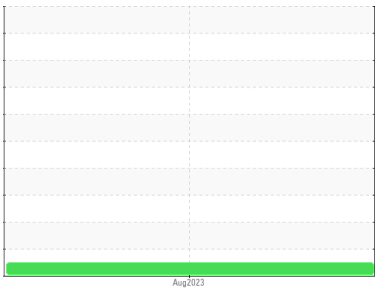
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
HITACHI P109 (S/N HCMDDQ60V00082382)
Component
Diesel Engine
Fluid
PETRO CANADA DURON SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l`équipement au prochain intervalle de vidange afin d`en surveiller la condition.

Wear
Les taux de métaux sont typiques pour la période de rodage d`un nouveau composant.

Contamination
Il n`y a aucun indice de contamination dans l`huile.

Fluid Condition
Les niveaux d`additifs indiquent l`ajout d`une autre marque ou d`un autre type d`huile. Le résultat pour le BN indique que la réserve d'alcalinité est acceptable pour l`huile. L`état de l`huile permet d`en prolonger l`utilisation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0843721**	---	---
Sample Date		Client Info		**14 Aug 2023**	---	---
Machine Age	hrs	Client Info		**304**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**NORMAL**	---	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**4**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**0**	---	---
Nickel	ppm	ASTM D5185(m)	>4	**0**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)	>3	**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**1**	---	---
Lead	ppm	ASTM D5185(m)	>40	**<1**	---	---
Copper	ppm	ASTM D5185(m)	>330	**2**	---	---
Tin	ppm	ASTM D5185(m)	>15	**0**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

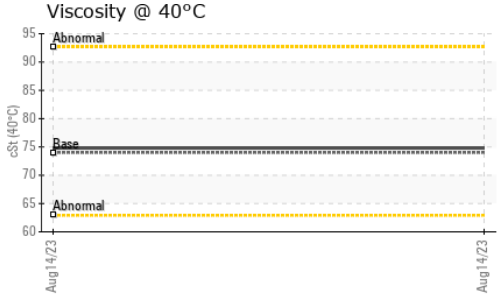
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1	**60**	---	---
Barium	ppm	ASTM D5185(m)	1	**0**	---	---
Molybdenum	ppm	ASTM D5185(m)	1	**36**	---	---
Manganese	ppm	ASTM D5185(m)	1	**<1**	---	---
Magnesium	ppm	ASTM D5185(m)	10	**475**	---	---
Calcium	ppm	ASTM D5185(m)	2942	**1654**	---	---
Phosphorus	ppm	ASTM D5185(m)	1102	**931**	---	---
Zinc	ppm	ASTM D5185(m)	1351	**1016**	---	---
Sulfur	ppm	ASTM D5185(m)	3903	**2576**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**8**	---	---
Sodium	ppm	ASTM D5185(m)		**3**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**0**	---	---

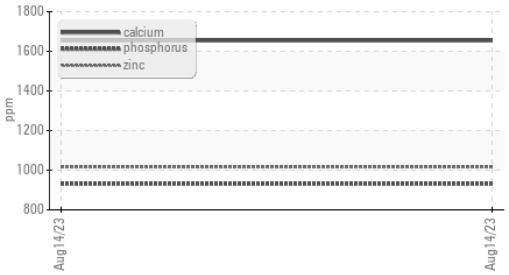
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**5.1**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.3**	---	---

OIL ANALYSIS REPORT

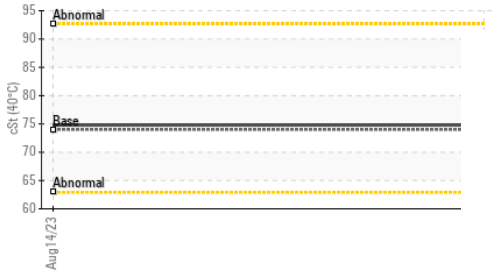
Viscosity @ 40°C



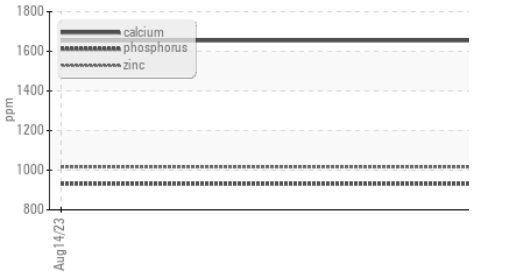
Additives



Viscosity @ 40°C



Additives



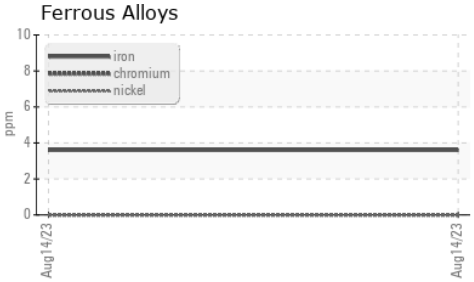
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.3**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	9.1	**9.38**	---	---

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**	---	---

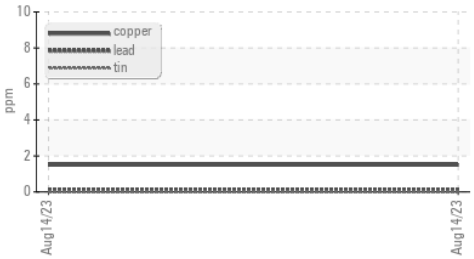
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	74.0	**74.8**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	**11.2**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	146	**140**	---	---

GRAPHS

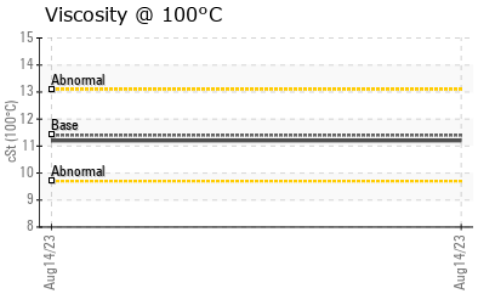
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0843721 **Received** : 17 Aug 2023
Lab Number : 02576384 **Diagnosed** : 24 Aug 2023
Unique Number : 5629444 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: KV40, PrtCount, VI, Visual)

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.

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