



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id

76

Component

Transfer Case

Fluid

TRC MOLY ULTRA-TEC GEAR OIL 85W140 (1 GAL)

RECOMMENDATION

We advise that you check for the source of water entry. 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR0001536	TR0001348	TR0001147
Sample Date		Client Info		03 May 2024	18 Jan 2024	06 Nov 2023
Machine Age	hrs	Client Info		24753	24114	23801
Oil Age	hrs	Client Info		24753	24114	23801
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	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL

WEAR

Gear wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	▲ 965	▲ 832	▲ 858
Chromium	ppm	ASTM D5185m	>5	3	3	3
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>45	● 44	● 46	● 38
Lead	ppm	ASTM D5185m	>150	1	<1	0
Copper	ppm	ASTM D5185m	>100	12	20	10
Tin	ppm	ASTM D5185m	>5	2	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

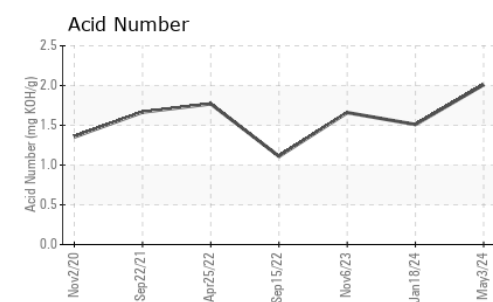
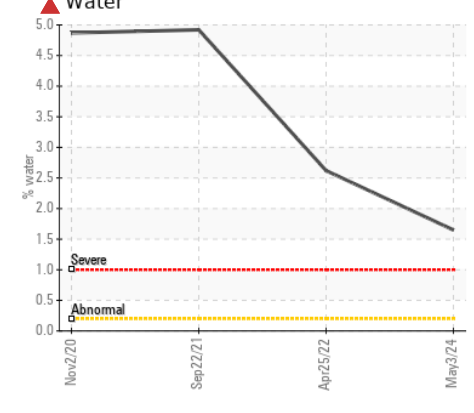
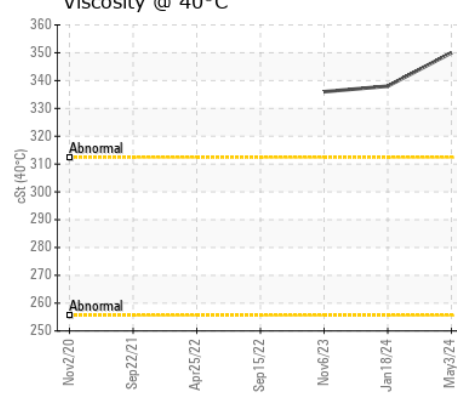
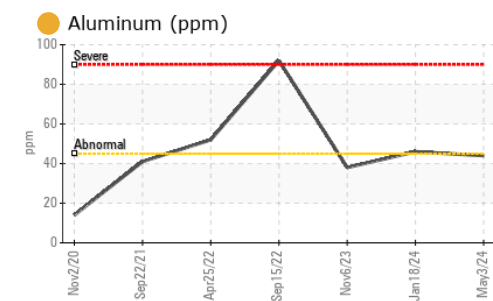
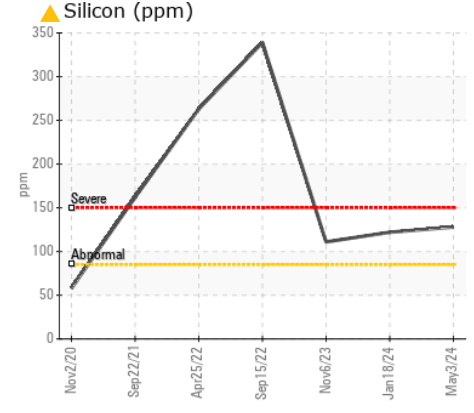
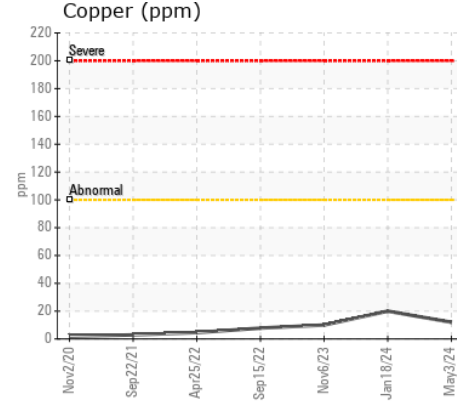
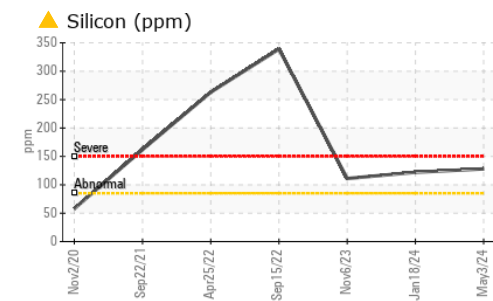
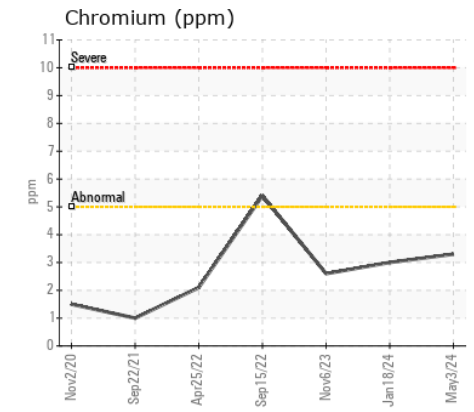
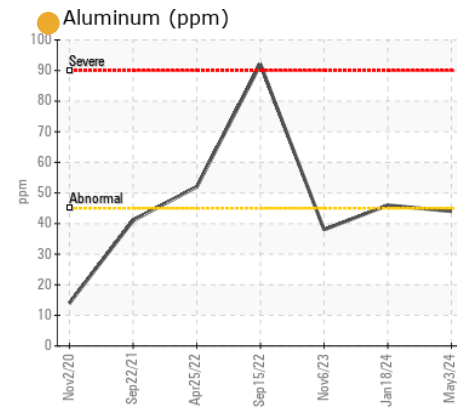
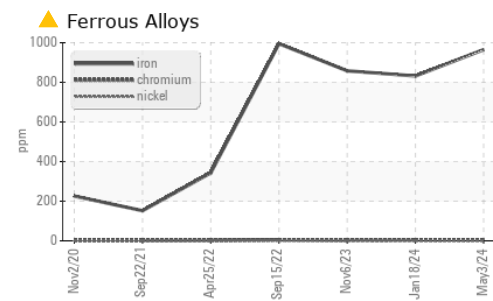
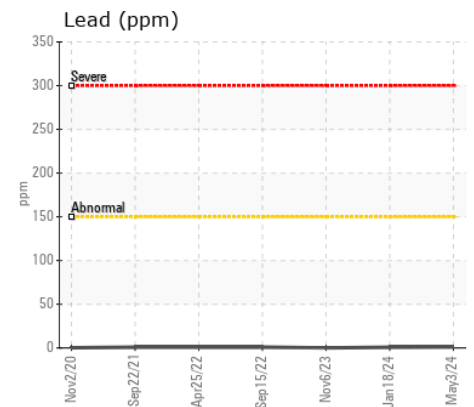
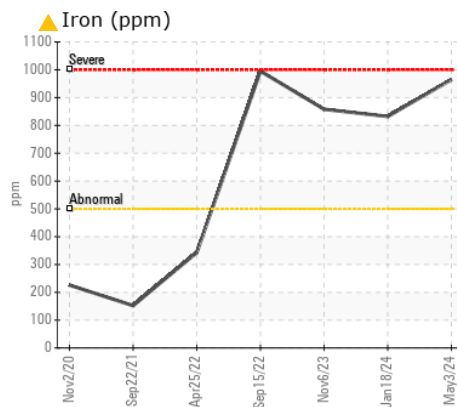
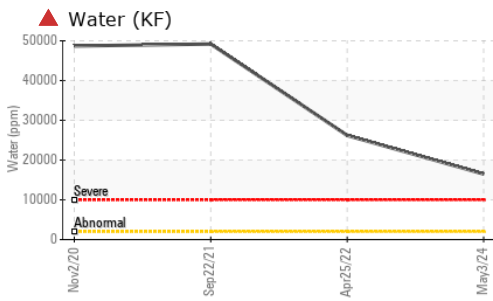
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>85	▲ 128	▲ 122	▲ 111
Potassium	ppm	ASTM D5185m	>20	7	7	7
Water	%	ASTM D6304	>0.2	▲ 1.65	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 16500	---	---
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	● HAZY	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	▲ 0.2%	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		20	18	16
Boron	ppm	ASTM D5185m		245	336	298
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		8	7	6
Magnesium	ppm	ASTM D5185m		8	6	4
Calcium	ppm	ASTM D5185m		96	99	88
Phosphorus	ppm	ASTM D5185m		1252	1296	1157
Zinc	ppm	ASTM D5185m		23	10	5
Sulfur	ppm	ASTM D5185m		25542	25028	21730
Acid Number (AN)	mg KOH/g	ASTM D8045		2.01	1.51	1.66
Visc @ 40°C	cSt	ASTM D445		350	338	336
Visc @ 100°C	cSt	ASTM D445	30	21.9	27.0	26.9
Viscosity Index (VI)	Scale	ASTM D2270	105	72	106	106



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR0001536 **Received** : 09 May 2024
Lab Number : 06174707 **Tested** : 13 May 2024
Unique Number : 11020760 **Diagnosed** : 13 May 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KF, KV100, VI)

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

Certificate L2367
 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)