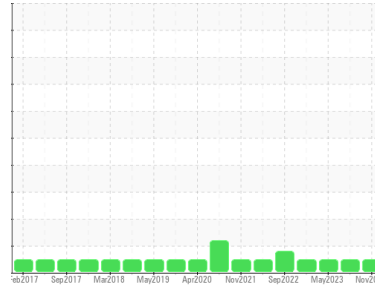




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
2H28
 Machine Id
KENWORTH T370 JTK9733 (S/N 6511385142)
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (15 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		ARI0007357	ARI0006717	ARI0006763
Sample Date	Client Info		14 Nov 2023	24 Aug 2023	01 May 2023
Machine Age	mls	Client Info	106667	101862	97966
Oil Age	mls	Client Info	4804	6085	24447
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	35	36	19
Chromium	ppm	ASTM D5185m >20	<1	2	<1
Nickel	ppm	ASTM D5185m >4	0	<1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	18	25	5
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	0	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<1	1	3
Barium	ppm	ASTM D5185m	3	0	0
Molybdenum	ppm	ASTM D5185m	61	63	56
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	907	984	832
Calcium	ppm	ASTM D5185m	1020	1077	1148
Phosphorus	ppm	ASTM D5185m	991	1068	1013
Zinc	ppm	ASTM D5185m	1183	1308	1186
Sulfur	ppm	ASTM D5185m	3357	3275	3143

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	7	3
Sodium	ppm	ASTM D5185m	0	2	0
Potassium	ppm	ASTM D5185m >20	57	59	12

INFRA-RED

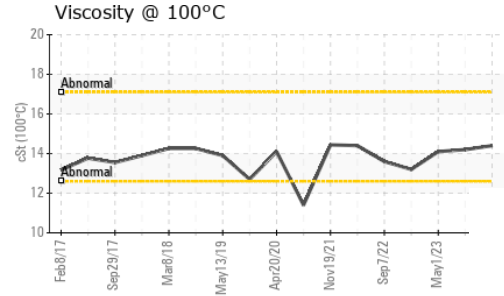
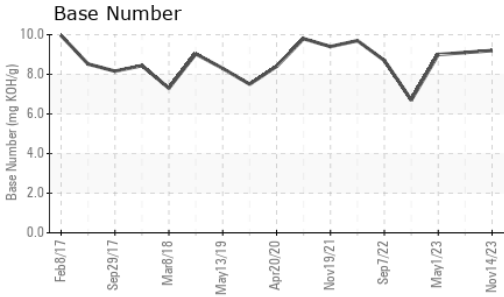
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.7	8.4	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.4	18.9	18.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.2	15.7	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	9.1	9.0



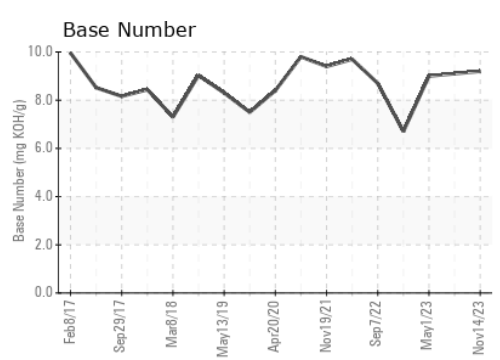
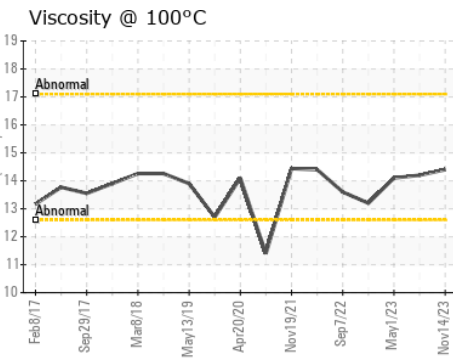
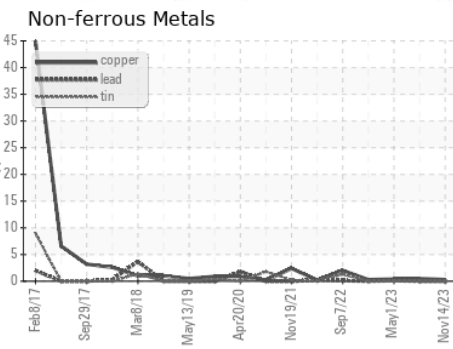
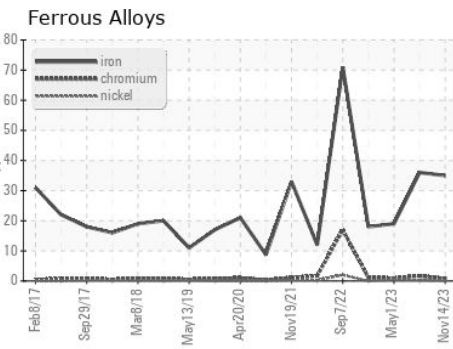
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.2	14.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ARI0007357 **Received** : 07 Dec 2023
Lab Number : **06028482** **Diagnosed** : 09 Dec 2023
Unique Number : 10778273 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: TBN)

INSITUFORM TECHNOLOGIES, INC
 253F WORCESTER ROAD
 CHARLTON, MA
 US 01507
 Contact: NELSON LEITE
 NLEITE@INSITUFORM.COM
 T: (774)364-1927
 F: (508)248-1709

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)