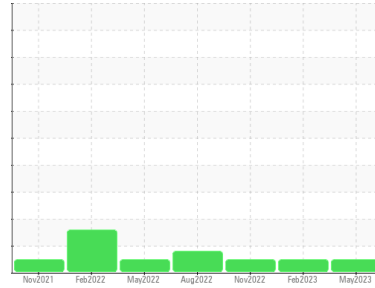


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Temper Mill
 Machine Id
[Temper Mill] 230235-DELIVERY COIL CAR
 Component
Hydraulic System
 Fluid
PETRO CANADA HYDREX AW 46 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are 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	history 1	history 2
Sample Number	Client Info	PCA0095449	PCA0089528	PCA0081730
Sample Date	Client Info	01 May 2023	23 Feb 2023	22 Nov 2022
Machine Age	hrs Client Info	0	0	0
Oil Age	hrs Client Info	0	0	0
Oil Changed	Client Info	Not Changed	N/A	Not Changed
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history 1	history 2
Iron ppm ASTM D5185m	>20	2	2	2
Chromium ppm ASTM D5185m	>20	0	0	0
Nickel ppm ASTM D5185m	>20	0	0	0
Titanium ppm ASTM D5185m		<1	0	0
Silver ppm ASTM D5185m		0	0	<1
Aluminum ppm ASTM D5185m	>20	<1	0	0
Lead ppm ASTM D5185m	>20	0	0	0
Copper ppm ASTM D5185m	>20	2	1	1
Tin ppm ASTM D5185m	>20	0	0	0
Vanadium ppm ASTM D5185m		0	0	0
Cadmium ppm ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2
Boron ppm ASTM D5185m	0	0	0	0
Barium ppm ASTM D5185m	0	0	0	1
Molybdenum ppm ASTM D5185m	0	<1	<1	<1
Manganese ppm ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m	0	7	4	4
Calcium ppm ASTM D5185m	50	51	56	57
Phosphorus ppm ASTM D5185m	330	325	336	306
Zinc ppm ASTM D5185m	430	417	444	416
Sulfur ppm ASTM D5185m	760	921	1007	1043

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon ppm ASTM D5185m	>15	<1	<1	<1
Sodium ppm ASTM D5185m		<1	0	0
Potassium ppm ASTM D5185m	>20	0	<1	<1

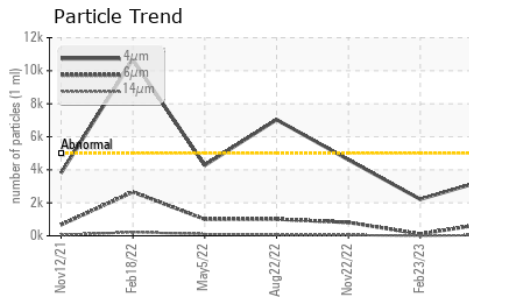
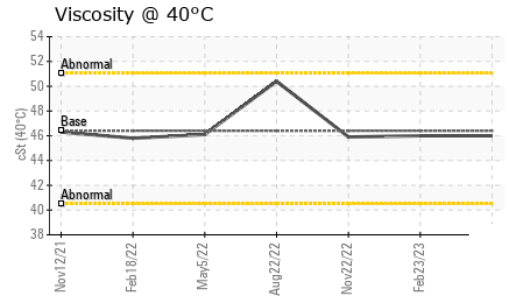
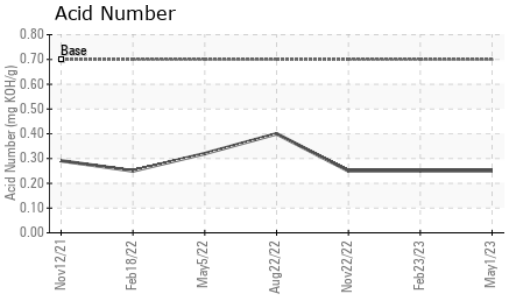
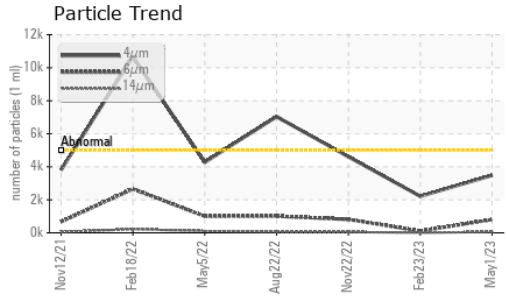
FLUID CLEANLINESS

method	limit/base	current	history 1	history 2
Particles >4µm ASTM D7647	>5000	3481	2212	4601
Particles >6µm ASTM D7647	>1300	800	106	812
Particles >14µm ASTM D7647	>160	53	8	46
Particles >21µm ASTM D7647	>40	15	3	9
Particles >38µm ASTM D7647	>10	0	1	1
Particles >71µm ASTM D7647	>3	0	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	19/17/13	18/14/10	19/17/13

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Acid Number (AN) mg KOH/g ASTM D8045	0.70	0.25	0.25	0.25

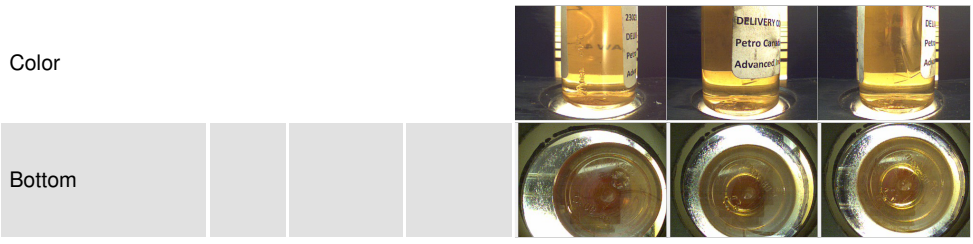
OIL ANALYSIS REPORT



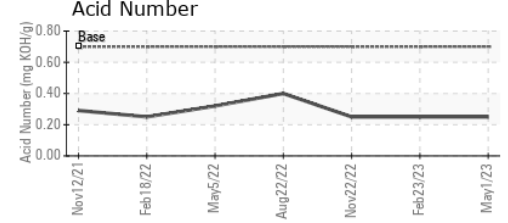
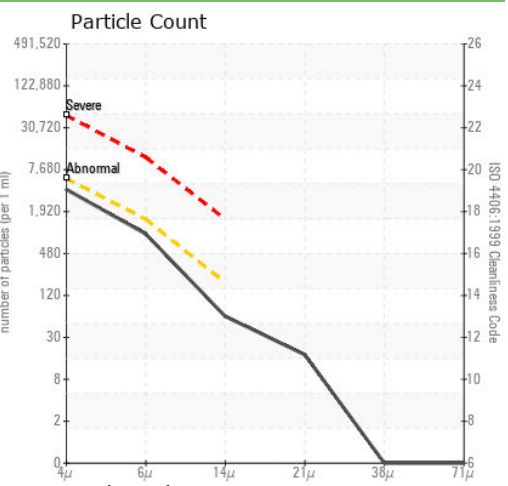
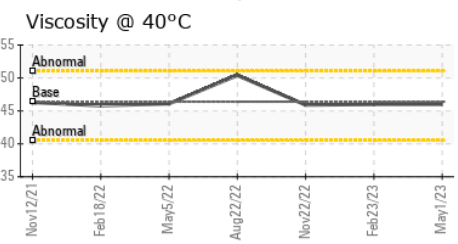
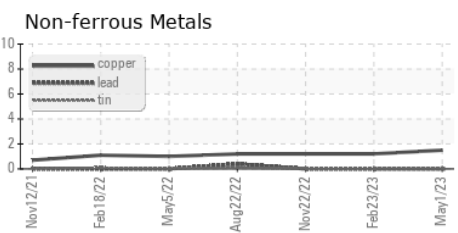
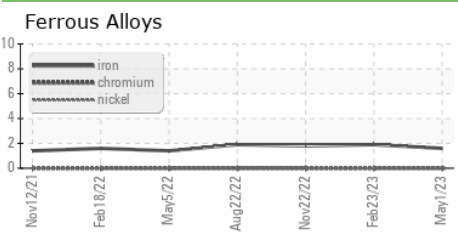
VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 40°C	cSt	ASTM D445	46.4	46.0	46.0	45.9

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0095449
Lab Number : 05894372
Unique Number : 10550182
Test Package : PLANT

SDI - Steel Dynamics Inc. - Heartland
 455 West Industrial Drive
 Terre Haute, IN
 US 47802
 Contact: BRAD ELLIS
 brad.ellis@steeldynamics.com

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)