



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**ARLINE (S/N 71084/300/02)**  
 Component  
**Hydraulic System**  
 Fluid  
**TRC HYDRAULIC OIL 15W (300 GAL)**

**RECOMMENDATION**

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. Please note that this is a corrected copy for laboratory data updates.

**WEAR**

All component wear rates are normal.

**CONTAMINATION**

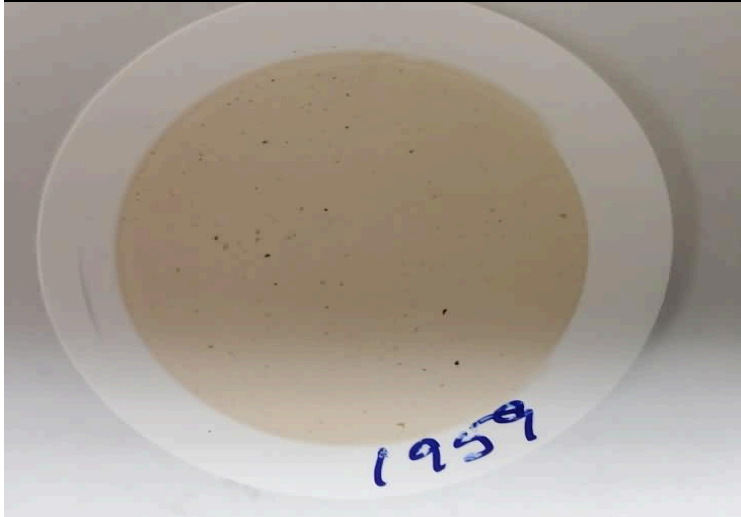
There is a moderate concentration of water present in the oil. There is a moderate amount of visible silt present in the sample. MPC (Membrane Patch Colorimetry) test indicates a light concentration of varnish present.

**FLUID CONDITION**

The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06151959</b>	TR05563496	TR05106323
Sample Date		Client Info		<b>30 Mar 2024</b>	03 Jun 2022	30 Oct 2020
Machine Age	hrs	Client Info		<b>23164</b>	53600	8640
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>20	<1	0	<1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>75	<b>1</b>	1	12
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	6
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	0	<1
Water	%	ASTM D6304	>0.1	<b>▲ 0.413</b>	---	---
ppm Water	ppm	ASTM D6304	>1000	<b>▲ 4130</b>	---	---
MPC Varnish Potential	Scale	ASTM D7843	>15	<b>▲ 18</b>	---	---
Particles >4µm		ASTM D7647	>5000	---	3933	2272
Particles >6µm		ASTM D7647	>1300	---	● 1411	701
Particles >14µm		ASTM D7647	>160	---	● 195	75
Particles >21µm		ASTM D7647	>40	---	51	24
Particles >38µm		ASTM D7647	>10	---	7	1
Particles >71µm		ASTM D7647	>3	---	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	● 19/18/15	18/17/13
Silt	scalar	*Visual	NONE	<b>▲ MODER</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	VLITE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>▲ 0.2%</b>	NEG	NEG
Sodium	ppm	ASTM D5185m		<b>5</b>	<1	1
Boron	ppm	ASTM D5185m		<b>0</b>	0	1
Barium	ppm	ASTM D5185m		<b>5</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m		<b>72</b>	105	111
Phosphorus	ppm	ASTM D5185m		<b>613</b>	357	263
Zinc	ppm	ASTM D5185m		<b>728</b>	405	262
Sulfur	ppm	ASTM D5185m		<b>1572</b>	903	583
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.70</b>	0.46	0.281
Visc @ 40°C	cSt	ASTM D445	46	<b>46.7</b>	---	---
Visc @ 100°C	cSt	ASTM D445	6.3	<b>7.09</b>	7.2	7.1
Viscosity Index (VI)	Scale	ASTM D2270		<b>109</b>	---	---

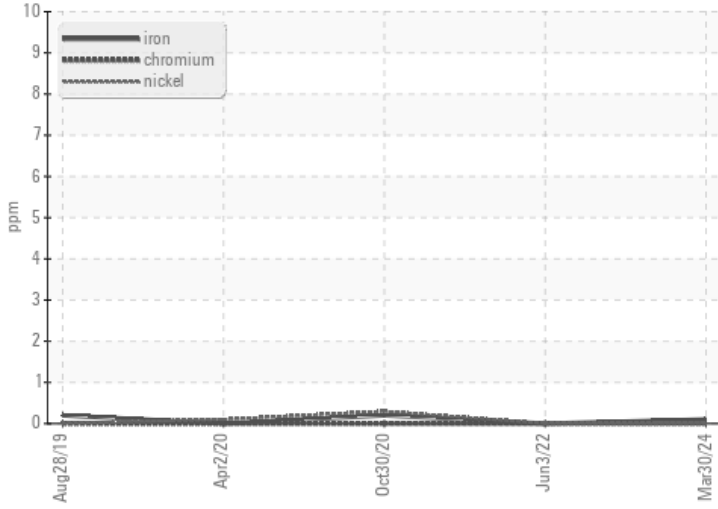
MPC (Varnish Test)



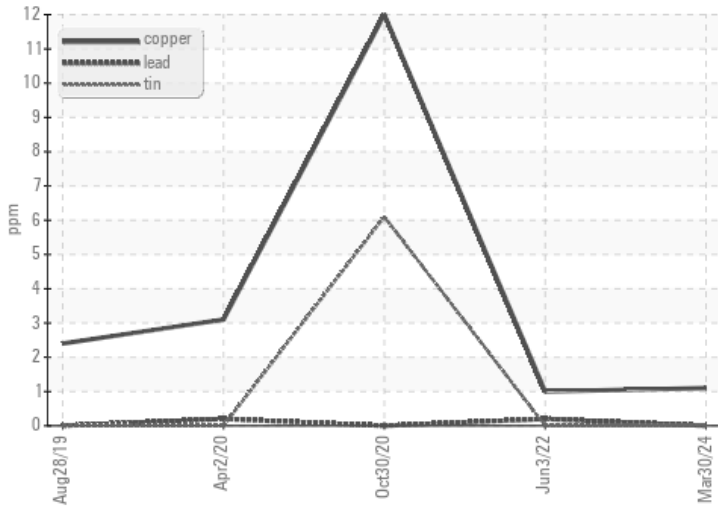
Sample Color & Clarity



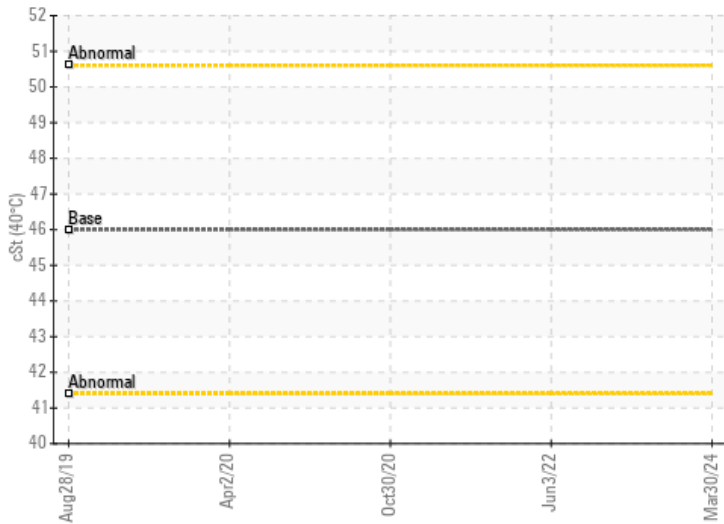
### Ferrous Alloys



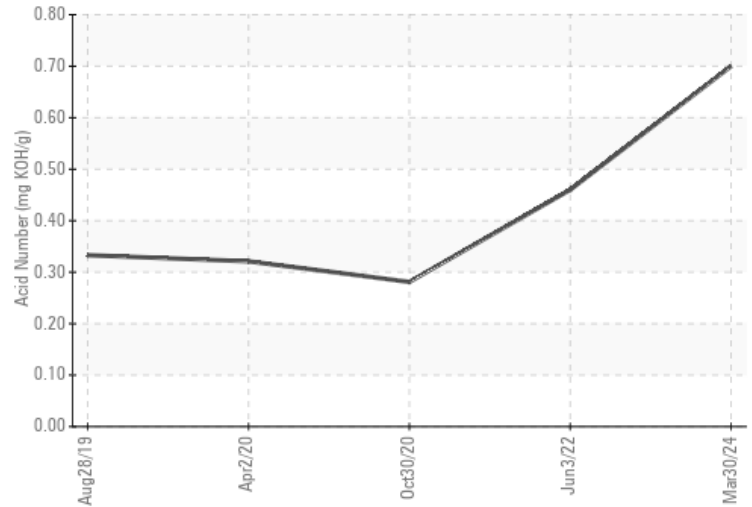
### Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06151959  
**Lab Number** : 06151959  
**Unique Number** : 10982037  
**Test Package** : MOB 2 ( Additional Tests: KF, KV100, MPC, VI )

**Received** : 17 Apr 2024  
**Tested** : 12 May 2024  
**Diagnosed** : 12 May 2024 - Doug Bogart

**PELICAN PRODUCTS INC**  
 23215 EARLY AVE  
 TORRANCE, CA  
 US 90505  
 Contact: NORMAN MASSON

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:

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