



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id

T13

Component

1 Hydraulic System

Fluid

Hydraulic System Oil (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR0001372	TR0001253	TR0000796
Sample Date		Client Info		09 Jan 2024	03 Oct 2023	10 Apr 2023
Machine Age	hrs	Client Info		5342	5045	4268
Oil Age	hrs	Client Info		5342	5045	1
Filter Age	hrs	Client Info		5342	5045	1
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>20	▲ 35	▲ 29	▲ 29
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	4	6	3
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	2	3	2
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

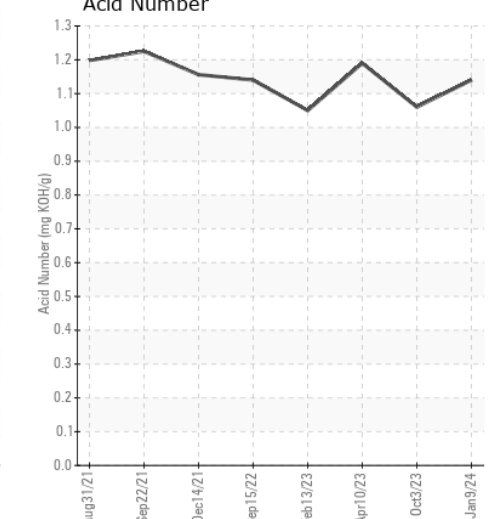
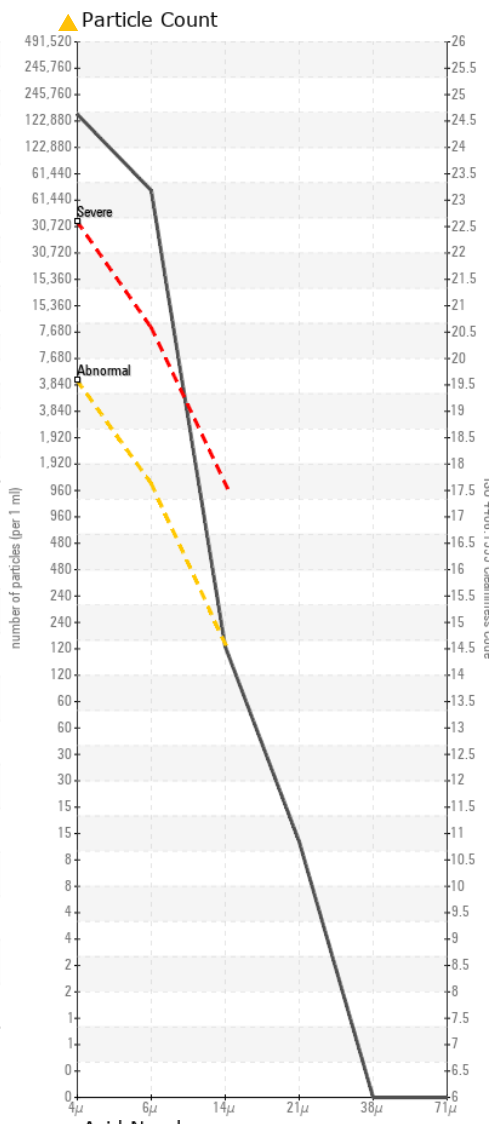
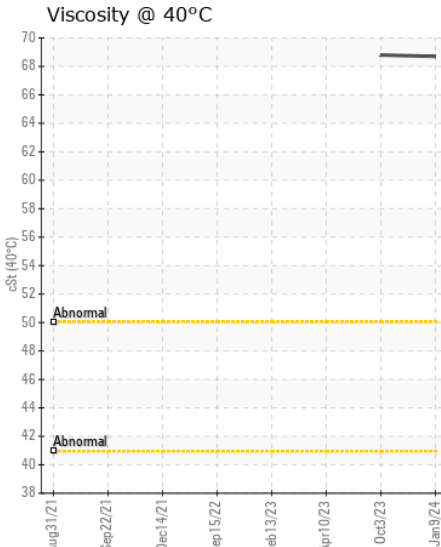
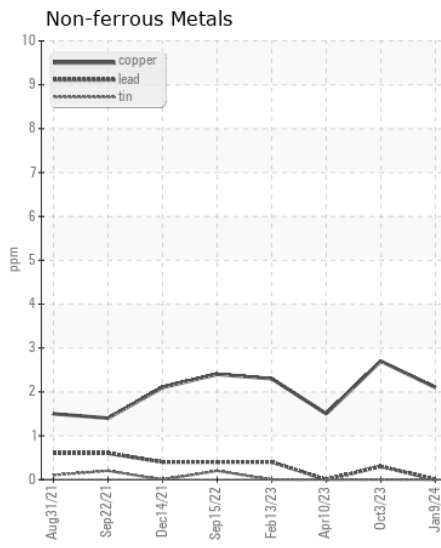
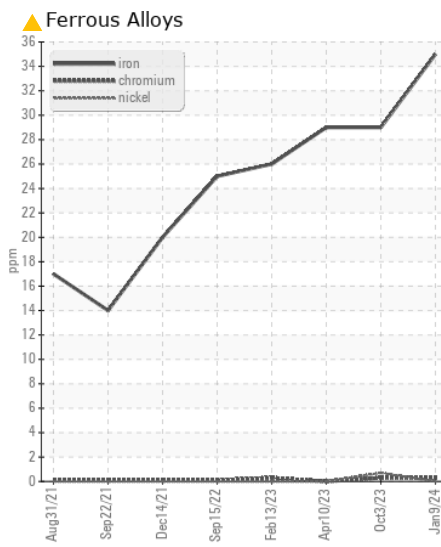
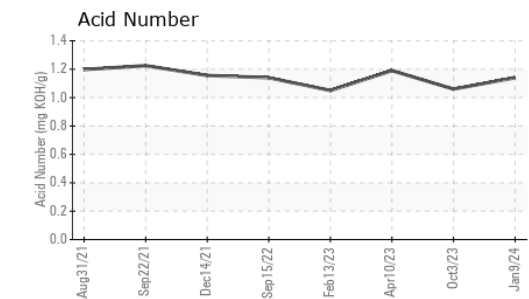
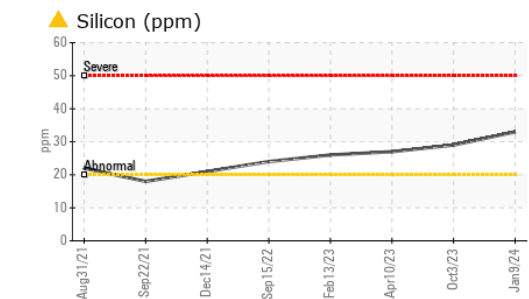
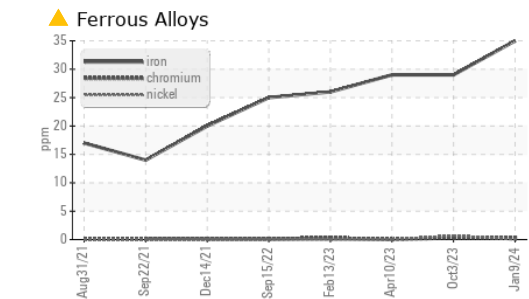
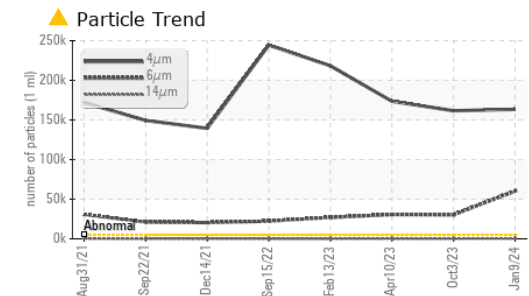
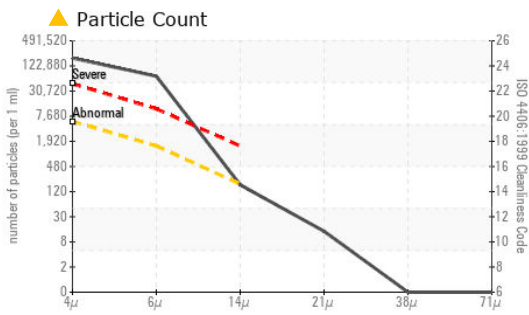
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>20	▲ 33	▲ 29	▲ 27
Potassium	ppm	ASTM D5185m	>20	3	2	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 163372	▲ 161599	▲ 173552
Particles >6µm		ASTM D7647	>1300	▲ 60276	▲ 30389	▲ 30730
Particles >14µm		ASTM D7647	>160	154	66	45
Particles >21µm		ASTM D7647	>40	12	6	6
Particles >38µm		ASTM D7647	>10	0	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 25/23/14	▲ 25/22/13	▲ 25/22/13
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	>0.1	NEG	NEG	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	4	2
Boron	ppm	ASTM D5185m		9	10	10
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	4	5
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		31	33	41
Calcium	ppm	ASTM D5185m		1656	1631	1820
Phosphorus	ppm	ASTM D5185m		727	651	688
Zinc	ppm	ASTM D5185m		827	858	900
Sulfur	ppm	ASTM D5185m		3207	3192	3403
Acid Number (AN)	mg KOH/g	ASTM D8045		1.14	1.06	1.19
Visc @ 40°C	cSt	ASTM D445		68.7	68.8	---
Visc @ 100°C	cSt	ASTM D445		9.3	9.4	9.4
Viscosity Index (VI)	Scale	ASTM D2270		112	114	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR0001372 **Received** : 12 Jan 2024
Lab Number : 06060215 **Diagnosed** : 16 Jan 2024
Unique Number : 10831597 **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: SERVICE MANAGER
snsmaterials1@gmail.com
T:
F: (928)754-1991

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)