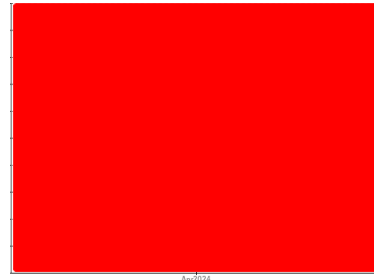


Machine Id
V3457
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)



DIAGNOSIS

▲ Recommendation
 We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check for faulty combustion, plugged air filters, or aftercoolers. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

▲ Wear
 Piston and cylinder wear is indicated.

▲ Contamination
 Sodium and/or potassium levels are high. Test for glycol is positive. There is an abnormal amount of solids and carbon present in the oil.

▲ Fluid Condition
 The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0112760	---	---
Sample Date	Client Info		05 Apr 2024	---	---
Machine Age	mls	Client Info	316897	---	---
Oil Age	mls	Client Info	0	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			SEVERE	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 159	---	---
Chromium	ppm	ASTM D5185m >20	6	---	---
Nickel	ppm	ASTM D5185m >4	<1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >3	0	---	---
Aluminum	ppm	ASTM D5185m >20	▲ 44	---	---
Lead	ppm	ASTM D5185m >40	0	---	---
Copper	ppm	ASTM D5185m >330	159	---	---
Tin	ppm	ASTM D5185m >15	2	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	8	---	---
Barium	ppm	ASTM D5185m 0	2	---	---
Molybdenum	ppm	ASTM D5185m 50	108	---	---
Manganese	ppm	ASTM D5185m 0	4	---	---
Magnesium	ppm	ASTM D5185m 950	704	---	---
Calcium	ppm	ASTM D5185m 1050	1383	---	---
Phosphorus	ppm	ASTM D5185m 995	794	---	---
Zinc	ppm	ASTM D5185m 1180	1016	---	---
Sulfur	ppm	ASTM D5185m 2600	2771	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	13	---	---
Sodium	ppm	ASTM D5185m	▲ 392	---	---
Potassium	ppm	ASTM D5185m >20	▲ 546	---	---
Fuel	%	ASTM D3524 >5	<1.0	---	---
Glycol	%	*ASTM D2982	▲ 0.10	---	---

INFRA-RED

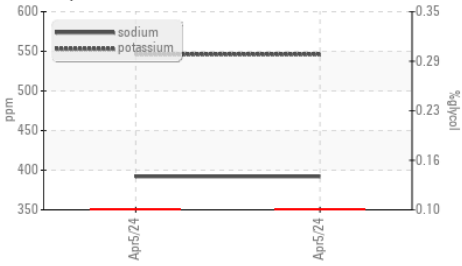
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	▲ 3.8	---	---
Nitration	Abs/cm	*ASTM D7624 >20	21.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	34.5	---	---

FLUID DEGRADATION

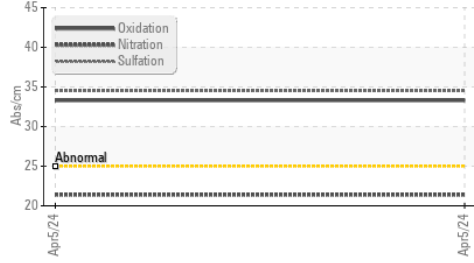
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	33.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	▲ 0.8	---	---

OIL ANALYSIS REPORT

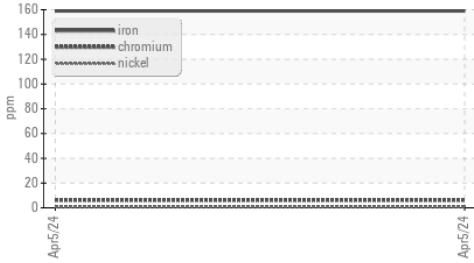
▲ Glycol Contamination



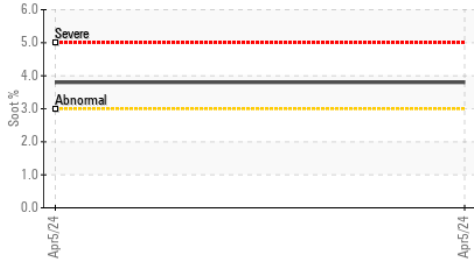
▲ FT-IR (Direct Trend)



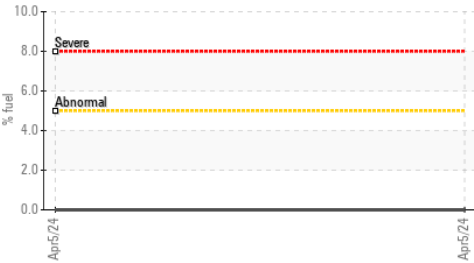
▲ Ferrous Alloys



▲ Soot %



▲ Fuel Dilution



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	---

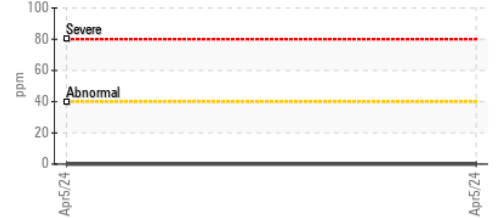
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.1	---

GRAPHS

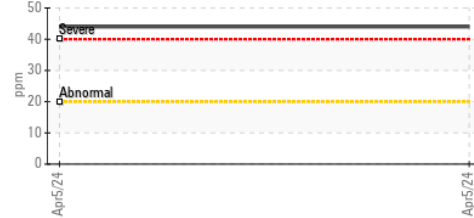
▲ Iron (ppm)



▲ Lead (ppm)



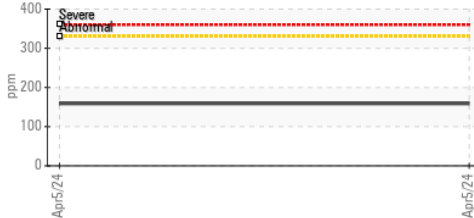
▲ Aluminum (ppm)



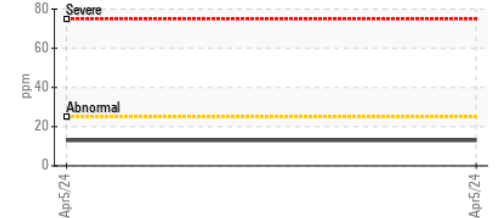
▲ Chromium (ppm)



▲ Copper (ppm)



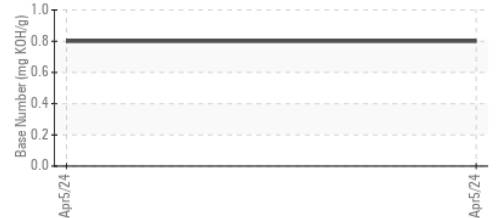
▲ Silicon (ppm)



▲ Viscosity @ 100°C



▲ Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0112760

Lab Number : 06155729

Unique Number : 10991152

Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, TBN)

Received : 22 Apr 2024

Tested : 23 Apr 2024

Diagnosed : 23 Apr 2024 - Jonathan Hester

MILLER TRUCK LEASING #137

361 ROUTE 312

BREWSTER, NY

US 10509

Contact: Robert Beckhusen

rbeckhusen@millertransgroup.com

T: (845)779-1064

F:

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)