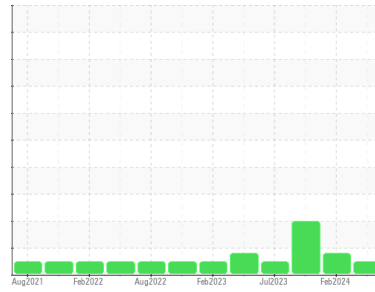


OIL ANALYSIS REPORT

Area
Galv Line
 Machine Id
[Galv Line] 640160-STEERING UNITS 1- 2
 Component
Hydraulic System
 Fluid
PETRO CANADA HYDREX AW 46 (--- GAL)

Sample Rating Trend



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	history1	history2
Sample Number	Client Info	PCA0117623	PCA0112960	PCA0107661
Sample Date	Client Info	05 Jun 2024	12 Feb 2024	20 Nov 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	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>20	14	13	15
Chromium ppm ASTM D5185m	>20	<1	0	<1
Nickel ppm ASTM D5185m	>20	0	0	<1
Titanium ppm ASTM D5185m		<1	<1	<1
Silver ppm ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m	>20	2	0	2
Lead ppm ASTM D5185m	>20	2	1	2
Copper ppm ASTM D5185m	>20	14	12	15
Tin ppm ASTM D5185m	>20	<1	<1	<1
Vanadium ppm ASTM D5185m		0	0	0
Cadmium ppm ASTM D5185m		<1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m	0	0	0	0
Barium ppm ASTM D5185m	0	<1	0	4
Molybdenum ppm ASTM D5185m	0	<1	0	<1
Manganese ppm ASTM D5185m	0	0	<1	<1
Magnesium ppm ASTM D5185m	0	4	2	4
Calcium ppm ASTM D5185m	50	60	58	60
Phosphorus ppm ASTM D5185m	330	303	266	341
Zinc ppm ASTM D5185m	430	393	376	382
Sulfur ppm ASTM D5185m	760	3207	3231	3661

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>15	<1	<1	<1
Sodium ppm ASTM D5185m		0	1	<1
Potassium ppm ASTM D5185m	>20	1	2	<1
Water % ASTM D6304	>0.05	NEG	NEG	NEG

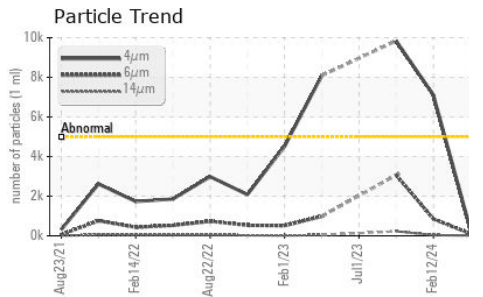
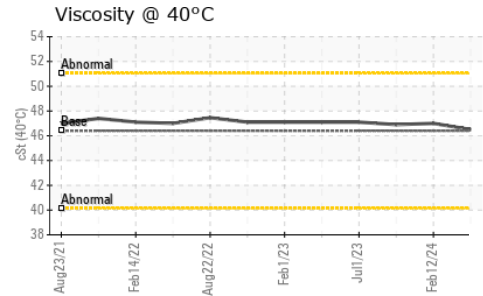
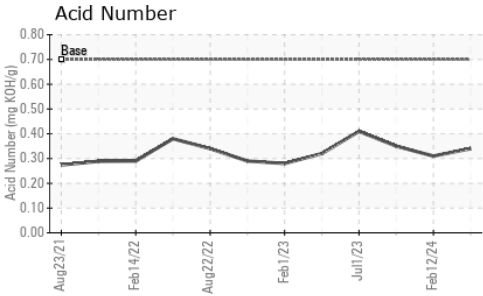
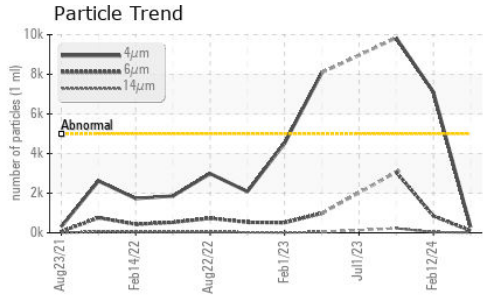
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	292	7104	9841
Particles >6µm ASTM D7647	>1300	104	851	3067
Particles >14µm ASTM D7647	>160	14	34	227
Particles >21µm ASTM D7647	>40	5	7	50
Particles >38µm ASTM D7647	>10	1	0	3
Particles >71µm ASTM D7647	>3	1	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	15/14/11	20/17/12	20/19/15

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045	0.70	0.34	0.31	0.35

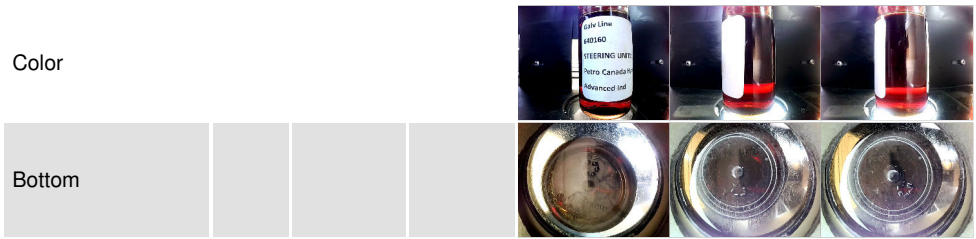
OIL ANALYSIS REPORT



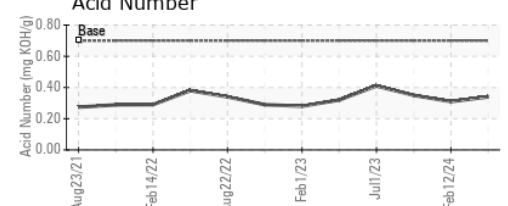
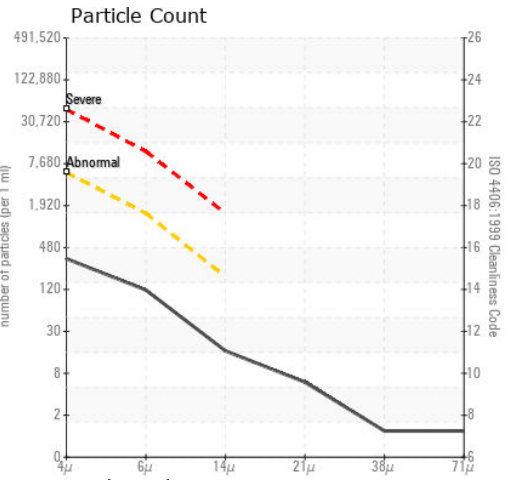
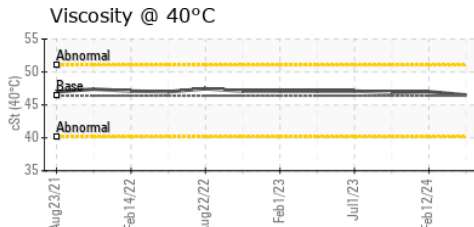
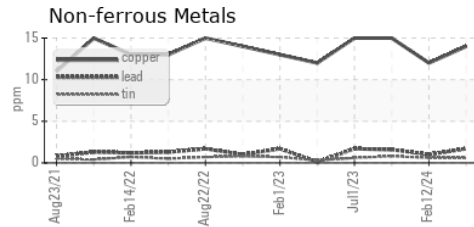
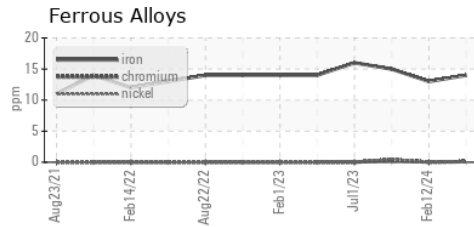
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	46.4	46.5	47.0	46.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0117623
Lab Number : 06201481
Unique Number : 11063604
Test Package : PLANT

Received : 06 Jun 2024
Tested : 09 Jun 2024
Diagnosed : 09 Jun 2024 - Don Baldrige

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)