



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	ATTENTION

Machine Id
KENWORTH 780
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (28 QTS)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0778887	WC0707364	WC0707324
Sample Date		Client Info		28 Jul 2023	29 Dec 2022	23 May 2022
Machine Age	hrs	Client Info		2443	1828	1272
Oil Age	hrs	Client Info		450	0	450
Filter Age	hrs	Client Info		450	0	450
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	59	57	36
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	10	▲ 40	8
Lead	ppm	ASTM D5185m	>40	2	2	2
Copper	ppm	ASTM D5185m	>330	5	4	3
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

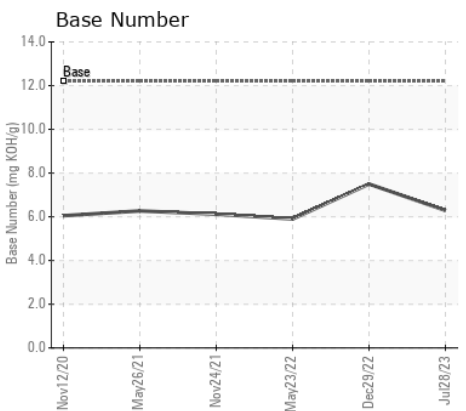
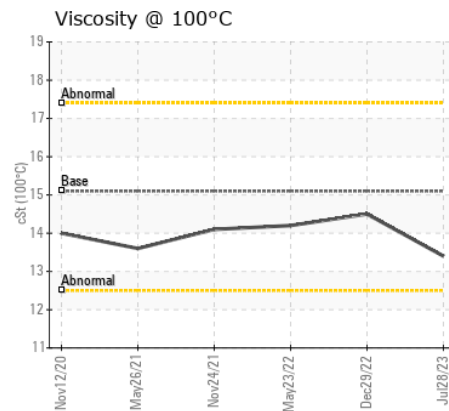
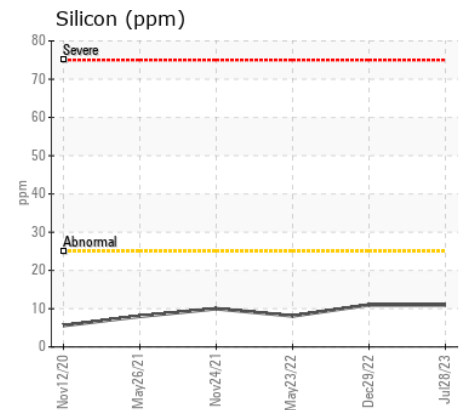
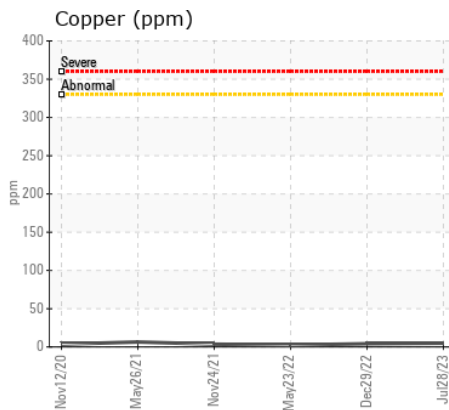
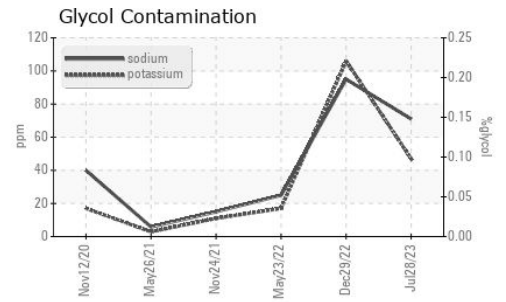
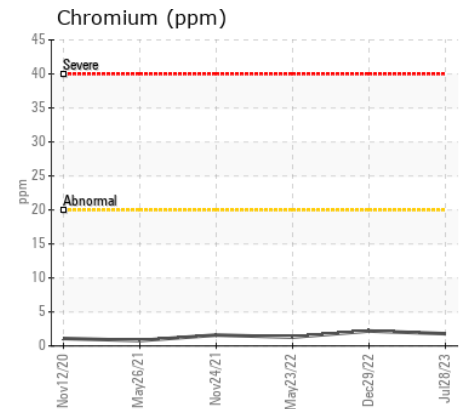
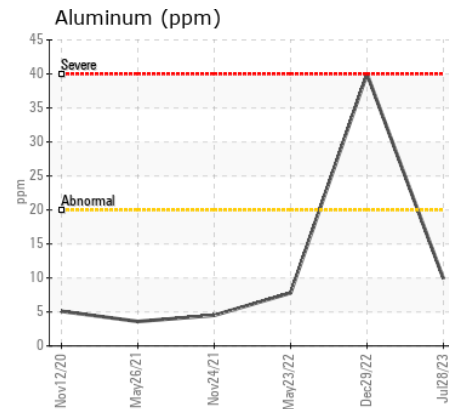
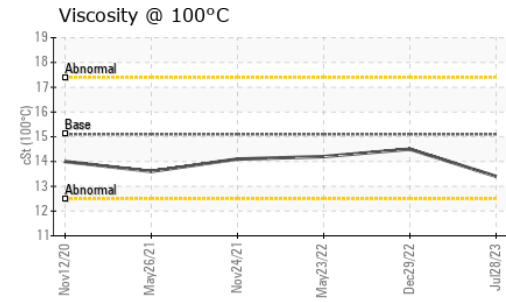
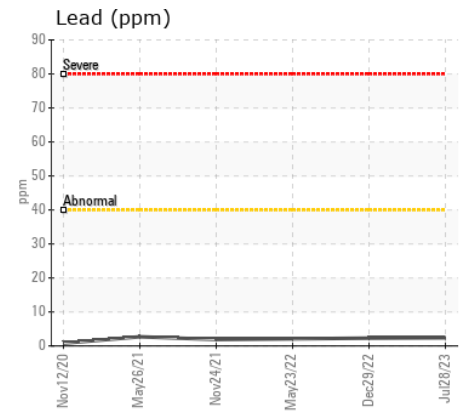
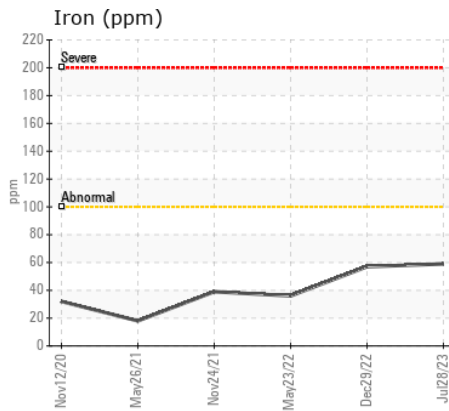
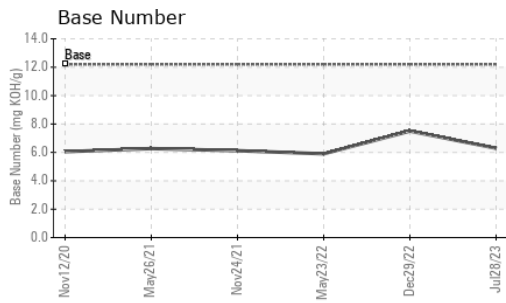
Sodium and/or potassium levels remain high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	11	11	8
Potassium	ppm	ASTM D5185m	>20	▲ 47	▲ 106	17
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.2	1.2	0.8
Nitration	Abs/cm	*ASTM D7624	>20	13.2	14.7	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.5	26.8	24.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		▲ 71	▲ 95	25
Boron	ppm	ASTM D5185m		23	29	73
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		12	22	35
Manganese	ppm	ASTM D5185m		2	1	<1
Magnesium	ppm	ASTM D5185m		742	728	717
Calcium	ppm	ASTM D5185m		1329	1401	1484
Phosphorus	ppm	ASTM D5185m	1360	672	690	692
Zinc	ppm	ASTM D5185m	1480	818	864	837
Sulfur	ppm	ASTM D5185m		4417	3396	2797
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.0	21.4	20.3
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	6.29	7.50	5.90
Visc @ 100°C	cSt	ASTM D445	15.1	13.4	14.5	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0778887 **Received** : 08 Jan 2024
Lab Number : 06055056 **Diagnosed** : 10 Jan 2024
Unique Number : 10821005 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: Glycol)

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Certificate L2367
 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)