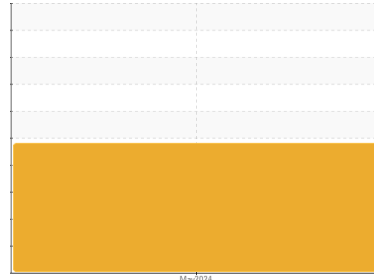


# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**200-21**  
Component  
**Diesel Engine**  
Fluid  
**TULCO LUBSOIL CK-4 15W40 (13 GAL)**

## DIAGNOSIS

**Recommendation**  
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

**Wear**  
Piston and cylinder wear is indicated.

**Contamination**  
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring.

**Fluid Condition**  
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>TO50002381</b>	---	---
Sample Date	Client Info		<b>23 May 2024</b>	---	---
Machine Age	hrs	Client Info	<b>3285</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>▲ 128</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>4</b>	---	---
Nickel	ppm	ASTM D5185m >2	<b>3</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>▲ 30</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>1</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>6</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>27</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 65	<b>42</b>	---	---
Manganese	ppm	ASTM D5185m	<b>2</b>	---	---
Magnesium	ppm	ASTM D5185m 1060	<b>440</b>	---	---
Calcium	ppm	ASTM D5185m 1140	<b>1640</b>	---	---
Phosphorus	ppm	ASTM D5185m 1170	<b>902</b>	---	---
Zinc	ppm	ASTM D5185m 1230	<b>1128</b>	---	---
Sulfur	ppm	ASTM D5185m 3130	<b>3590</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 35</b>	---	---
Sodium	ppm	ASTM D5185m	<b>6</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>12</b>	---	---
Fuel	%	ASTM D3524 >5	<b>▲ 4.3</b>	---	---

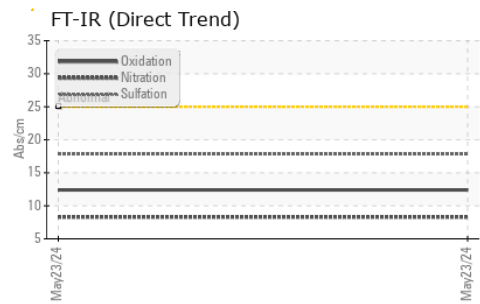
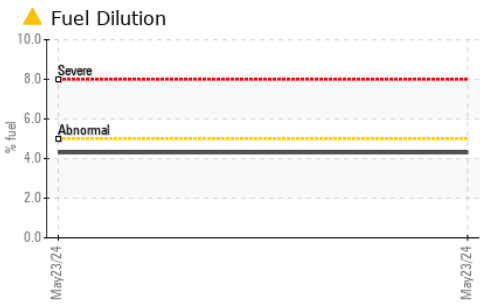
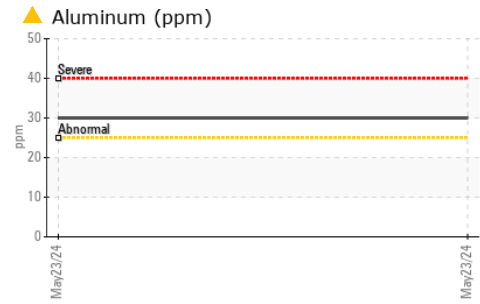
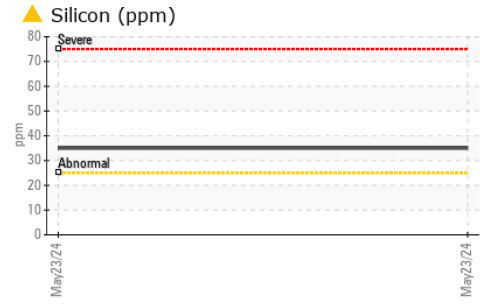
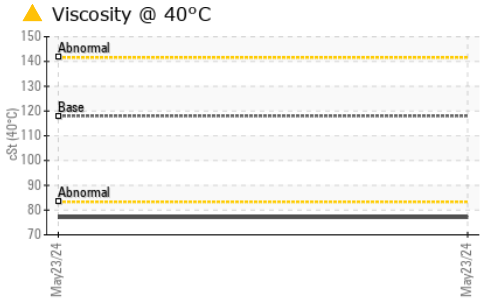
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.8</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.4</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.8	<b>8.93</b>	---	---

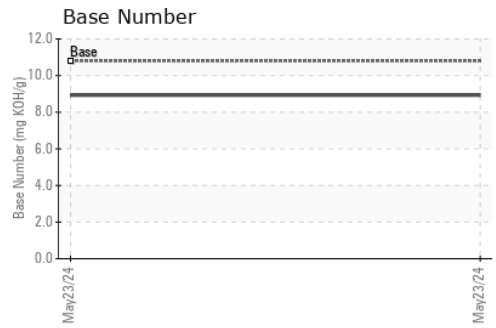
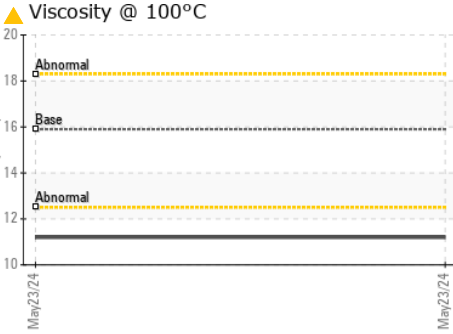
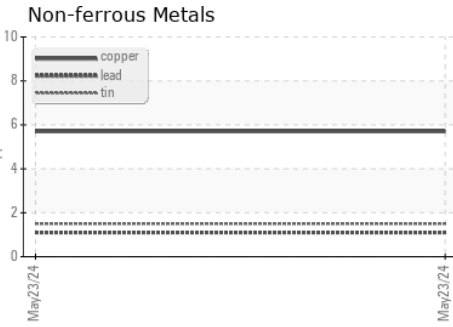
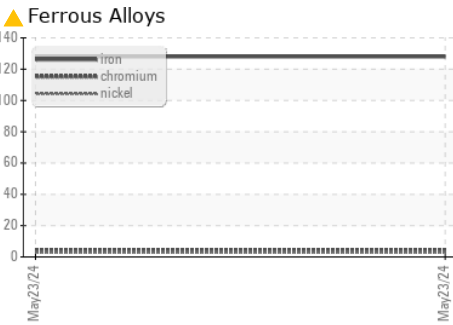
# OIL ANALYSIS REPORT



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 D445	118	▲ 77.1	---	---
Visc @ 100°C	cSt	ASTM D445	15.9	▲ 11.2	---	---
Viscosity Index (VI)	Scale	ASTM D2270	143	135	---	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO50002381      **Received** : 11 Jun 2024  
**Lab Number** : 06206747      **Tested** : 18 Jun 2024  
**Unique Number** : 11074208      **Diagnosed** : 18 Jun 2024 - Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: FuelDilution, KV40, PercentFuel, VI )

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)

**KLX ENERGY SERVICES**  
 701 N MAIN  
 UNION CITY, OK  
 US 73090-9657  
 Contact: FRANKIE GOAD  
 frankie.goad@klx.com

T:  
F: