

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR


Area
(66462Z) Walgreens - Tractor
 Machine Id
[Walgreens - Tractor] 136A624275
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (11 GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

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 suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0105939	---	---
Sample Date	Client Info	12 Feb 2024	---	---
Machine Age	hrs	Client Info	19831	---
Oil Age	hrs	Client Info	0	---
Oil Changed	Client Info	N/A	---	---
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 >80	32	---	---
Chromium	ppm ASTM D5185m >5	4	---	---
Nickel	ppm ASTM D5185m >2	1	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >3	1	---	---
Aluminum	ppm ASTM D5185m >30	46	---	---
Lead	ppm ASTM D5185m >30	<1	---	---
Copper	ppm ASTM D5185m >150	▲ 264	---	---
Tin	ppm ASTM D5185m >5	4	---	---
Vanadium	ppm ASTM D5185m	<1	---	---
Cadmium	ppm ASTM D5185m	<1	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	48	---	---
Barium	ppm ASTM D5185m 0	0	---	---
Molybdenum	ppm ASTM D5185m 50	44	---	---
Manganese	ppm ASTM D5185m 0	5	---	---
Magnesium	ppm ASTM D5185m 950	541	---	---
Calcium	ppm ASTM D5185m 1050	1605	---	---
Phosphorus	ppm ASTM D5185m 995	828	---	---
Zinc	ppm ASTM D5185m 1180	925	---	---
Sulfur	ppm ASTM D5185m 2600	2761	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	8	---	---
Sodium	ppm ASTM D5185m	0	---	---
Potassium	ppm ASTM D5185m >20	146	---	---

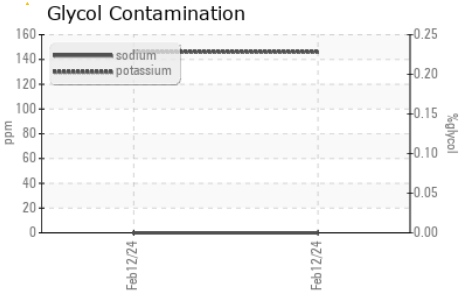
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.3	---	---
Nitration	Abs/cm *ASTM D7624 >20	7.6	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	22.4	---	---

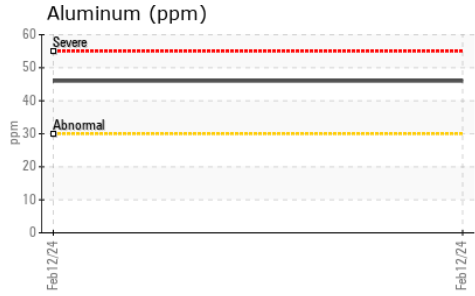
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	20.1	---	---
Base Number (BN)	mg KOH/g ASTM D2896	8.5	---	---

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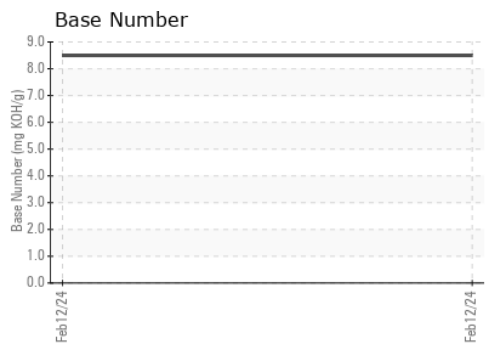
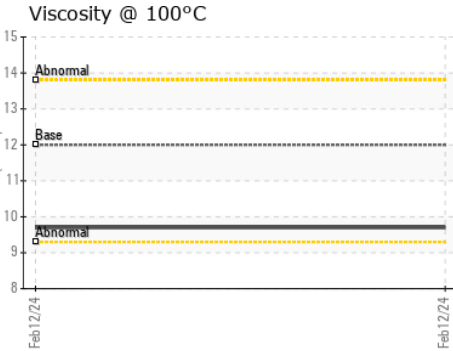
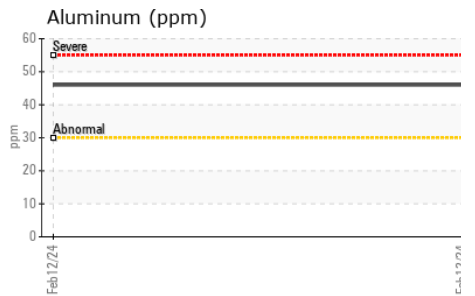
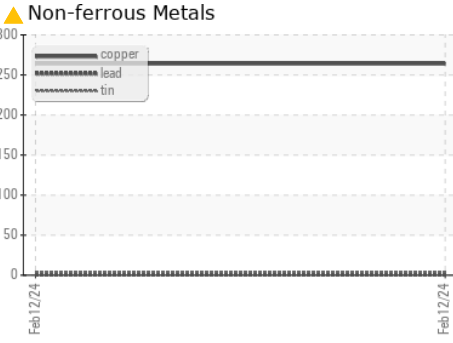
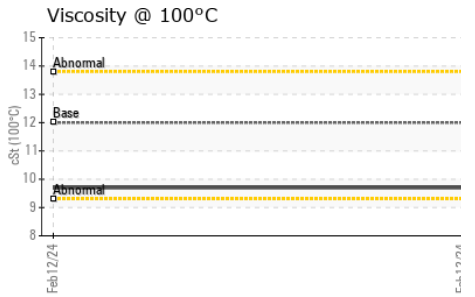
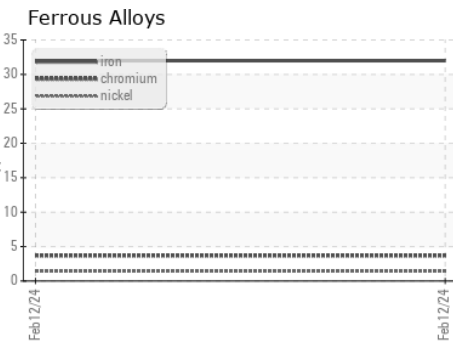
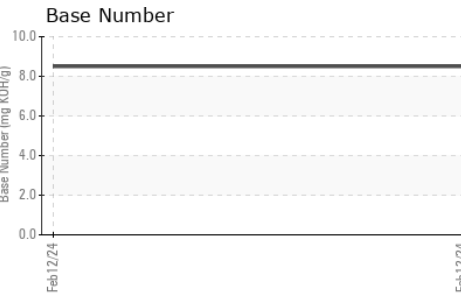


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE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



FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	12.00	9.7	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0105939 **Received** : 15 Feb 2024
Lab Number : 06090885 **Tested** : 19 Feb 2024
Unique Number : 10883738 **Diagnosed** : 19 Feb 2024 - Don Baldrige
Test Package : FLEET

Transervice - Shop 1361 - Berkeley-Windsor
 4400 State Road 19
 Windsor, WI
 US 53598
 Contact: Mike Hurda
 mhurda@transervice.com
 T: (608)846-2726
 F: (608)846-0389

Certificate L2367
 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)