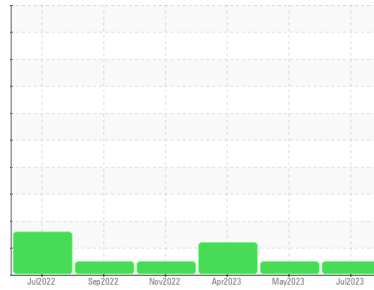




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CATERPILLAR 966K 966K-2
 Component
Diesel Engine
 Fluid
KENDALL SUPER-D XA DIESEL ENGINE OIL 15W40 (6 GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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		WC0524365	WCM2312785	WCM2312804
Sample Date	Client Info		18 Jul 2023	30 May 2023	10 Apr 2023
Machine Age	hrs	Client Info	15155	14860	14600
Oil Age	hrs	Client Info	250	250	250
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	12	10	15
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	58	81	59
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	<1	0
Lead	ppm	ASTM D5185m >40	<1	0	0
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	79	100	75
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	20	7	18
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	545	389	516
Calcium	ppm	ASTM D5185m	1710	1685	1683
Phosphorus	ppm	ASTM D5185m	964	916	1017
Zinc	ppm	ASTM D5185m 1260	1199	1076	1214
Sulfur	ppm	ASTM D5185m	4256	4046	4411

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	5	6
Sodium	ppm	ASTM D5185m	7	7	5
Potassium	ppm	ASTM D5185m >20	3	0	2
Fuel	%	ASTM D3524 >5	1.7	<1.0	▲ 2.5

INFRA-RED

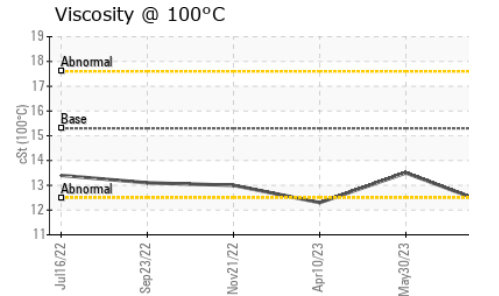
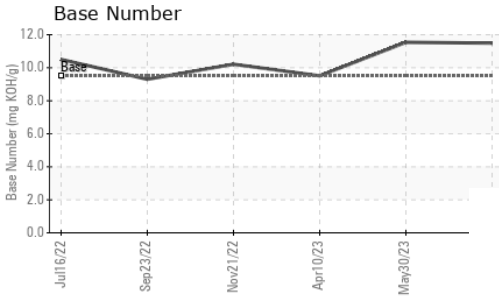
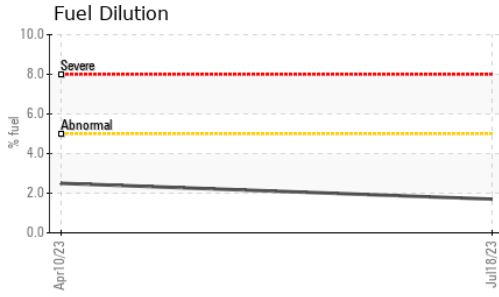
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	8.2	9.0	8.7
Sulfation	Abs.1mm	*ASTM D7415 >30	18.9	20.5	17.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs.1mm	*ASTM D7414 >25	13.7	15.6	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.5	11.49	11.54	9.51



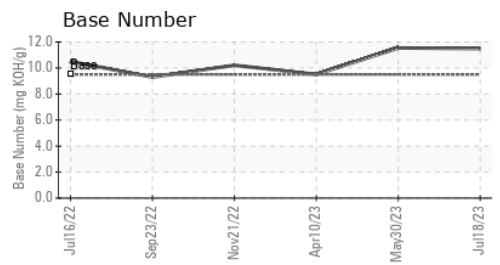
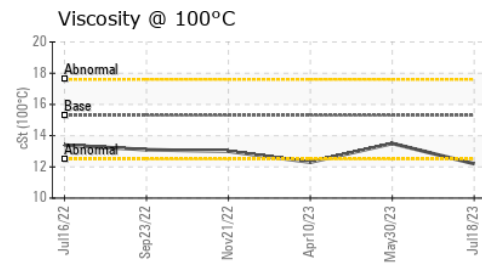
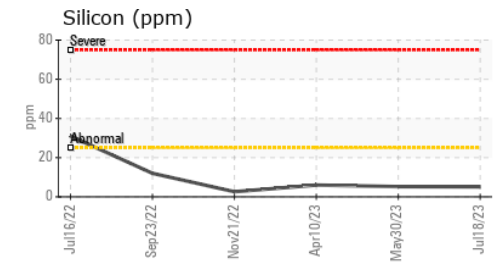
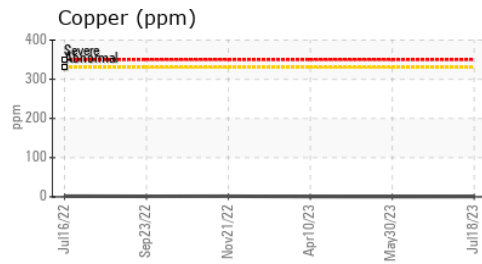
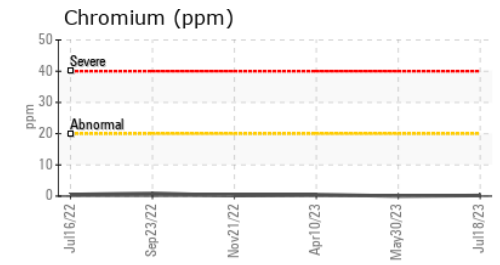
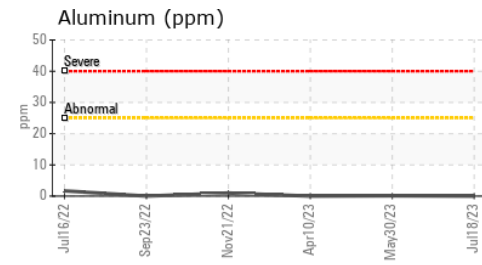
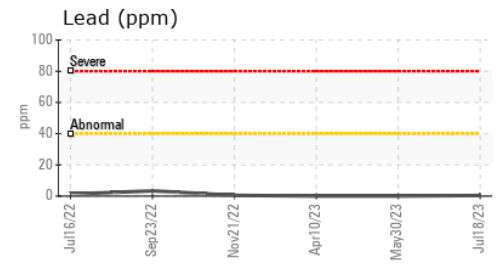
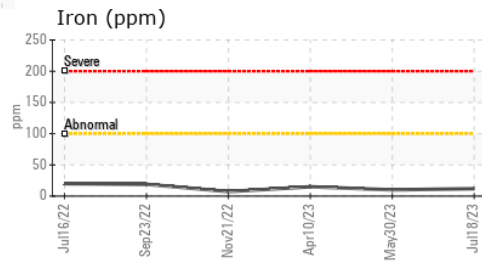
OIL ANALYSIS REPORT



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	15.3	12.2	13.5 ▲ 12.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0524365 **Received** : 15 Aug 2023
Lab Number : 05925536 **Diagnosed** : 17 Aug 2023
Unique Number : 10605483 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

DEXTER & HARPELL
 2352 MAIN ST
 CONCORD, MA
 US 01742
 Contact: SCOTT BRUNEAU
 dhoam52@gmail.com
 T: (978)897-4901
 F:

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)