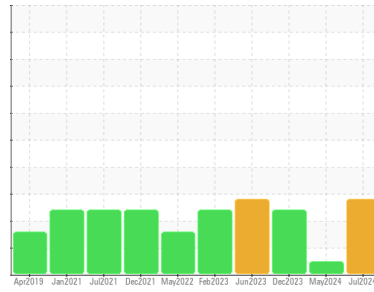




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Area  
**MISSION RANCHO**  
 Machine Id  
**MISSION RANCHO B-2 (S/N 2015146)**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**FRICK COMPRESSOR OIL #13 (110 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a light concentration of water present in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	<b>USP0012282</b>	USP0011520	USP250270	
Sample Date	Client Info	<b>11 Jul 2024</b>	08 May 2024	12 Dec 2023	
Machine Age	hrs	Client Info	<b>151077</b>	149841	146231
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A	
Sample Status		<b>ABNORMAL</b>	NORMAL	ATTENTION	

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >8	<1	0	0
Chromium	ppm	ASTM D5185m >2	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >3	<1	0	0
Lead	ppm	ASTM D5185m >2	0	0	0
Copper	ppm	ASTM D5185m >8	0	0	<1
Tin	ppm	ASTM D5185m >4	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	<1
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	0	<1
Phosphorus	ppm	ASTM D5185m	0	0	<1
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	0	0	0

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	1	<1	0
Sodium	ppm	ASTM D5185m	0	<1	2
Potassium	ppm	ASTM D5185m >20	<1	0	0
Water	%	ASTM D6304 >0.01	▲ <b>0.045</b>	0.003	▲ 0.039
ppm Water	ppm	ASTM D6304 >100	▲ <b>458</b>	37	▲ 399

## FLUID CLEANLINESS

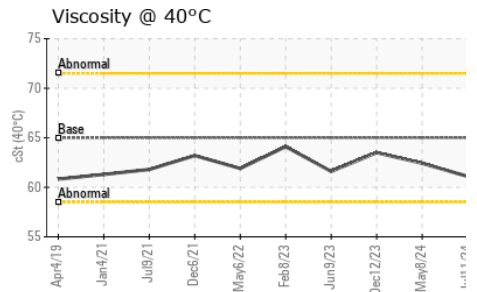
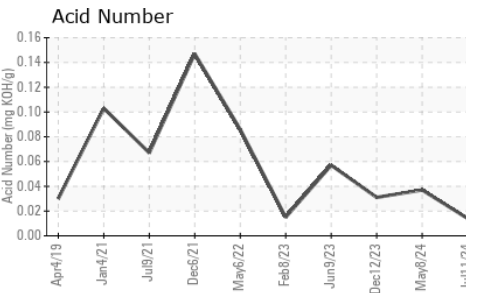
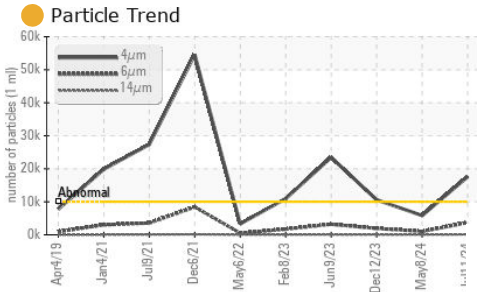
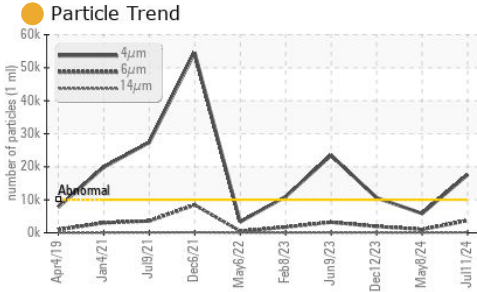
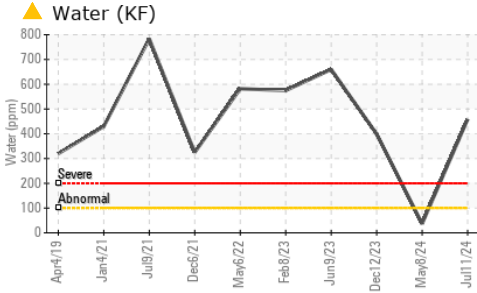
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	● <b>17584</b>	5839	● 10592
Particles >6µm	ASTM D7647 >2500	● <b>3751</b>	1014	1933
Particles >14µm	ASTM D7647 >320	<b>121</b>	21	72
Particles >21µm	ASTM D7647 >80	<b>14</b>	4	17
Particles >38µm	ASTM D7647 >20	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >4	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/15	● <b>21/19/14</b>	20/17/12	● 21/18/13

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974	<b>0.014</b>	0.037	0.031



# OIL ANALYSIS REPORT



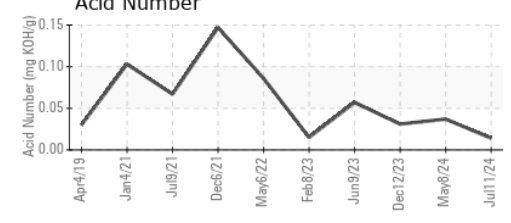
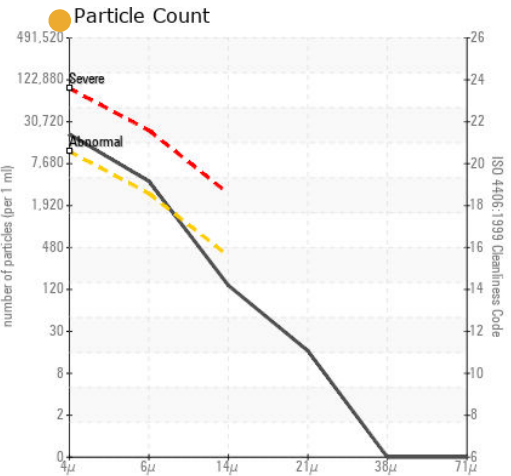
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	65.0	61.1	62.42

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0012282 **Received** : 12 Jul 2024  
**Lab Number** : 06234997 **Tested** : 15 Jul 2024  
**Unique Number** : 11123831 **Diagnosed** : 15 Jul 2024 - Doug Bogart  
**Test Package** : IND 2

**RACE ENGINEERING CORP**  
 12871 WESTERN AVE, SUITE E  
 GARDEN GROVE, CA  
 92841  
 Contact: TODD CARTER  
 ttrace@verizon.net  
 T: (714)895-3488  
 F: (714)895-5125

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - 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)