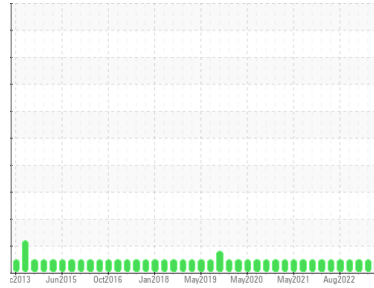




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
C242001 Invertose MVR

Component
Gearbox

Fluid
PETRO CANADA HYDREX AW 22 (185 GAL)

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	WC	WC	WC0761357
Sample Date	Client Info	05 Aug 2023	01 May 2023	31 Jan 2023
Machine Age	yrs Client Info	0	0	0
Oil Age	yrs Client Info	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >200	<1	<1	<1
Chromium	ppm ASTM D5185(m) >10	0	0	0
Nickel	ppm ASTM D5185(m) >10	<1	<1	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >25	0	0	0
Lead	ppm ASTM D5185(m) >50	0	0	0
Copper	ppm ASTM D5185(m) >200	<1	0	0
Tin	ppm ASTM D5185(m) >10	0	0	0
Antimony	ppm ASTM D5185(m) >5	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) 0	<1	<1	0
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 0	0	0	0
Manganese	ppm ASTM D5185(m) 1	0	0	0
Magnesium	ppm ASTM D5185(m) 0	<1	0	0
Calcium	ppm ASTM D5185(m) 50	53	53	52
Phosphorus	ppm ASTM D5185(m) 330	372	360	357
Zinc	ppm ASTM D5185(m) 430	414	408	412
Sulfur	ppm ASTM D5185(m) 760	837	796	862
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >50	3	3	2
Sodium	ppm ASTM D5185(m)	0	0	0
Potassium	ppm ASTM D5185(m) >20	<1	<1	0

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	957	906	925
Particles >6µm	ASTM D7647 >5000	254	265	271
Particles >14µm	ASTM D7647 >640	21	31	19
Particles >21µm	ASTM D7647 >160	7	10	4
Particles >38µm	ASTM D7647 >40	1	1	0
Particles >71µm	ASTM D7647 >10	0	0	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	17/15/12	17/15/12	17/15/11

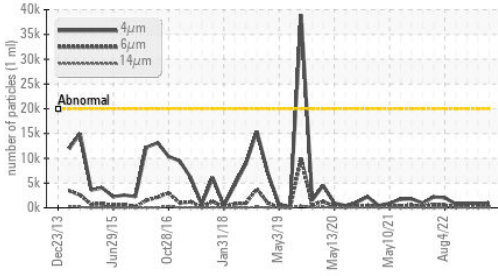
FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974* 0.70	0.60	0.56	0.52

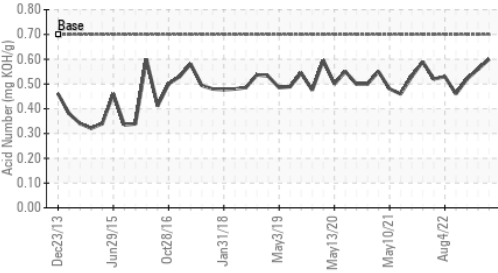


OIL ANALYSIS REPORT

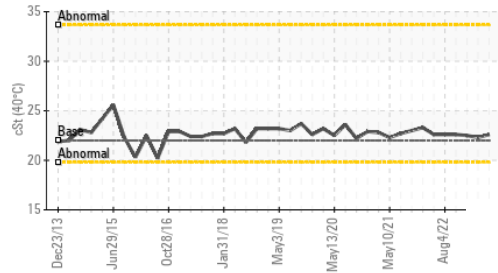
Particle Trend



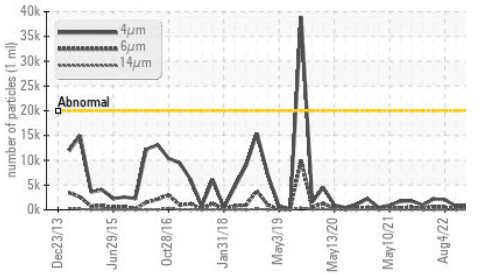
Acid Number



Viscosity @ 40°C



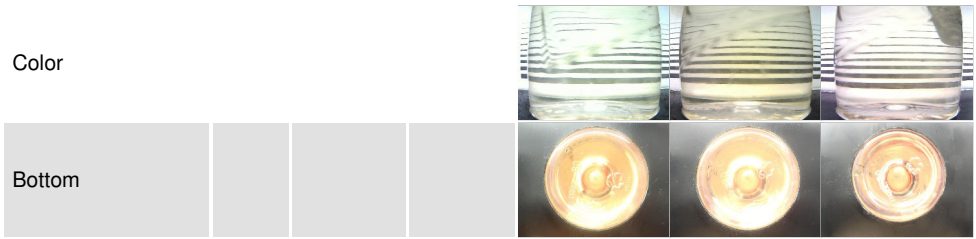
Particle Trend



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*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

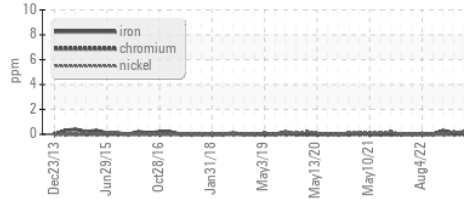
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	22.0	22.6	22.3

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

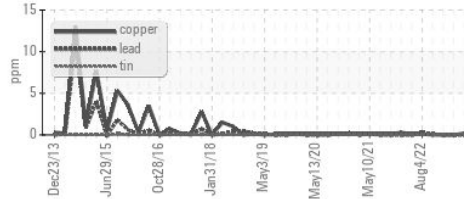


GRAPHS

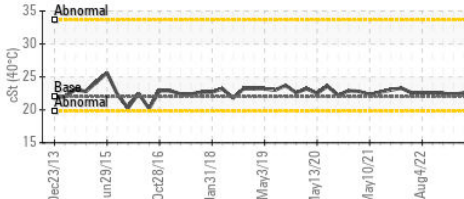
Ferrous Alloys



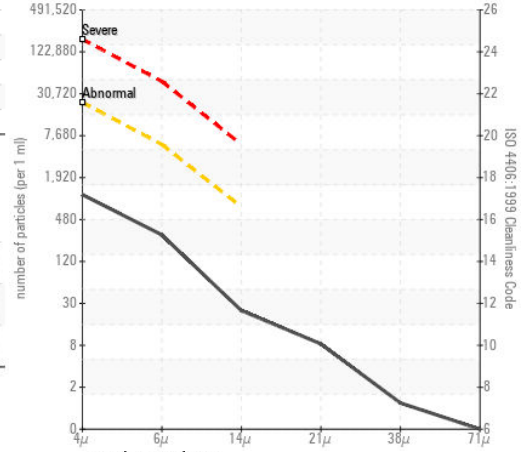
Non-ferrous Metals



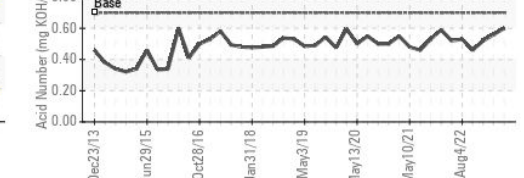
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC
 Lab Number : 02574951
 Unique Number : 5620002
 Test Package : IND 2 (Additional Tests: TAN Man)
 Received : 09 Aug 2023
 Diagnosed : 10 Aug 2023
 Diagnostician : Wes Davis

INGREDION INC
 4040 JAMES STREET
 CARDINAL, ON
 CA K0E 1E0
 Contact: James Byers
 james.byers@ingredion.com
 T: (613)657-3131
 F: (613)657-1955

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.