



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
EMPIRE EAST DARTMOOR LIFT
 Component
Left Genset
 Fluid
TRC PRO-SPEC IV HD 5W40 (6 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06148921	---	---
Sample Date		Client Info		04 Apr 2024	---	---
Machine Age	hrs	Client Info		18539	---	---
Oil Age	hrs	Client Info		34	---	---
Filter Age	hrs	Client Info		34	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				ABNORMAL	---	---

WEAR

The chromium level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	29	---	---
Chromium	ppm	ASTM D5185m	>4	▲ 16	---	---
Nickel	ppm	ASTM D5185m	>2	1	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>5	0	---	---
Aluminum	ppm	ASTM D5185m	>12	2	---	---
Lead	ppm	ASTM D5185m	>17	2	---	---
Copper	ppm	ASTM D5185m	>70	2	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

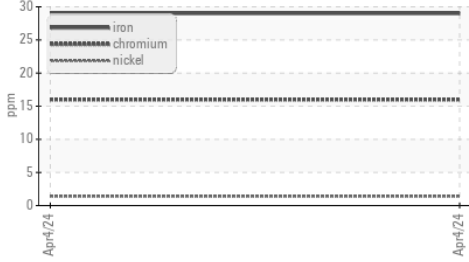
Silicon	ppm	ASTM D5185m	>25	10	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	---	---
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	>0.1	NEG	---	---

FLUID CONDITION

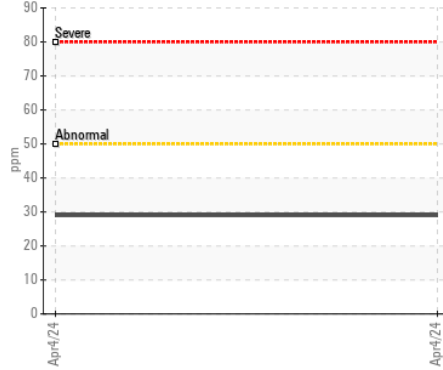
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		17	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		280	---	---
Calcium	ppm	ASTM D5185m	4500	3134	---	---
Phosphorus	ppm	ASTM D5185m		823	---	---
Zinc	ppm	ASTM D5185m	1200	987	---	---
Sulfur	ppm	ASTM D5185m		3902	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	13.10	---	---
Visc @ 100°C	cSt	ASTM D445	15	13.7	---	---

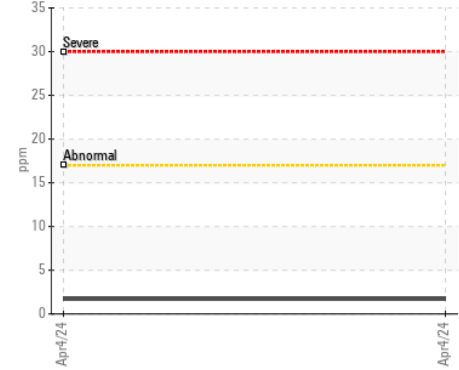
▲ Ferrous Alloys



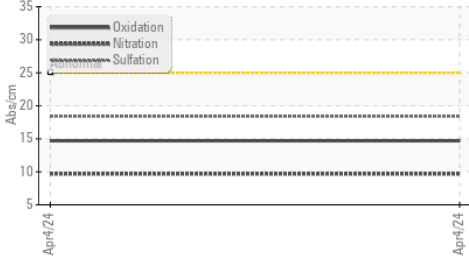
Iron (ppm)



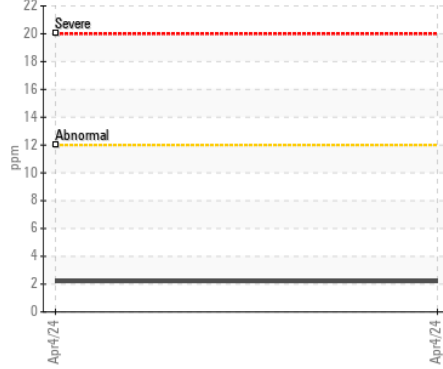
Lead (ppm)



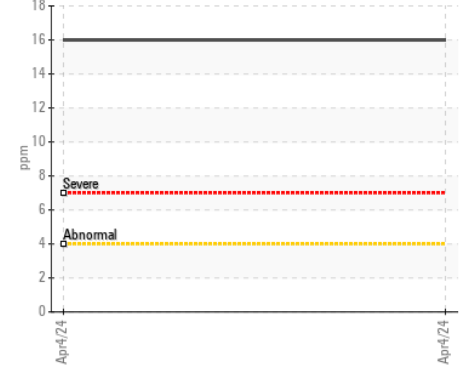
FT-IR (Direct Trend)



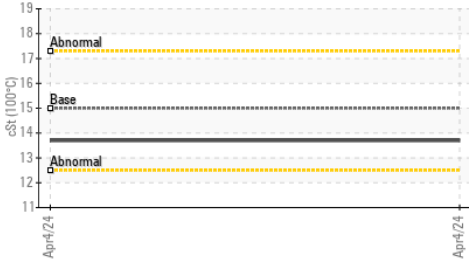
Aluminum (ppm)



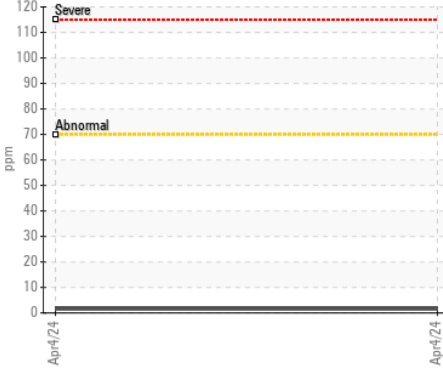
▲ Chromium (ppm)



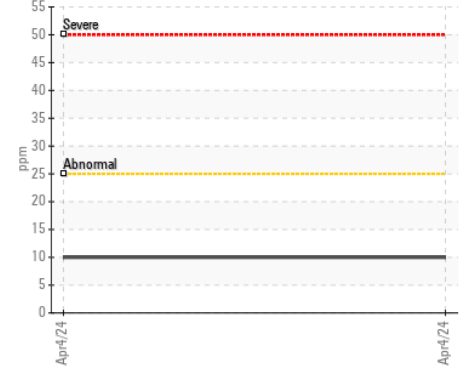
Viscosity @ 100°C



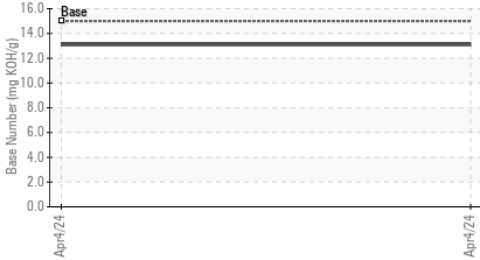
Copper (ppm)



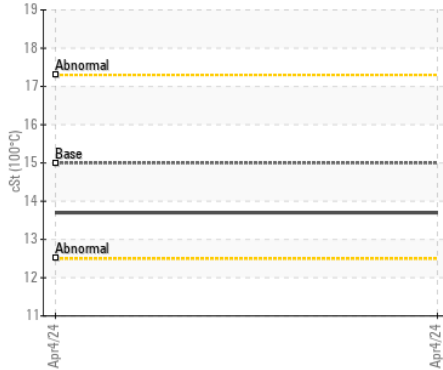
Silicon (ppm)



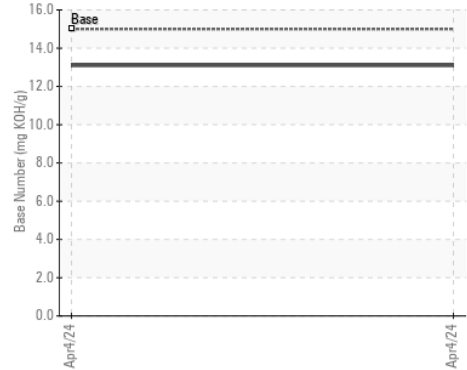
Base Number



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : TR06148921
 Lab Number : 06148921
 Unique Number : 10978999
 Test Package : MOB 2

Received : 15 Apr 2024
 Tested : 18 Apr 2024
 Diagnosed : 18 Apr 2024 - Doug Bogart

CITY OF MCHENRY - KEVIN BEGGS
 1415 INDUSTRIAL DR
 MCHENRY, IL
 US 60050
 Contact: JERRY MORTON

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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)

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F: