TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
86
Component
Front Differential
Fluid
TRC MOLY ULTRA-TEC GEAR OIL 85W140 (10 GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Bearing and/or bushing wear is indicated.

CONTAMINATION

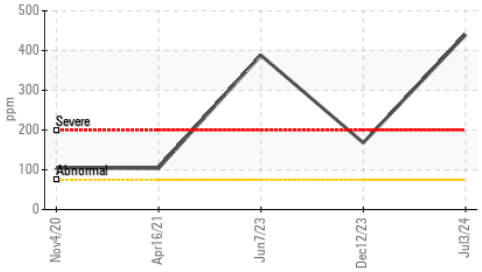
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

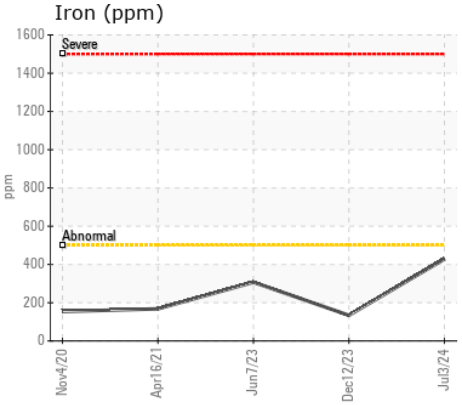
The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR0001565	TR0001296	TR0000831
Sample Date		Client Info		03 Jul 2024	12 Dec 2023	07 Jun 2023
Machine Age	hrs	Client Info		21408	20473	19767
Oil Age	hrs	Client Info		21408	20473	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	Not Changd
Sample Status				SEVERE	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>500	428	134	307
Chromium	ppm	ASTM D5185m	>10	3	<1	2
Nickel	ppm	ASTM D5185m	>10	3	<1	1
Titanium	ppm	ASTM D5185m		4	1	3
Silver	ppm	ASTM D5185m		<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	50	19	41
Lead	ppm	ASTM D5185m	>25	14	7	9
Copper	ppm	ASTM D5185m	>100	132	65	87
Tin	ppm	ASTM D5185m	>10	9	4	6
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>75	440	168	388
Potassium	ppm	ASTM D5185m	>20	25	8	19
Water		WC Method	>.2	NEG	NEG	NEG
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	>.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		18	7	16
Boron	ppm	ASTM D5185m		264	193	247
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		23	3	10
Manganese	ppm	ASTM D5185m		6	2	4
Magnesium	ppm	ASTM D5185m		8	5	6
Calcium	ppm	ASTM D5185m		202	95	166
Phosphorus	ppm	ASTM D5185m		953	1018	1008
Zinc	ppm	ASTM D5185m		17	4	2
Sulfur	ppm	ASTM D5185m		18560	18808	22785
Acid Number (AN)	mg KOH/g	ASTM D8045		1.41	1.36	1.52
Visc @ 40°C	cSt	ASTM D445		382	379	---
Visc @ 100°C	cSt	ASTM D445	30	29.1	29.4	29.7
Viscosity Index (VI)	Scale	ASTM D2270	105	105	107	---

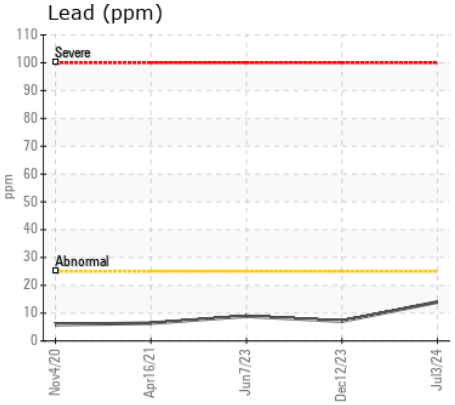
Silicon (ppm)



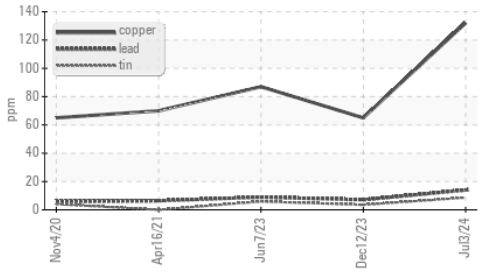
Iron (ppm)



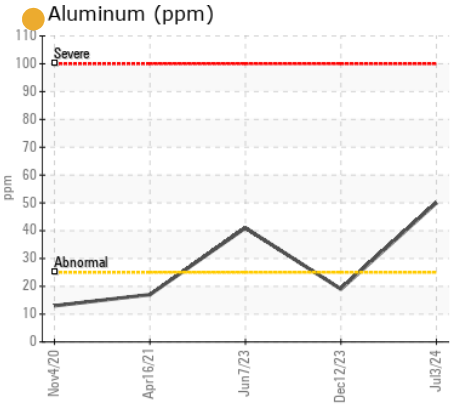
Lead (ppm)



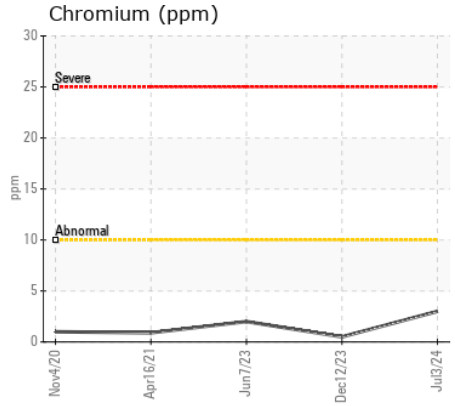
Non-ferrous Metals



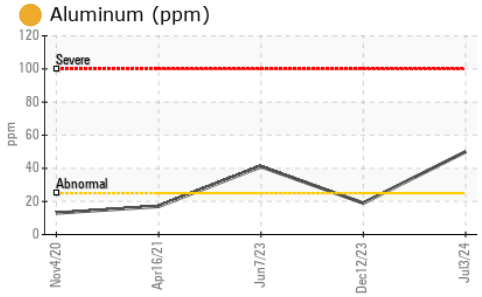
Aluminum (ppm)



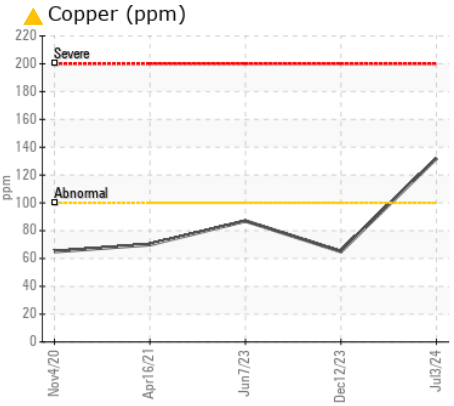
Chromium (ppm)



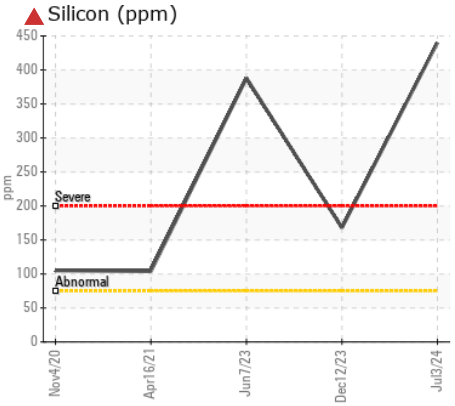
Aluminum (ppm)



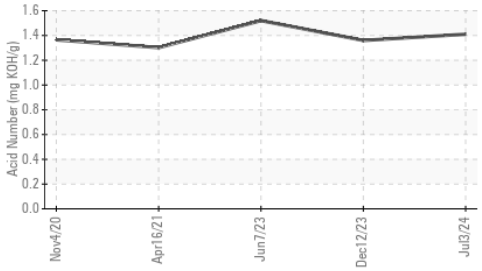
Copper (ppm)



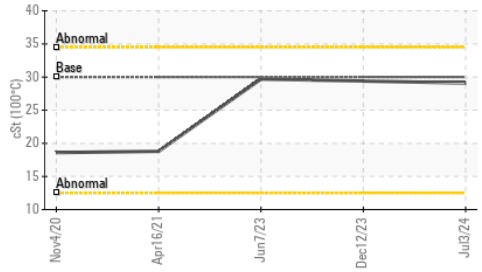
Silicon (ppm)



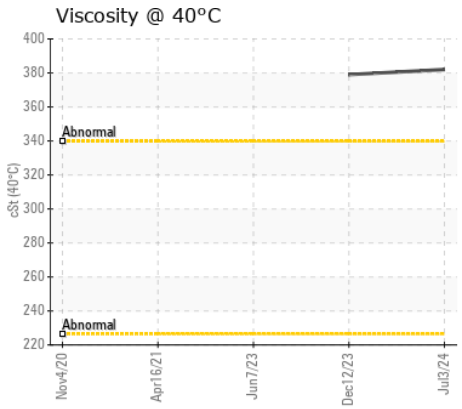
Acid Number



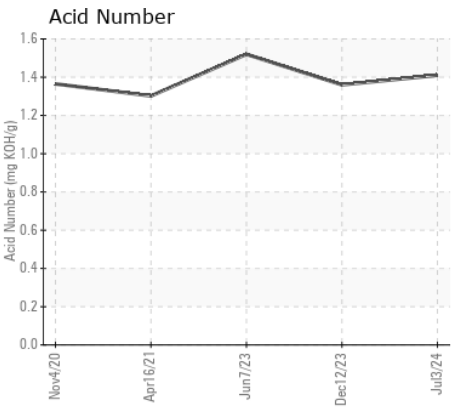
Viscosity @ 100°C



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR0001565
Lab Number : 06230328
Unique Number : 11113821
Test Package : MOB 2 (Additional Tests: KV100, VI)

Received : 08 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 10 Jul 2024 - Don Baldridge

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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