



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
KING KONG (S/N H35A0200018)
 Component
Hydraulic System
 Fluid
TRC HYDRAULIC OIL 15W (820 GAL)

RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data and diagnostic comment updates.

WEAR

All component wear rates are normal.

CONTAMINATION

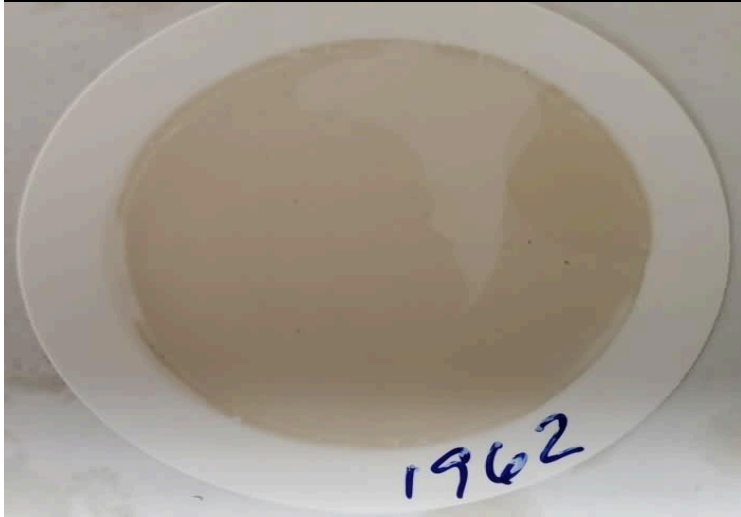
MPC (Membrane Patch Colorimetry) test indicates a light concentration of varnish present. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

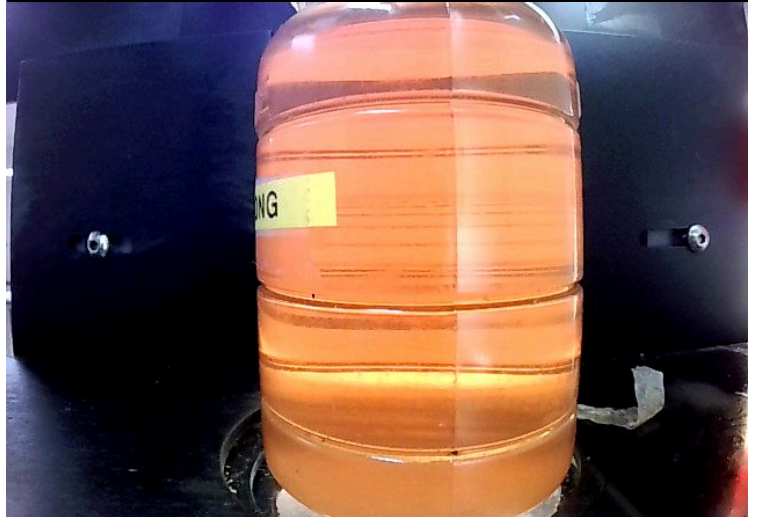
The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06151962	TR05563497	TR05106326
Sample Date		Client Info		30 Mar 2024	03 Jun 2022	30 Oct 2020
Machine Age	hrs	Client Info		119716	4416	3360
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	<1	0	<1
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	<1	<1
Aluminum	ppm	ASTM D5185m	>10	0	0	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	2	1	1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	<1	<1	0
Potassium	ppm	ASTM D5185m	>20	10	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ 16	---	---
Particles >4µm		ASTM D7647	>5000	2091	3499	622
Particles >6µm		ASTM D7647	>1300	587	1091	171
Particles >14µm		ASTM D7647	>160	47	97	13
Particles >21µm		ASTM D7647	>40	12	23	4
Particles >38µm		ASTM D7647	>10	1	2	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/16/13	19/17/14	16/15/11
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
Sodium	ppm	ASTM D5185m		2	0	<1
Boron	ppm	ASTM D5185m		0	0	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	0	<1
Calcium	ppm	ASTM D5185m		72	85	100
Phosphorus	ppm	ASTM D5185m		658	708	779
Zinc	ppm	ASTM D5185m		768	930	964
Sulfur	ppm	ASTM D5185m		1742	1769	1699
Acid Number (AN)	mg KOH/g	ASTM D8045		0.88	0.62	0.658
Visc @ 40°C	cSt	ASTM D445	46	47.2	---	---
Visc @ 100°C	cSt	ASTM D445	6.3	7.2	7.1	7.1
Viscosity Index (VI)	Scale	ASTM D2270		112	---	---

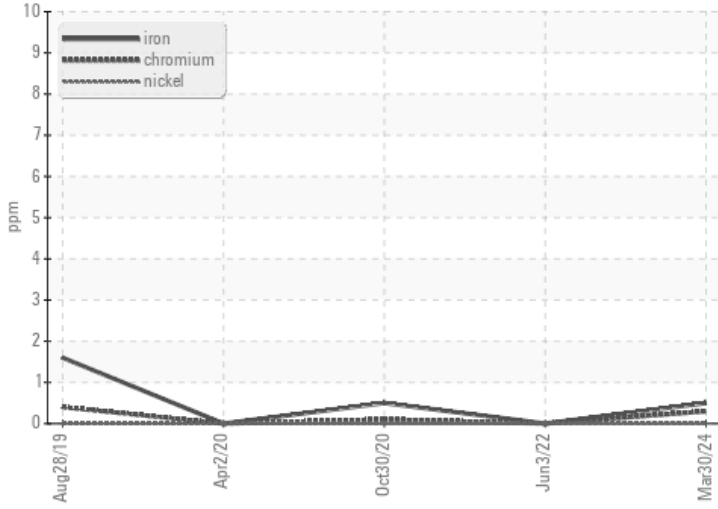
MPC (Varnish Test)



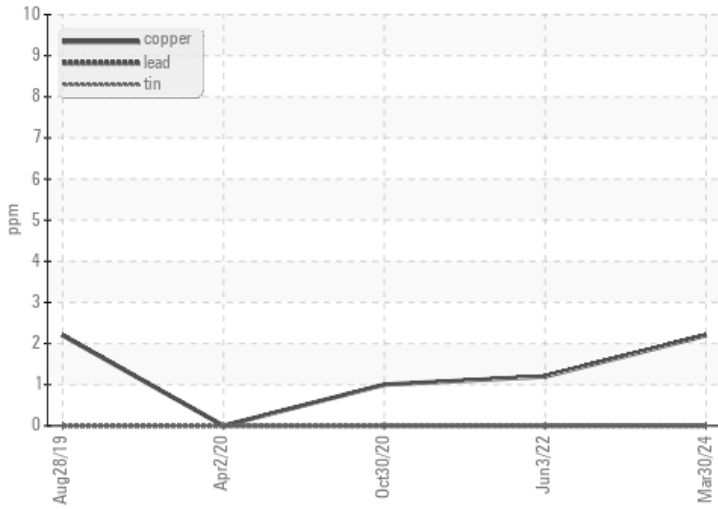
Sample Color & Clarity



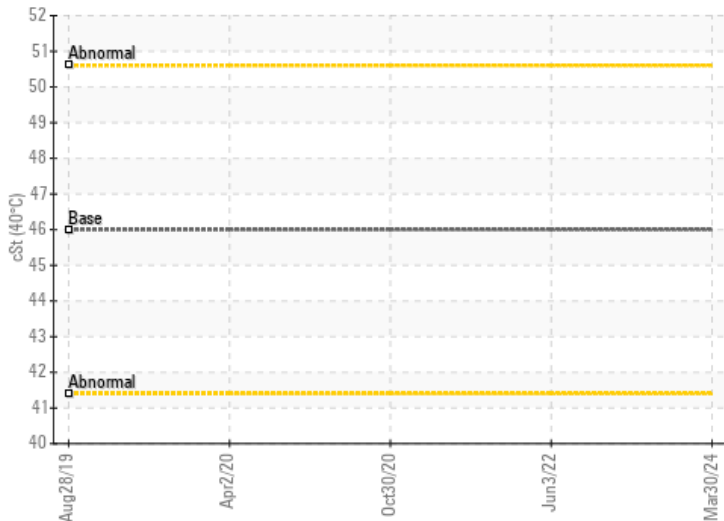
Ferrous Alloys



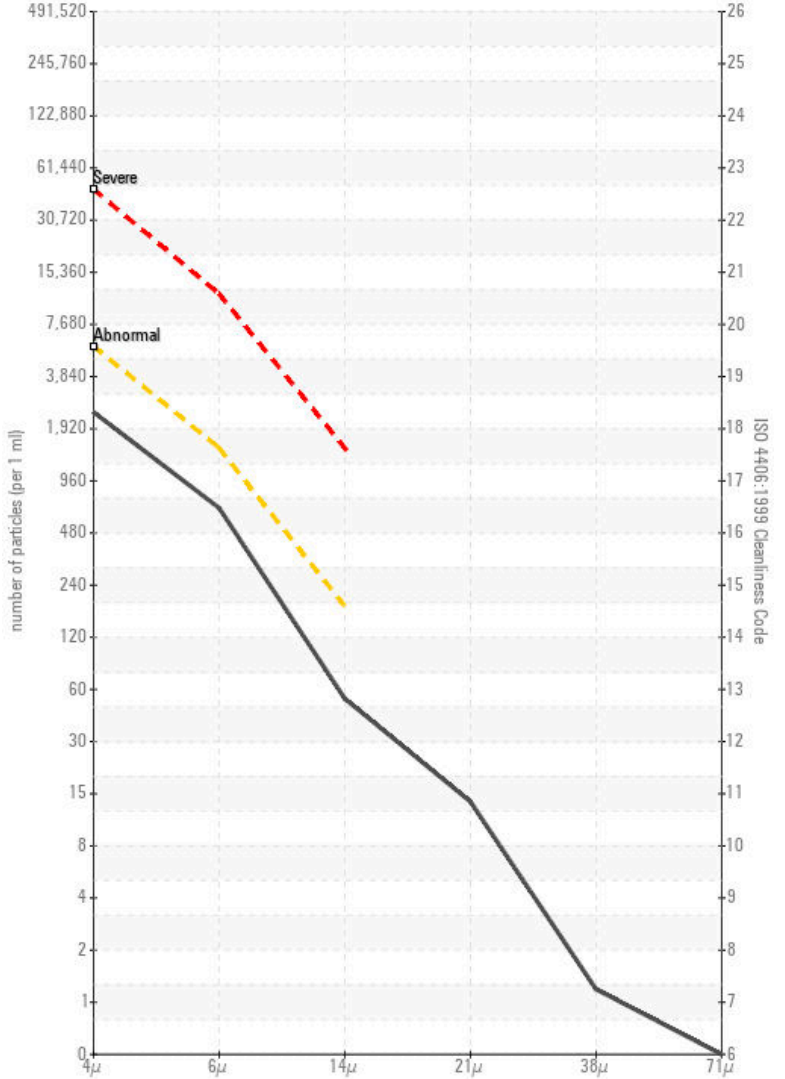
Non-ferrous Metals



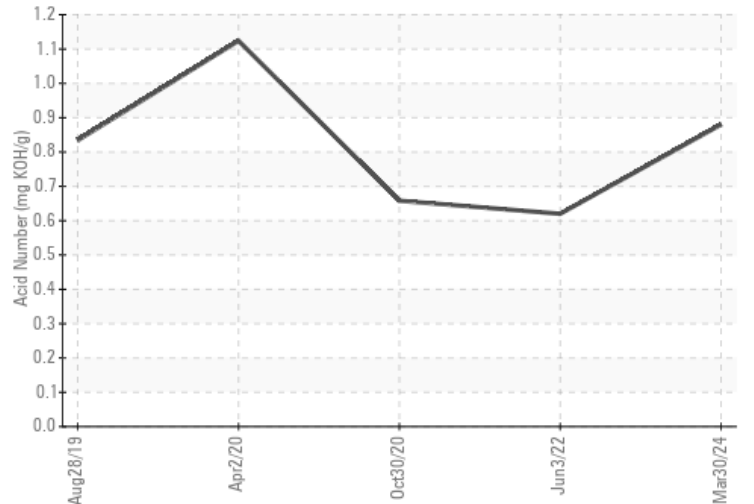
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06151962
Lab Number : 06151962
Unique Number : 10982040
Test Package : MOB 2 (Additional Tests: 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)

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