



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

73

Component

Middle Differential

Fluid

TRC MOLY ULTRA-TEC GEAR OIL 85W140 (--- GAL)

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		TR0001303	TR0001248	TR0000852
Sample Date		Client Info		09 Jan 2024	03 Oct 2023	16 May 2023
Machine Age	hrs	Client Info		19809	19660	19124
Oil Age	hrs	Client Info		19809	19660	0
Filter Age	hrs	Client Info		0	19660	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	None	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Bearing and/or gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	▲ 560	▲ 880	▲ 924
Chromium	ppm	ASTM D5185m	>10	2	5	4
Nickel	ppm	ASTM D5185m	>10	3	5	5
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	8	8
Lead	ppm	ASTM D5185m	>25	0	<1	0
Copper	ppm	ASTM D5185m	>100	▲ 261	▲ 160	60
Tin	ppm	ASTM D5185m	>10	▲ 24	▲ 15	4
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

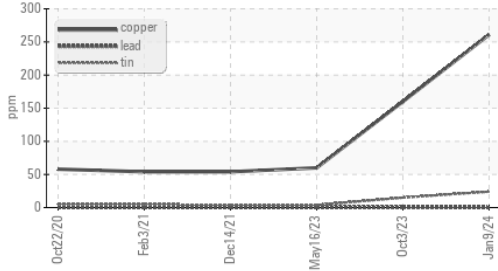
Silicon	ppm	ASTM D5185m	>75	34	45	41
Potassium	ppm	ASTM D5185m	>20	3	3	4
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	0.2%	NEG

FLUID CONDITION

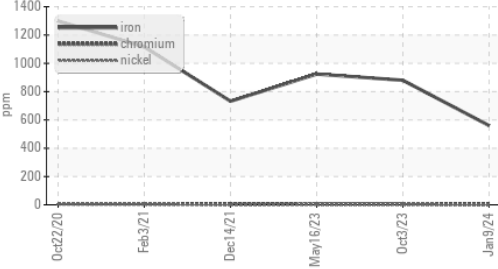
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	3	3
Boron	ppm	ASTM D5185m		230	206	53
Barium	ppm	ASTM D5185m		0	<1	<1
Molybdenum	ppm	ASTM D5185m		<1	3	3
Manganese	ppm	ASTM D5185m		9	17	14
Magnesium	ppm	ASTM D5185m		1	5	6
Calcium	ppm	ASTM D5185m		38	48	104
Phosphorus	ppm	ASTM D5185m		1206	1132	428
Zinc	ppm	ASTM D5185m		35	45	42
Sulfur	ppm	ASTM D5185m		22425	25235	20630
Acid Number (AN)	mg KOH/g	ASTM D8045		1.41	1.71	0.57
Visc @ 40°C	cSt	ASTM D445		298	298	---
Visc @ 100°C	cSt	ASTM D445	30	24.9	22.6	16.1
Viscosity Index (VI)	Scale	ASTM D2270	105	107	93	---

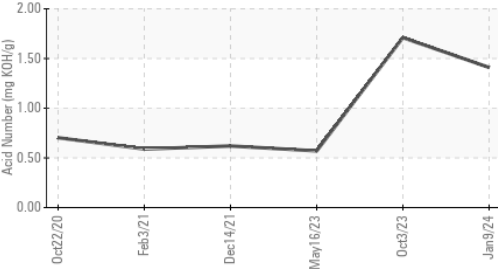
▲ Non-ferrous Metals



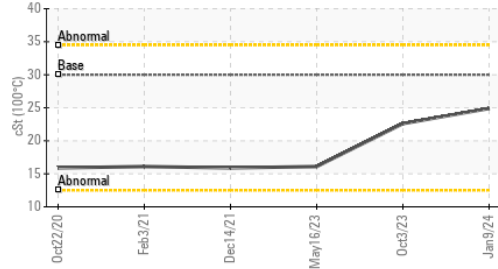
▲ Ferrous Alloys



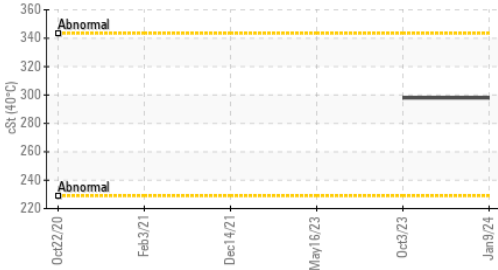
Acid Number



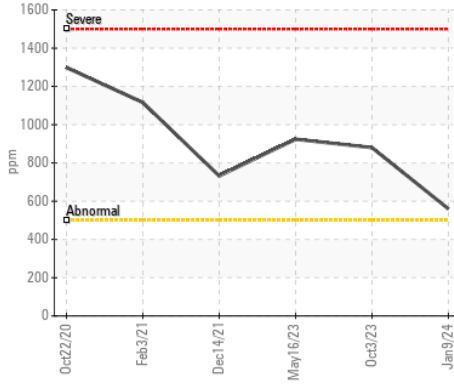
Viscosity @ 100°C



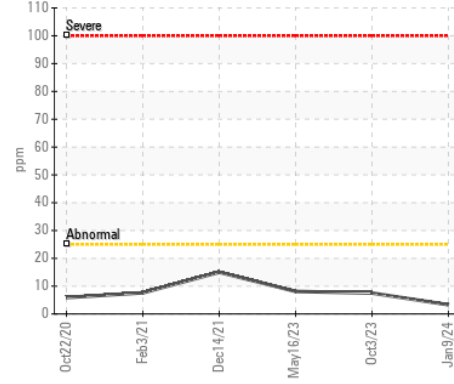
Viscosity @ 40°C



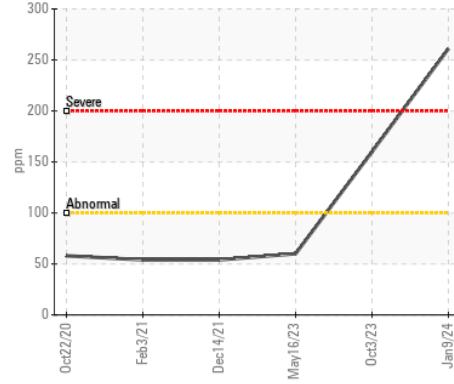
▲ Iron (ppm)



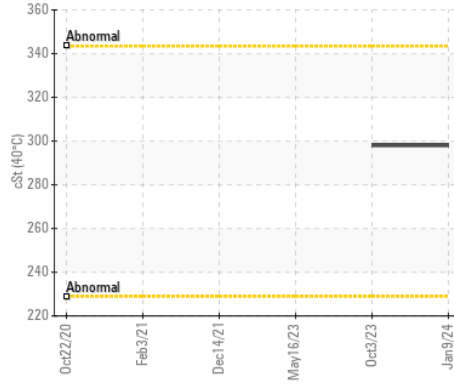
Aluminum (ppm)



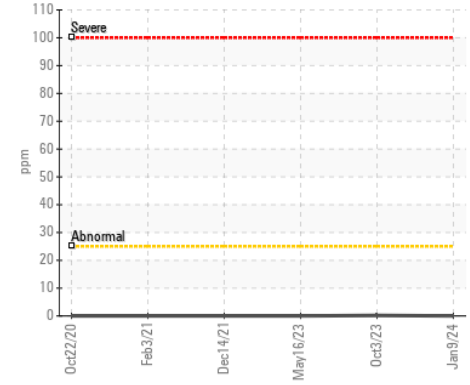
▲ Copper (ppm)



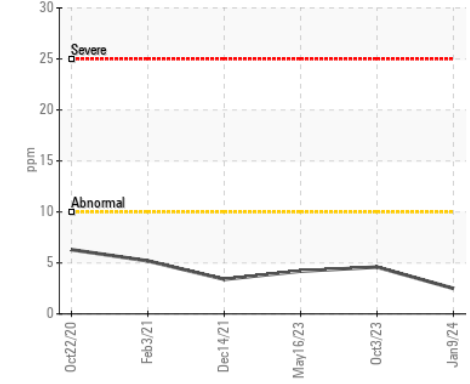
Viscosity @ 40°C



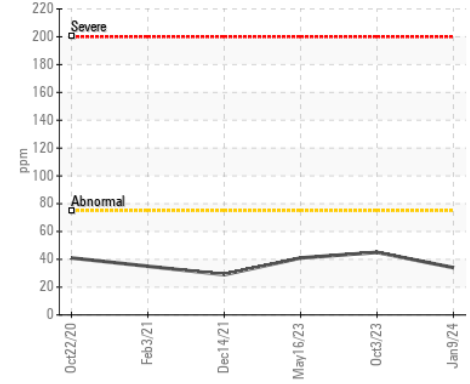
Lead (ppm)



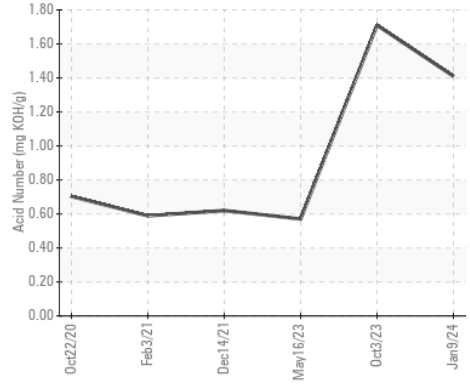
Chromium (ppm)



Silicon (ppm)



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR0001303 **Received** : 12 Jan 2024
Lab Number : 06060372 **Diagnosed** : 16 Jan 2024
Unique Number : 10831754 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: KV100, VI)

S S CONCRETE MATERIALS LLC
 P.O. BOX 23283
 BULLHEAD CITY, AZ
 US 86439
 Contact: MARK OPHEIM

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)

T:
 F: (928)754-1991