



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Wonder

Machine Id

7213-020A

Component

Port Hydraulic System

Fluid

TUXTON PREMIUM HYDRAULIC AW 32 (38 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0506669	WC0394181	---
Sample Date		Client Info		25 Nov 2020	12 Dec 2019	---
Machine Age	hrs	Client Info		14289	13434	---
Oil Age	hrs	Client Info		855	4163	---
Filter Age	hrs	Client Info		855	4163	---
Oil Changed		Client Info		Not Changed	Not Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ATTENTION	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	2	1	---
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	---
Nickel	ppm	ASTM D5185(m)		<1	0	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)		<1	0	---
Aluminum	ppm	ASTM D5185(m)	>10	0	<1	---
Lead	ppm	ASTM D5185(m)	>10	<1	<1	---
Copper	ppm	ASTM D5185(m)	>75	11	9	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

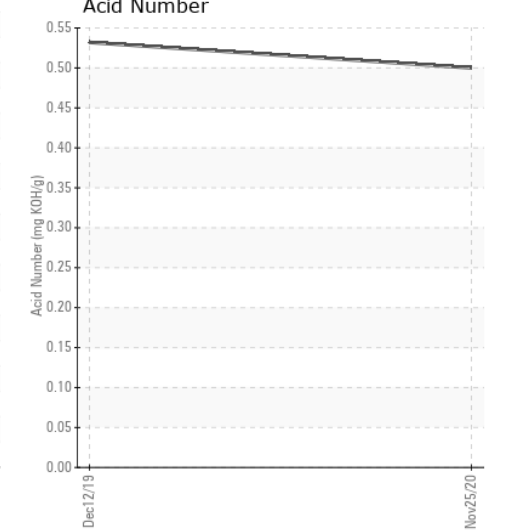
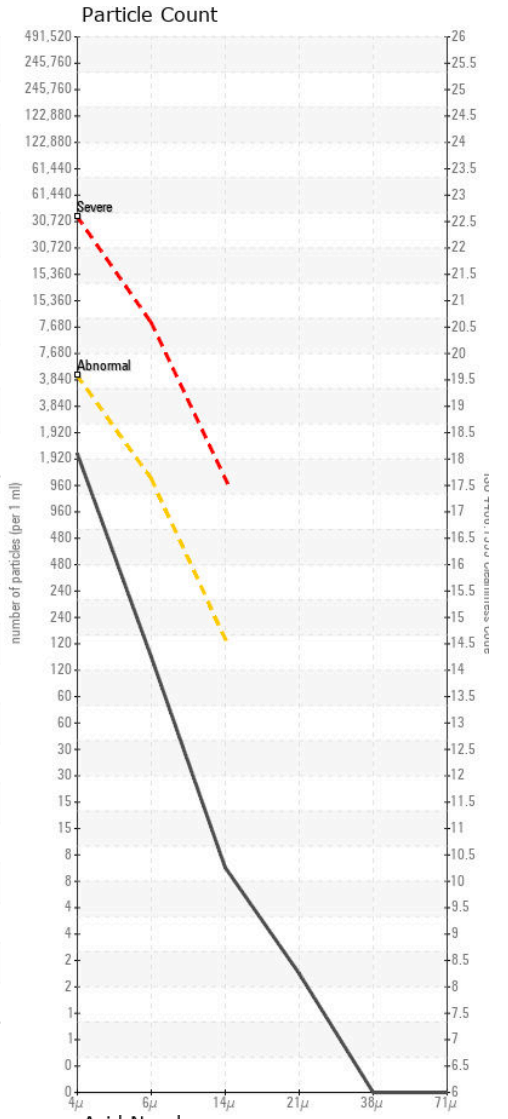
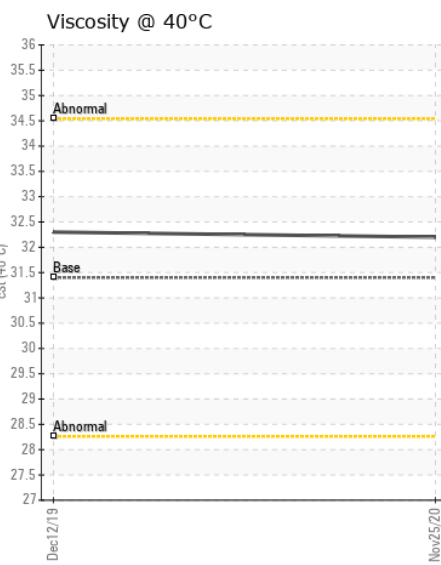
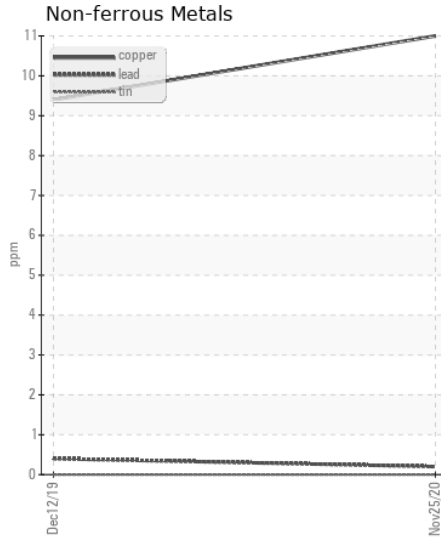
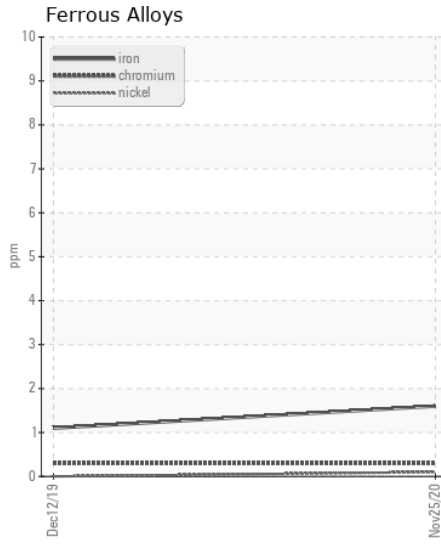
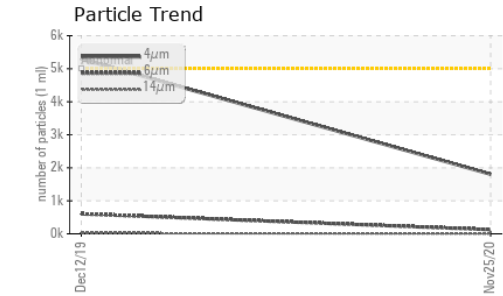
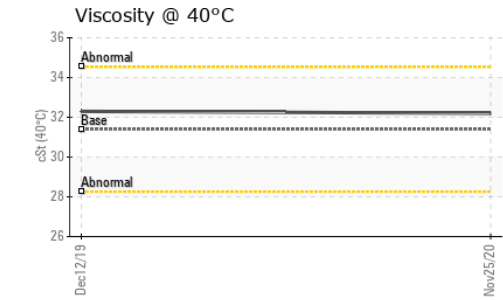
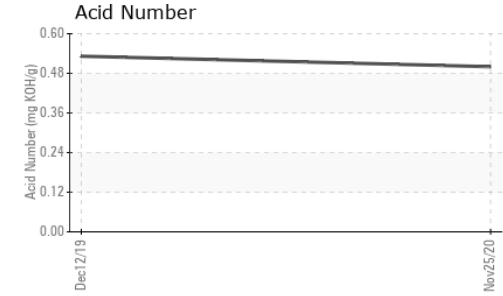
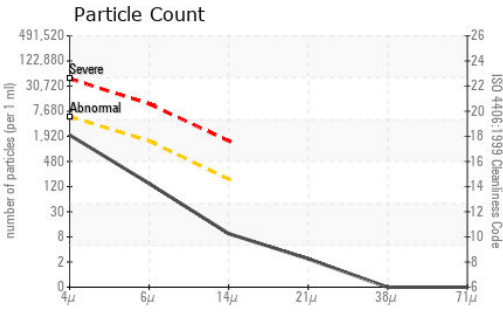
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	<1	0	---
Potassium	ppm	ASTM D5185(m)	>20	2	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	1805	▲ 5297	---
Particles >6µm		ASTM D7647	>1300	126	603	---
Particles >14µm		ASTM D7647	>160	8	20	---
Particles >21µm		ASTM D7647	>40	2	6	---
Particles >38µm		ASTM D7647	>10	0	0	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/14/10	▲ 20/16/11	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		2	0	---
Boron	ppm	ASTM D5185(m)		1	1	---
Barium	ppm	ASTM D5185(m)		<1	<1	---
Molybdenum	ppm	ASTM D5185(m)		<1	<1	---
Manganese	ppm	ASTM D5185(m)		0	0	---
Magnesium	ppm	ASTM D5185(m)		1	2	---
Calcium	ppm	ASTM D5185(m)		33	35	---
Phosphorus	ppm	ASTM D5185(m)		346	355	---
Zinc	ppm	ASTM D5185(m)		453	442	---
Sulfur	ppm	ASTM D5185(m)		1491	1414	---
Acid Number (AN)	mg KOH/g	ASTM D974*		0.50	0.532	---
Visc @ 40°C	cSt	ASTM D7279(m)	31.4	32.2	32.3	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0506669 **Received** : 01 Dec 2020
Lab Number : 02390523 **Tested** : 02 Dec 2020
Unique Number : 5137980 **Diagnosed** : 02 Dec 2020 - Wes Davis
Test Package : MAR 2 (Additional Tests: TAN Man)

Niagara City Cruises (Hornblower)
 5775 River Road
 Niagara Falls, ON
 CA L2G 3K9
 Contact: Evan Dubblestyn
 evan.dubblestyn@cityexperiences.com
 T: (519)373-4663
 F: x:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.