



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**TA3 - GROUND PILE LEG**

Component  
**Gearbox**

Fluid  
**GEAR OIL ISO 220 (--- QTS)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for laboratory data updates.

## WEAR

Gear wear is indicated.

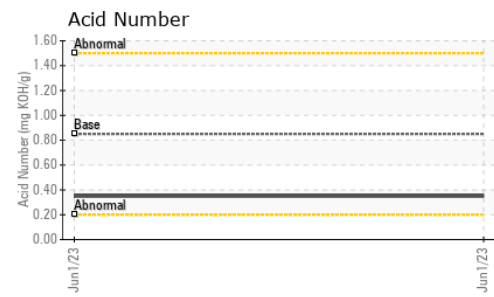
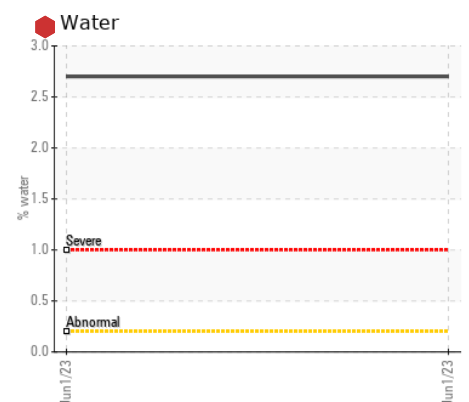
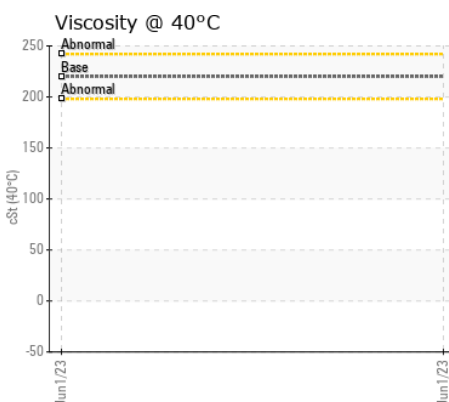
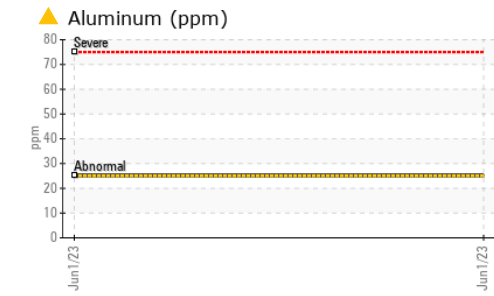
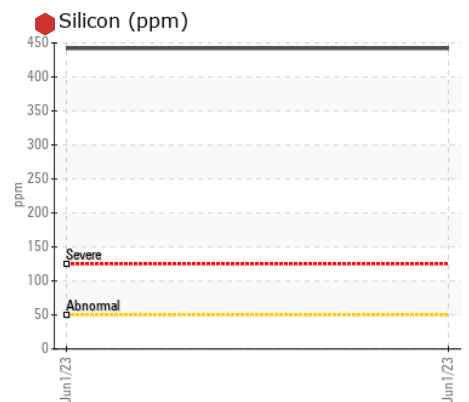
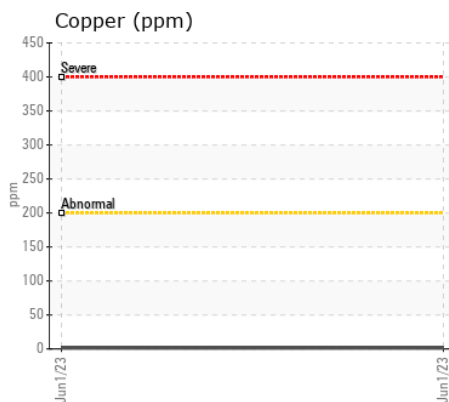
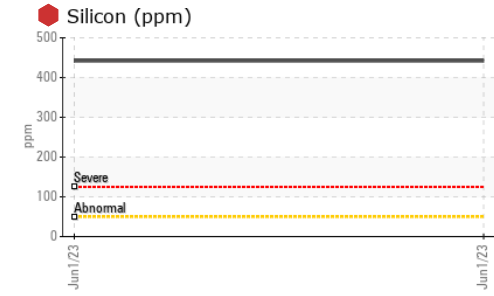
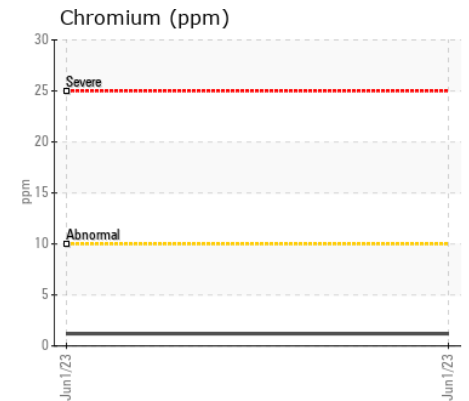
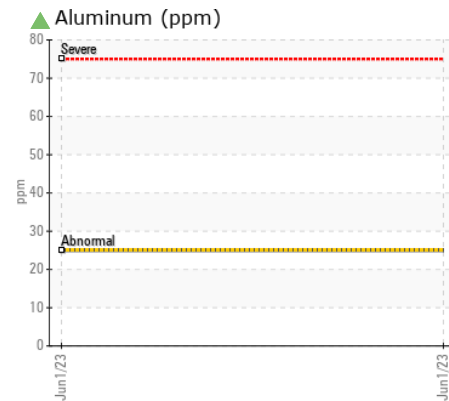
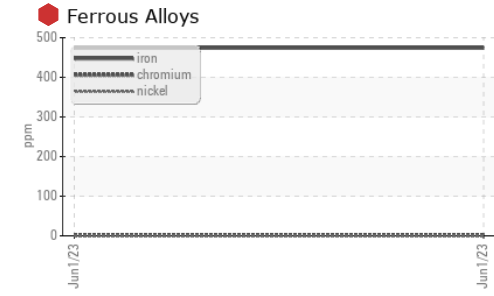
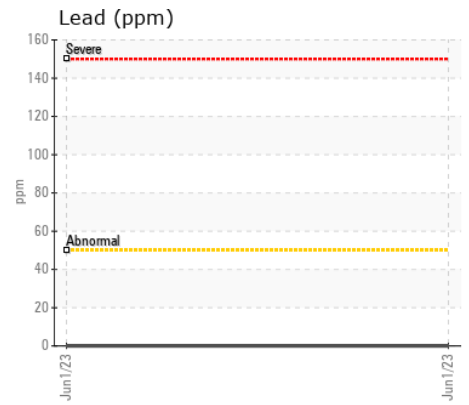
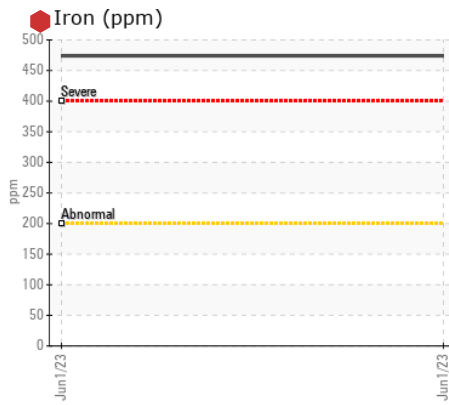
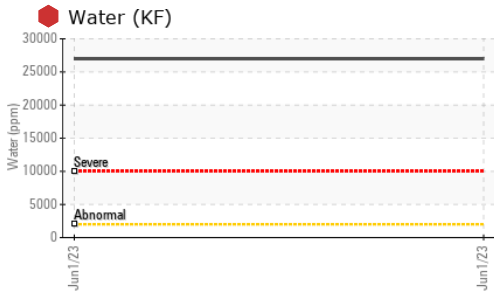
## CONTAMINATION

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

## 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		<b>TR05872276</b>	---	---
Sample Date		Client Info		<b>01 Jun 2023</b>	---	---
Machine Age	yrs	Client Info		<b>0</b>	---	---
Oil Age	yrs	Client Info		<b>1</b>	---	---
Filter Age	yrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Not Changd</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>SEVERE</b>	---	---
Iron	ppm	ASTM D5185m	>200	<b>474</b>	---	---
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m		<b>3</b>	---	---
Silver	ppm	ASTM D5185m		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>25	<b>25</b>	---	---
Lead	ppm	ASTM D5185m	>50	<b>0</b>	---	---
Copper	ppm	ASTM D5185m	>200	<b>2</b>	---	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Silicon	ppm	ASTM D5185m	>50	<b>442</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	---	---
Water	%	ASTM D6304	>0.2	<b>2.70</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	<b>27000</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>0.2%</b>	---	---
Sodium	ppm	ASTM D5185m		<b>6</b>	---	---
Boron	ppm	ASTM D5185m	50	<b>0</b>	---	---
Barium	ppm	ASTM D5185m	15	<b>7</b>	---	---
Molybdenum	ppm	ASTM D5185m	15	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m		<b>3</b>	---	---
Magnesium	ppm	ASTM D5185m	50	<b>3</b>	---	---
Calcium	ppm	ASTM D5185m	50	<b>66</b>	---	---
Phosphorus	ppm	ASTM D5185m	350	<b>350</b>	---	---
Zinc	ppm	ASTM D5185m	100	<b>433</b>	---	---
Sulfur	ppm	ASTM D5185m	12500	<b>5768</b>	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	<b>0.35</b>	---	---
Visc @ 100°C	cSt	ASTM D445	19.0	<b>14.8</b>	---	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR05872276 **Received** : 13 Jun 2023  
**Lab Number** : 05872276 **Tested** : 16 Jun 2023  
**Unique Number** : 10512060 **Diagnosed** : 16 Jun 2023 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: KF, KV100 )

**H & S SERVICES**  
 5521 E SHARP  
 SPOKANE VALLEY, WA  
 US 99218  
 Contact: RON GROGAN

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: