

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

 Machine Id
341314

 Component
Diesel Engine

 Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS
Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

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	PCA0113664	---	---
Sample Date	Client Info	01 Feb 2024	---	---
Machine Age	mls Client Info	63443	---	---
Oil Age	mls Client Info	31331	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	---	---
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	▲ 113	---	---
Chromium	ppm ASTM D5185m >20	5	---	---
Nickel	ppm ASTM D5185m >4	<1	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >3	0	---	---
Aluminum	ppm ASTM D5185m >20	32	---	---
Lead	ppm ASTM D5185m >40	0	---	---
Copper	ppm ASTM D5185m >330	10	---	---
Tin	ppm ASTM D5185m >15	<1	---	---
Vanadium	ppm ASTM D5185m	<1	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	6	---	---
Barium	ppm ASTM D5185m 0	2	---	---
Molybdenum	ppm ASTM D5185m 50	74	---	---
Manganese	ppm ASTM D5185m 0	2	---	---
Magnesium	ppm ASTM D5185m 950	904	---	---
Calcium	ppm ASTM D5185m 1050	1262	---	---
Phosphorus	ppm ASTM D5185m 995	1019	---	---
Zinc	ppm ASTM D5185m 1180	1218	---	---
Sulfur	ppm ASTM D5185m 2600	2943	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	15	---	---
Sodium	ppm ASTM D5185m	<1	---	---
Potassium	ppm ASTM D5185m >20	66	---	---

INFRA-RED

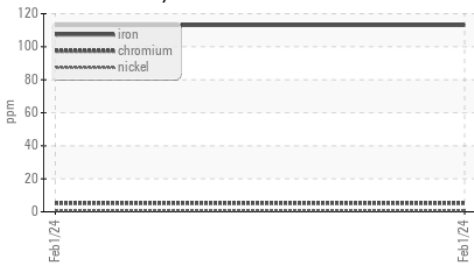
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	1.2	---	---
Nitration	Abs/cm *ASTM D7624 >20	14.0	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	26.7	---	---

FLUID DEGRADATION

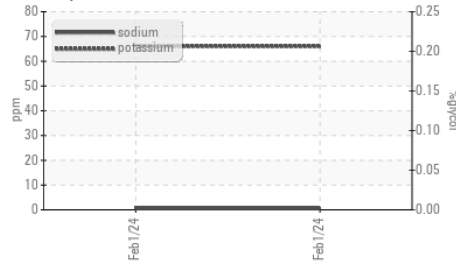
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	26.2	---	---
Base Number (BN)	mg KOH/g ASTM D2896	5.3	---	---

OIL ANALYSIS REPORT

▲ Ferrous Alloys



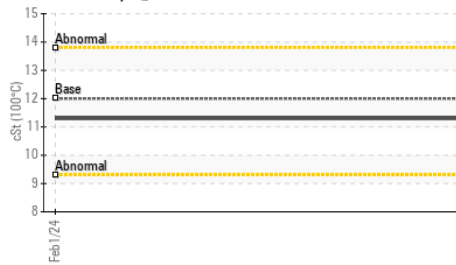
Glycol Contamination



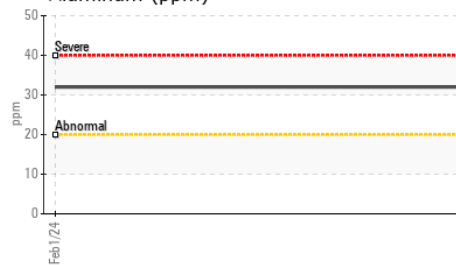
Base Number



Viscosity @ 100°C



Aluminum (ppm)



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

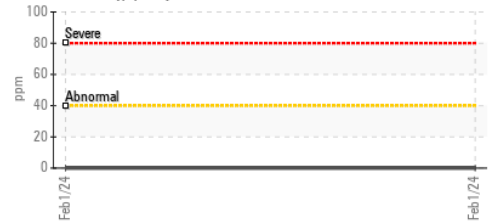
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.3	---

GRAPHS

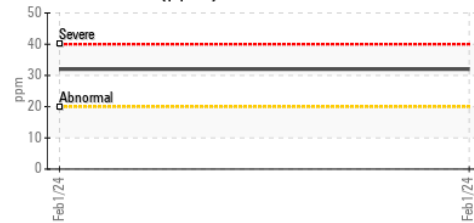
▲ Iron (ppm)



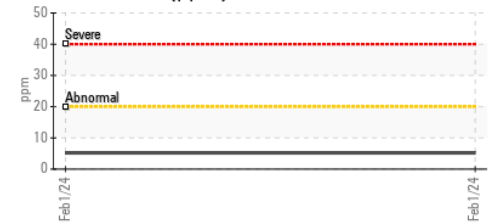
Lead (ppm)



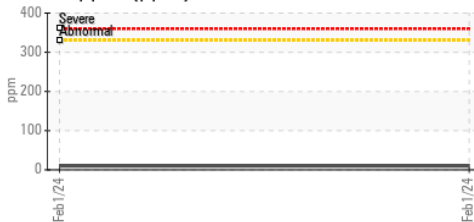
Aluminum (ppm)



Chromium (ppm)



Copper (ppm)



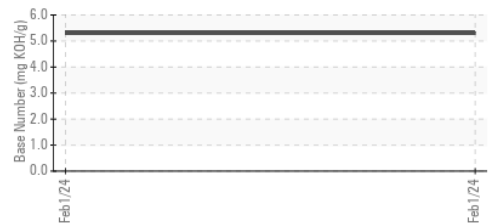
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0113664 **Received** : 21 Mar 2024
Lab Number : 06124688 **Tested** : 22 Mar 2024
Unique Number : 10938839 **Diagnosed** : 23 Mar 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

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 LOGAN TOWNSHIP, NJ
 US 08085
 Contact: ED DAVIS
 edavis@millertransgroup.com
 T: (856)214-3521
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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)