IND II

Hilcorp Alaska, LLC

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
ASR1-ASR-T-1150 ASR1-ASR-T-1150
Component
Hydraulic System
Fluid
MOBIL DTE 10 EXCEL 32 (245 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

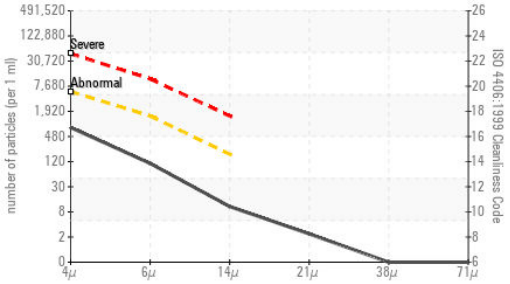
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

FLUID CONDITION

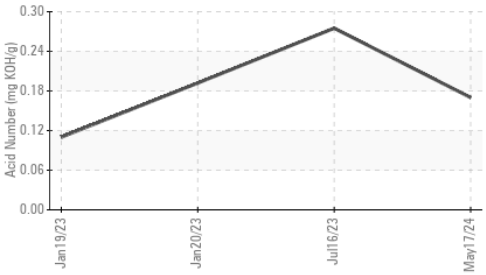
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HLC0002929	HLC0002569	HLC0000827
Sample Date		Client Info		17 May 2024	16 Jul 2023	20 Jan 2023
Machine Age	hrs	Client Info		21000	21938	18200
Oil Age	hrs	Client Info		0	4200	500
Filter Age	hrs	Client Info		1000	3000	500
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	<1	4	<1
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	0	0
Lead	ppm	ASTM D5185m	>20	0	<1	<1
Copper	ppm	ASTM D5185m	>20	2	3	<1
Tin	ppm	ASTM D5185m	>20	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	>15	3	5	5
Potassium	ppm	ASTM D5185m	>20	<1	3	0
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	691	▲ 14265	2664
Particles >6µm		ASTM D7647	>1300	96	▲ 3648	632
Particles >14µm		ASTM D7647	>160	9	▲ 386	30
Particles >21µm		ASTM D7647	>40	2	▲ 120	5
Particles >38µm		ASTM D7647	>10	0	6	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/14/10	▲ 21/19/16	19/16/12
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	>0.05	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		4	10	2
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		<1	0	0
Magnesium	ppm	ASTM D5185m		1	<1	0
Calcium	ppm	ASTM D5185m	120	86	93	97
Phosphorus	ppm	ASTM D5185m	475	196	316	289
Zinc	ppm	ASTM D5185m		23	54	43
Sulfur	ppm	ASTM D5185m	1275	1499	2005	1113
Acid Number (AN)	mg KOH/g	ASTM D8045		0.17	0.275	0.192
Visc @ 40°C	cSt	ASTM D445	32	31.1	33.0	31.9

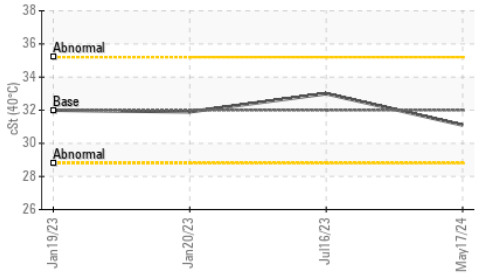
Particle Count



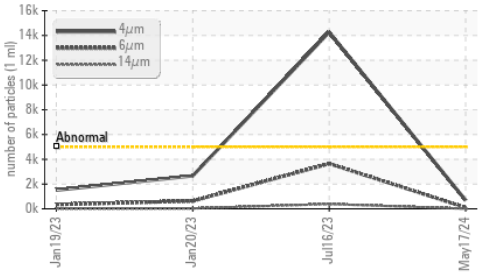
Acid Number



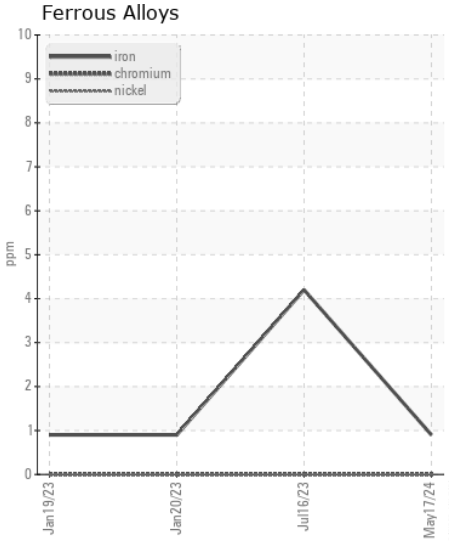
Viscosity @ 40°C



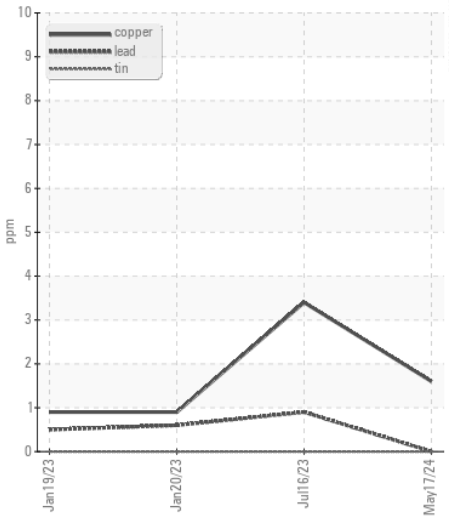
Particle Trend



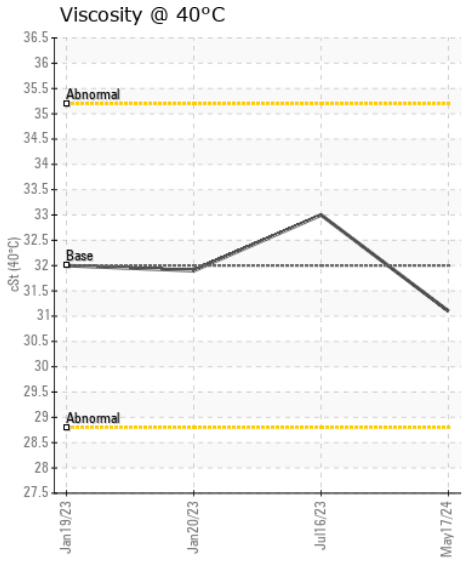
Ferrous Alloys



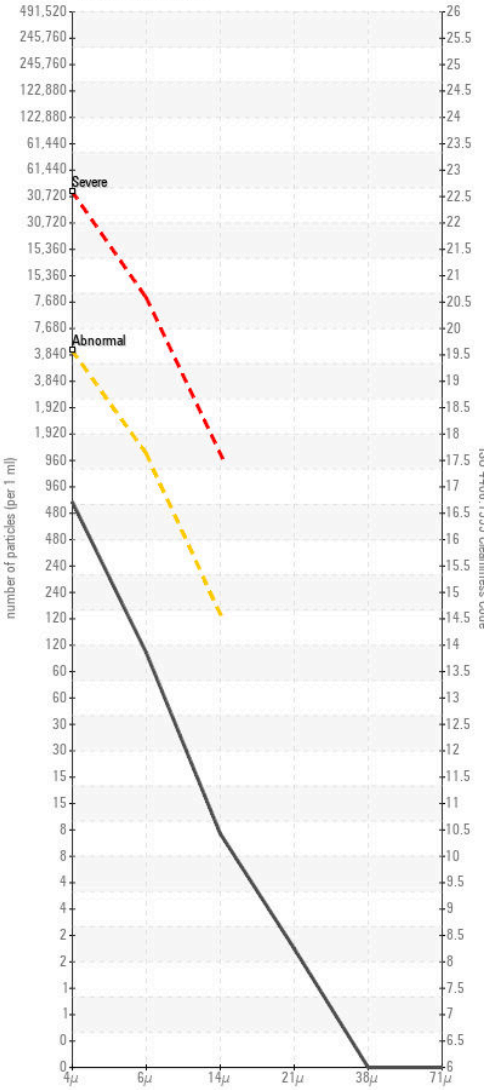
Non-ferrous Metals



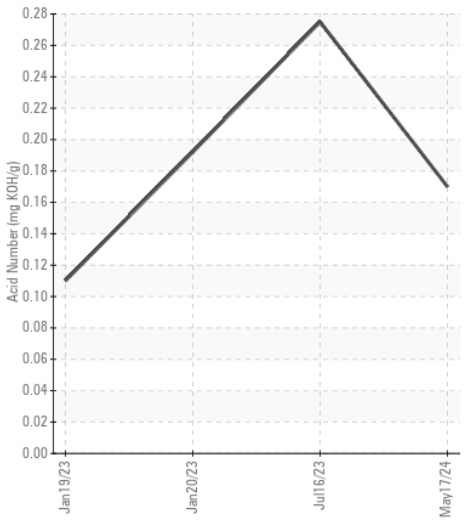
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0002929
Lab Number : 06190994
Unique Number : 11047746
Test Package : IND 2

Received : 24 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

Certificate L2367

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)

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