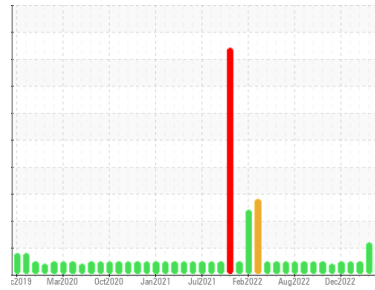




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
M11
 Machine Id
44-P-2540B WATER INJECTION PUMP (44-T-2550B) (S/N Maint Plan 22480)
 Component
Pump
 Fluid
MOBIL DTE 832 (2271 LTR)

DIAGNOSIS

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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PP	PP	PP
Sample Date	Client Info	09 May 2023	18 Mar 2023	14 Feb 2023
Machine Age	hrs Client Info	0	0	0
Oil Age	hrs Client Info	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	ATTENTION	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >75	<1	<1	<1
Chromium	ppm ASTM D5185(m) >5	0	0	0
Nickel	ppm ASTM D5185(m)	0	0	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >5	<1	<1	<1
Lead	ppm ASTM D5185(m) >10	0	0	0
Copper	ppm ASTM D5185(m) >15	0	0	0
Tin	ppm ASTM D5185(m)	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	<1
Vanadium	ppm ASTM D5185(m)	0	0	0
Beryllium	ppm ASTM D5185(m)	0	0	0
Cadmium	ppm ASTM D5185(m)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<1	<1	<1
Barium	ppm ASTM D5185(m)	0	0	0
Molybdenum	ppm ASTM D5185(m)	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m)	<1	<1	<1
Calcium	ppm ASTM D5185(m)	0	0	0
Phosphorus	ppm ASTM D5185(m)	1190	1256	1246
Zinc	ppm ASTM D5185(m)	1	1	2
Sulfur	ppm ASTM D5185(m)	17	41	20
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	<1	0	0
Sodium	ppm ASTM D5185(m)	<1	<1	<1
Potassium	ppm ASTM D5185(m) >20	<1	<1	0

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	1651	▲ 5014	3531
Particles >6µm	ASTM D7647 >1300	232	▲ 1486	752
Particles >14µm	ASTM D7647 >160	6	149	46
Particles >21µm	ASTM D7647 >40	2	47	9
Particles >38µm	ASTM D7647 >10	1	3	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	18/15/10	▲ 20/18/14	19/17/13

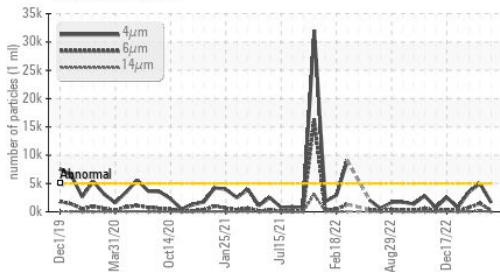
FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.07	0.10	0.07

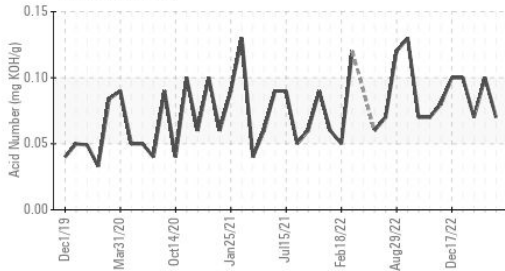


OIL ANALYSIS REPORT

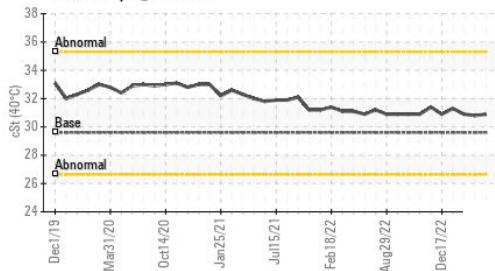
Particle Trend



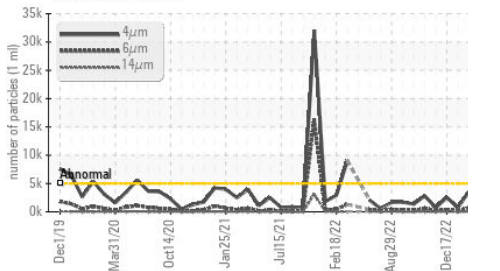
Acid Number



Viscosity @ 40°C



Particle Trend



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*	NEG	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	29.6	30.8	30.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

Color

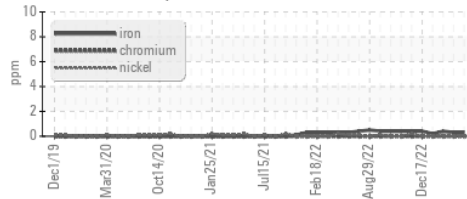


Bottom

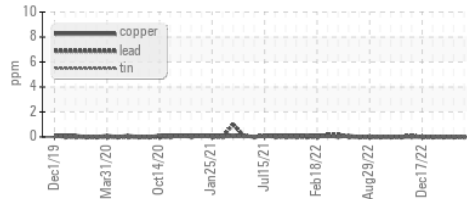


GRAPHS

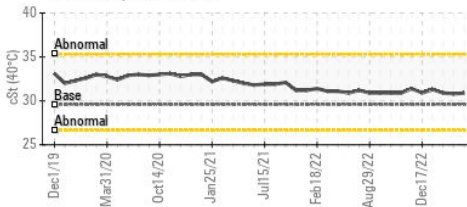
Ferrous Alloys



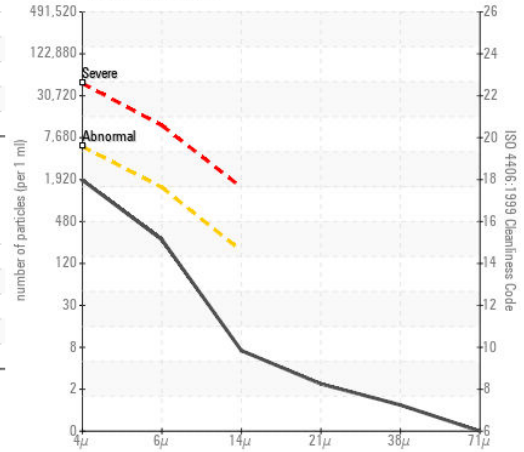
Non-ferrous Metals



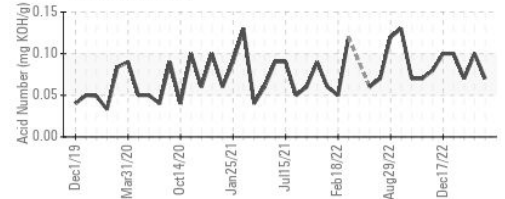
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HUSKY SEA ROSE /AKER SOLUTIONS
Sample No. : PP **Received** : 07 Jun 2023
Lab Number : 02562598 **Diagnosed** : 08 Jun 2023
Unique Number : 5591639 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: TAN Man)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

PO BOX 20
 ST. JOHN'S, NL
 CA A1C 6C9
 Contact: Maintenance Supervisor
 maintsuper.searose@huskyenergy.ca
 T: x:
 F: x: