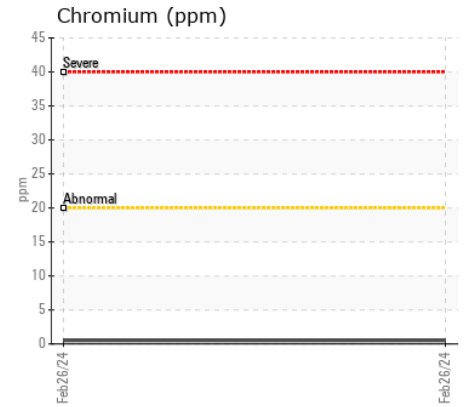
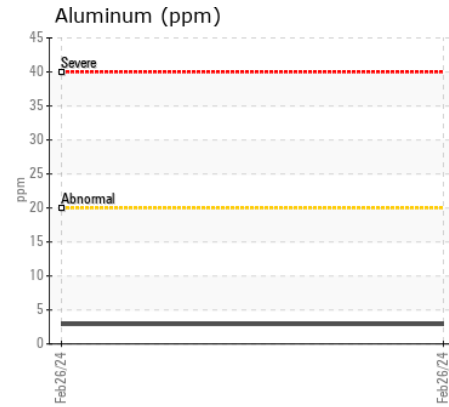
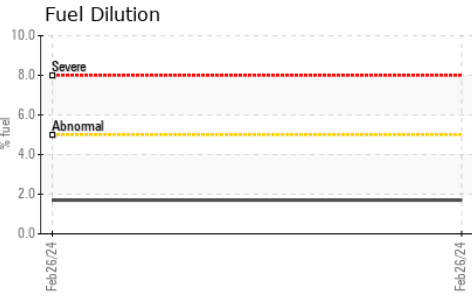
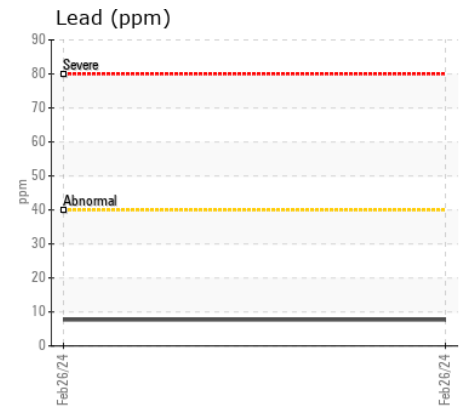
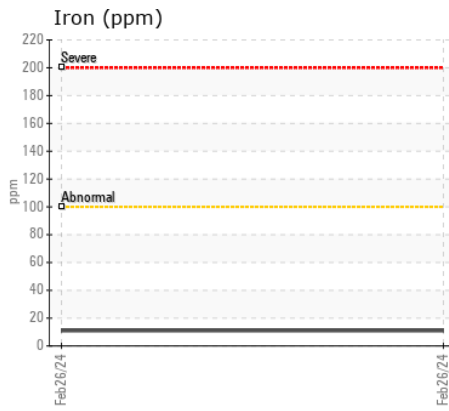
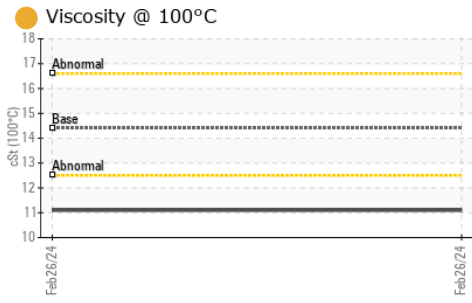
### CONTAMINATION

Fuel content negligible. No other contaminants were detected in the oil.

### FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LP0001006	---	---
Sample Date		Client Info		26 Feb 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		220	---	---
Filter Age	hrs	Client Info		220	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ATTENTION	---	---
Iron	ppm	ASTM D5185m	>100	11	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	3	---	---
Lead	ppm	ASTM D5185m	>40	8	---	---
Copper	ppm	ASTM D5185m	>330	30	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	9	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Fuel	%	ASTM D3524	>5	1.7	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.2	---	---
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	---	---
Sodium	ppm	ASTM D5185m	>158	0	---	---
Boron	ppm	ASTM D5185m	250	0	---	---
Barium	ppm	ASTM D5185m	10	12	---	---
Molybdenum	ppm	ASTM D5185m	100	60	---	---
Manganese	ppm	ASTM D5185m		2	---	---
Magnesium	ppm	ASTM D5185m	450	960	---	---
Calcium	ppm	ASTM D5185m	3000	1013	---	---
Phosphorus	ppm	ASTM D5185m	1150	945	---	---
Zinc	ppm	ASTM D5185m	1350	1267	---	---
Sulfur	ppm	ASTM D5185m	4250	2948	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	11.13	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	11.1	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LP0001006 **Received** : 26 Feb 2024  
**Lab Number** : 06101146 **Tested** : 29 Feb 2024  
**Unique Number** : 10899376 **Diagnosed** : 29 Feb 2024 - Doug Bogart  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**S.M. LORUSSO & SONS**  
 10 GROVE ST  
 WEST ROXBURY, MA  
 US 02132  
 Contact: MARK ERWIN  
 merwin@smlorusso.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)

T:  
F: