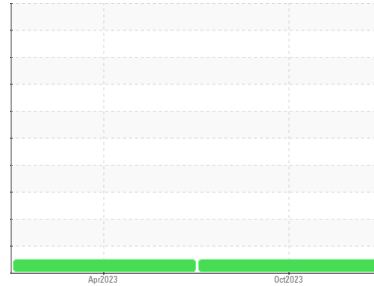


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
CHICAGO 95TH
 Machine Id
HYUNDAI 740 L-113 (S/N HLN02CD0000285)
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0105652	PCA0097282	---
Sample Date	Client Info			21 Oct 2023	24 Apr 2023	---
Machine Age	hrs	Client Info		1689	16388	---
Oil Age	hrs	Client Info		250	250	---
Oil Changed	Client Info			N/A	Changed	---
Sample Status				NORMAL	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	---
Water	WC Method	>0.2		NEG	NEG	---
Glycol	WC Method			NEG	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	25	---
Chromium	ppm	ASTM D5185m	>20	<1	2	---
Nickel	ppm	ASTM D5185m	>4	<1	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	2	<1	---
Lead	ppm	ASTM D5185m	>40	1	0	---
Copper	ppm	ASTM D5185m	>330	<1	<1	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

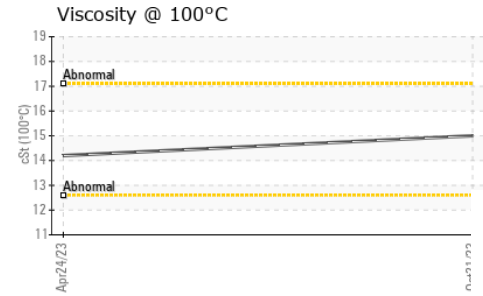
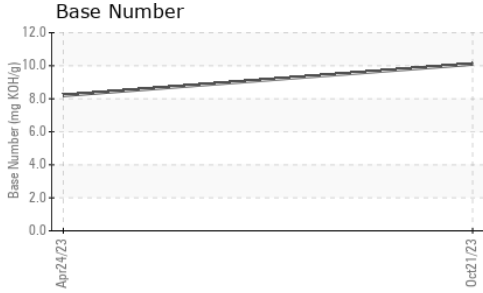
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		2	3	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		57	67	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		946	1061	---
Calcium	ppm	ASTM D5185m		985	1222	---
Phosphorus	ppm	ASTM D5185m		1018	1164	---
Zinc	ppm	ASTM D5185m		1234	1414	---
Sulfur	ppm	ASTM D5185m		2922	3678	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	4	---
Sodium	ppm	ASTM D5185m		0	3	---
Potassium	ppm	ASTM D5185m	>20	<1	6	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.7	1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.6	7.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	17.9	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	13.6	---
Base Number (BN)	mg KOH/g	ASTM D2896		10.1	8.2	---

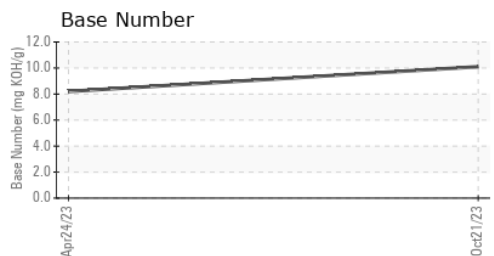
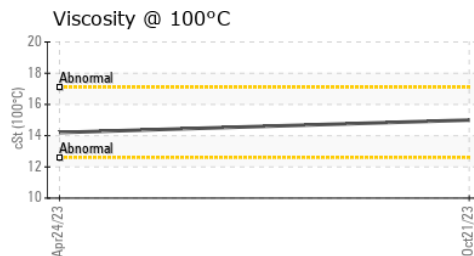
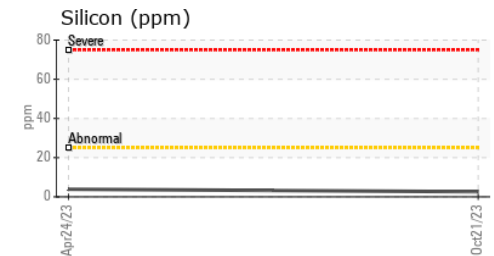
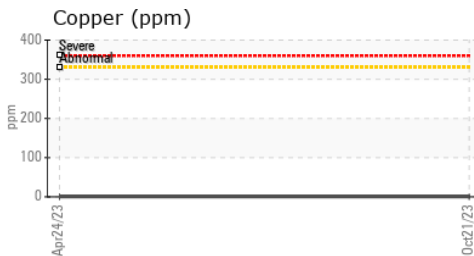
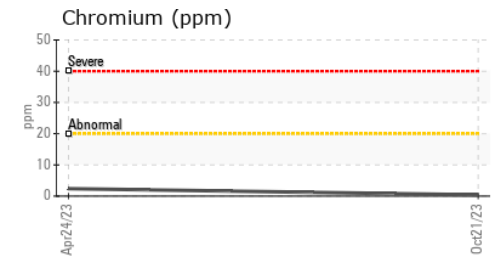
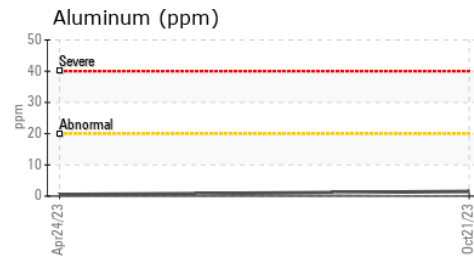
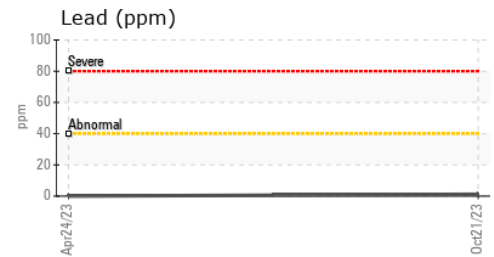
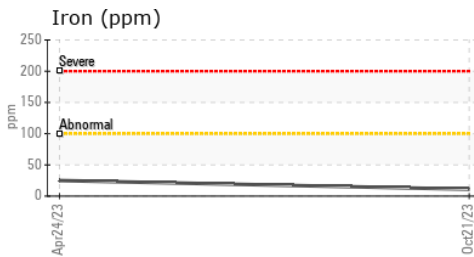
OIL ANALYSIS REPORT



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	15.0	14.2	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0105652 **Received** : 01 Feb 2024
Lab Number : **06076573** **Tested** : 01 Feb 2024
Unique Number : 10858664 **Diagnosed** : 01 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

NORTH AMERICAN STEVEDORING CO
 9301 S KREITER AVE
 CHICAGO, IL
 US 60617
 Contact: PACO MARTINEZ
 paco.martinez@qsl.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)

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F: