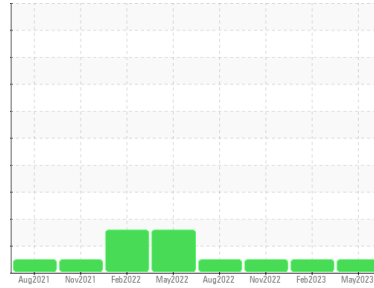


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
Galv Line
 Machine Id
[Galv Line] 695250-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

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

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		PCA0095491	PCA0089475	PCA0081704
Sample Date	Client Info		01 May 2023	01 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	Not Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >20	0	<1	<1
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	0
Aluminum	ppm	ASTM D5185m >20	<1	0	0
Lead	ppm	ASTM D5185m >20	0	0	0
Copper	ppm	ASTM D5185m >20	<1	<1	<1
Tin	ppm	ASTM D5185m >20	0	<1	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	0
Molybdenum	ppm	ASTM D5185m 0	0	<1	<1
Manganese	ppm	ASTM D5185m 0	0	0	0
Magnesium	ppm	ASTM D5185m 0	6	2	2
Calcium	ppm	ASTM D5185m 50	49	57	67
Phosphorus	ppm	ASTM D5185m 330	319	315	331
Zinc	ppm	ASTM D5185m 430	413	418	425
Sulfur	ppm	ASTM D5185m 760	907	935	945

CONTAMINANTS

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

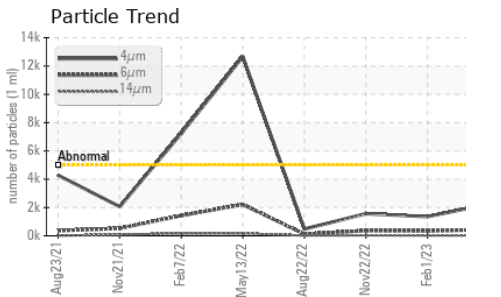
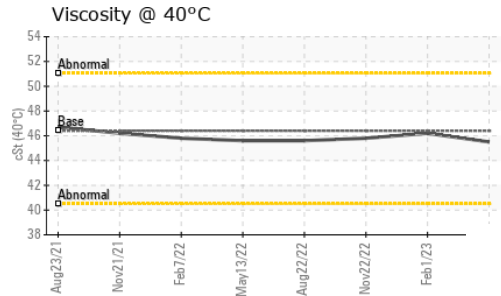
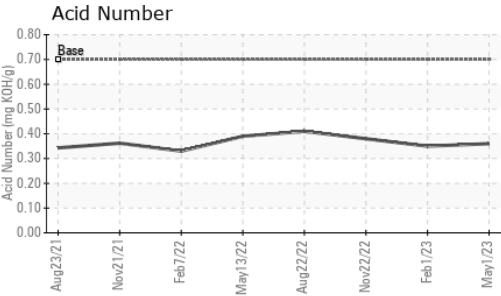
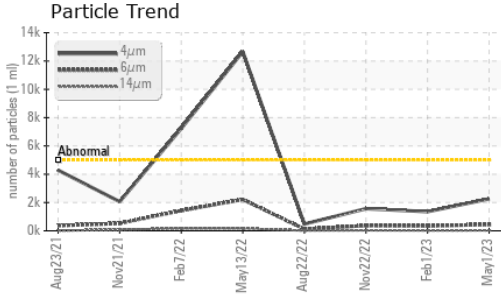
FLUID CLEANLINESS

	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>5000	2258	1353	1566
Particles >6µm	ASTM D7647	>1300	448	347	370
Particles >14µm	ASTM D7647	>160	30	19	35
Particles >21µm	ASTM D7647	>40	8	5	9
Particles >38µm	ASTM D7647	>10	0	1	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	18/16/12	18/16/11	18/16/12

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.70	0.36	0.35	0.38

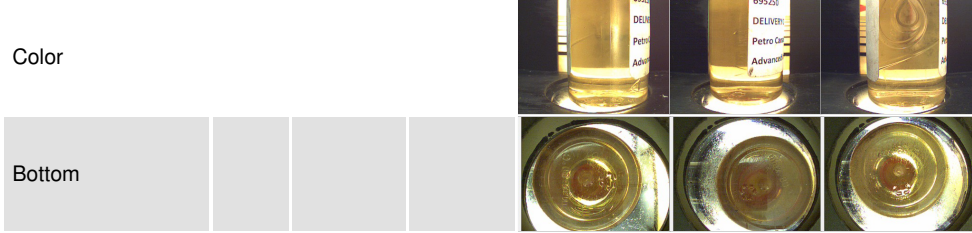
OIL ANALYSIS REPORT



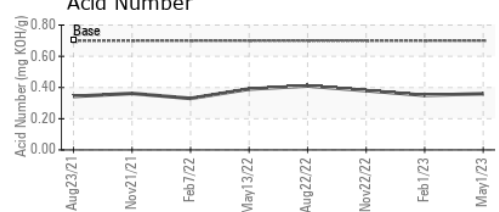
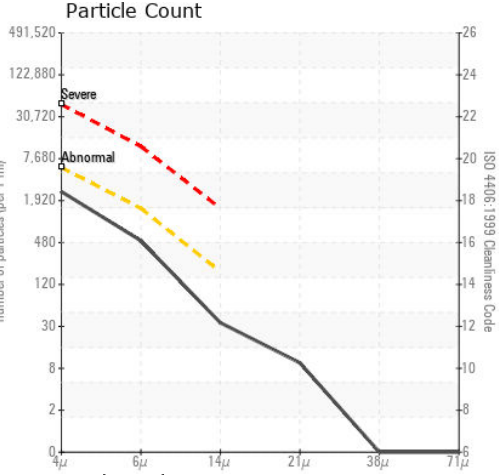
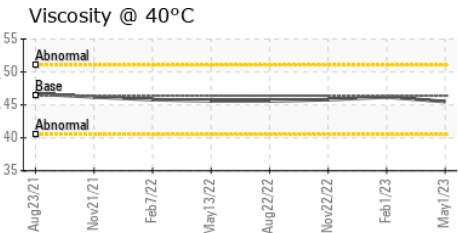
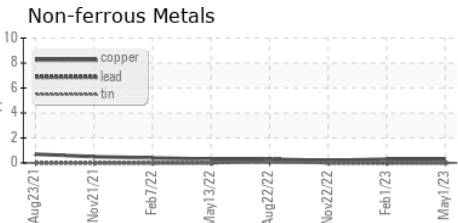
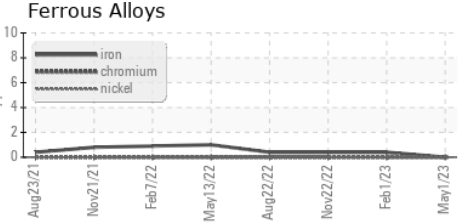
PARAMETER	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	45.5	46.2	45.8

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



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0095491
Lab Number : 05894378
Unique Number : 10550188
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)

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F: