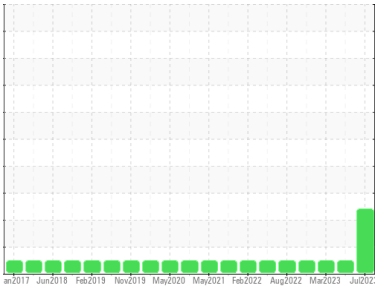
OIL DIAGNOSTICS

PROBLEM SUMMARY

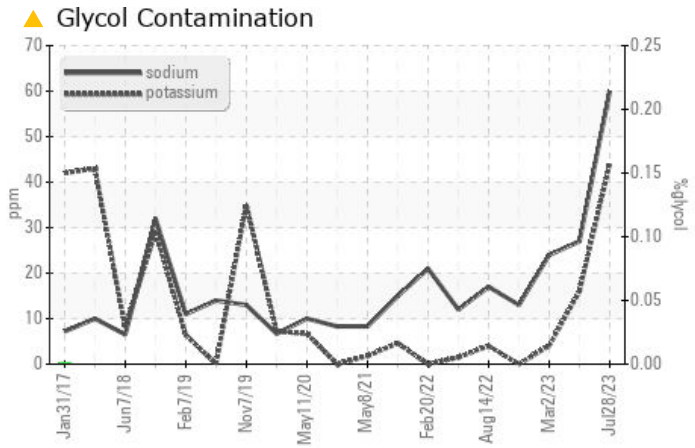
Sample Rating Trend



GLYCOL

Area
FLEET
Machine Id
26454
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m		▲ **60**	27	24
Potassium	ppm	ASTM D5185m	>20	▲ **44**	16	4

Customer Id: PERACCPCA
Sample No.: PCA0099296
Lab Number: 05925909
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

24 May 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

02 Mar 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

03 Nov 2022 Diag: Wes Davis

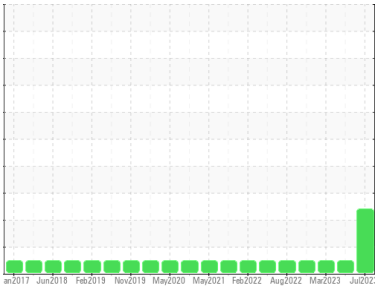
NORMAL

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Area
FLEET
Machine Id
26454
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Sodium and/or potassium levels are high. Test for glycol is negative.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0099296**	PCA0095975	PCA0089369
Sample Date		Client Info		**28 Jul 2023**	24 May 2023	02 Mar 2023
Machine Age	mls	Client Info		**470562**	456097	435541
Oil Age	mls	Client Info		**35022**	20556	47912
Oil Changed		Client Info		**Changed**	Not Changd	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**25**	18	32
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**6**	4	3
Lead	ppm	ASTM D5185m	>40	**3**	2	2
Copper	ppm	ASTM D5185m	>330	**4**	2	3
Tin	ppm	ASTM D5185m	>15	**1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**2**	3	0
Barium	ppm	ASTM D5185m	0	**0**	0	<1
Molybdenum	ppm	ASTM D5185m	50	**61**	62	58
Manganese	ppm	ASTM D5185m	0	**<1**	<1	0
Magnesium	ppm	ASTM D5185m	950	**962**	1013	848
Calcium	ppm	ASTM D5185m	1050	**1092**	1152	1090
Phosphorus	ppm	ASTM D5185m	995	**999**	1083	959
Zinc	ppm	ASTM D5185m	1180	**1289**	1385	1177
Sulfur	ppm	ASTM D5185m	2600	**3235**	3080	2396

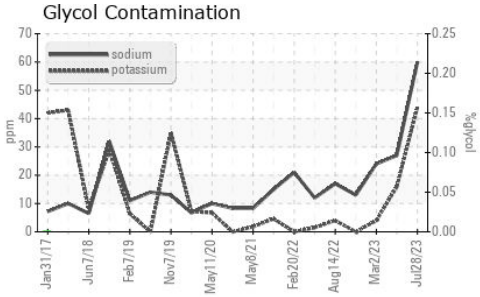
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	6	6
Sodium	ppm	ASTM D5185m		▲ **60**	27	24
Potassium	ppm	ASTM D5185m	>20	▲ **44**	16	4
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.7**	0.6	1.1
Nitration	Abs/cm	*ASTM D7624	>20	**10.3**	9.6	12.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.2**	22.0	25.4

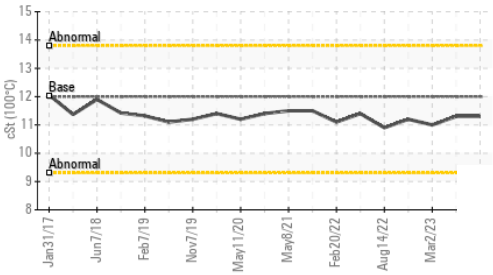
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.7**	18.5	21.7
Base Number (BN)	mg KOH/g	ASTM D2896		**5.6**	7.1	4.7

OIL ANALYSIS REPORT

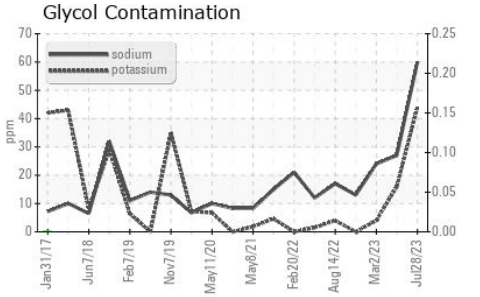
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

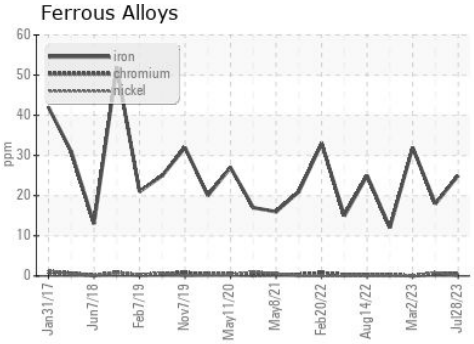


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

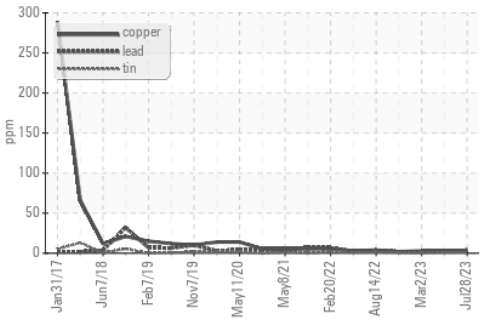
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**11.3**	11.3	11.0

GRAPHS

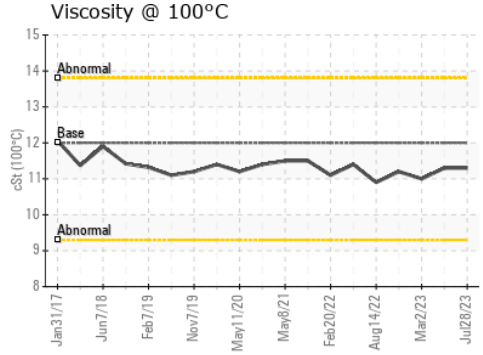
Ferrous Alloys



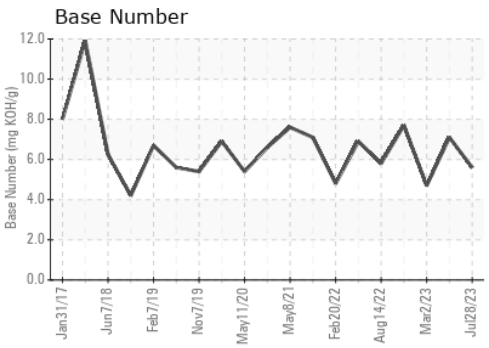
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0099296 **Received** : 16 Aug 2023
Lab Number : 05925909 **Diagnosed** : 17 Aug 2023
Unique Number : 10605856 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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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