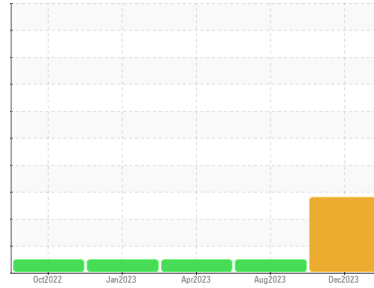


OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Machine Id
736802
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)



DIAGNOSIS

Recommendation
 We advise that you check for faulty combustion, plugged air filters, or aftercoolers. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Wear
 Cylinder, crank, or cam shaft wear is indicated.

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. There is an abnormal amount of solids and carbon present in the oil.

Fluid Condition
 The BN level is low.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0115235	PCA0103032	PCA0095951
Sample Date	Client Info	18 Dec 2023	02 Aug 2023	04 Apr 2023
Machine Age	mls	Client Info	238738	181443
Oil Age	mls	Client Info	0	0
Oil Changed	Client Info	Not Changed	Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	▲ 149	87	36
Chromium	ppm	ASTM D5185m	>20	6	4	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	30	23	11
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	73	66	54
Tin	ppm	ASTM D5185m	>15	3	3	1
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	7	2	6
Barium	ppm	ASTM D5185m	0	0	0	1
Molybdenum	ppm	ASTM D5185m	50	70	67	62
Manganese	ppm	ASTM D5185m	0	2	1	1
Magnesium	ppm	ASTM D5185m	950	959	964	851
Calcium	ppm	ASTM D5185m	1050	1270	1267	1106
Phosphorus	ppm	ASTM D5185m	995	1062	965	876
Zinc	ppm	ASTM D5185m	1180	1326	1278	1147
Sulfur	ppm	ASTM D5185m	2600	2064	2398	2114

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	10	6	4
Sodium	ppm	ASTM D5185m		3	4	2
Potassium	ppm	ASTM D5185m	>20	58	47	21
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0

INFRA-RED

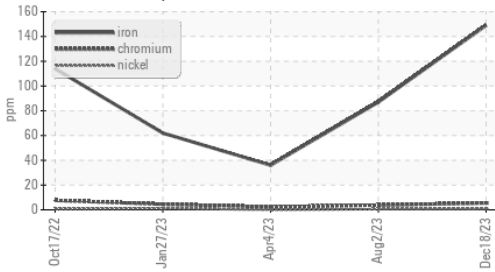
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	▲ 3.2	2.1	1
Nitration	Abs/cm	*ASTM D7624	>20	19.4	14.5	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	34.4	26.5	19.4

FLUID DEGRADATION

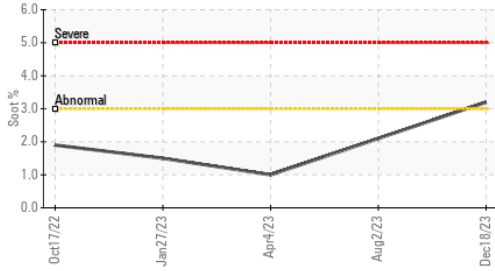
method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	38.6	26.3	17.0
Base Number (BN)	mg KOH/g	ASTM D2896		▲ 2.1	4.5	6.0

OIL ANALYSIS REPORT

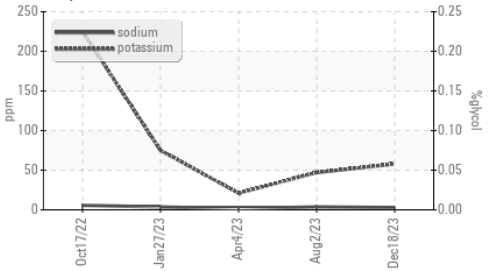
▲ Ferrous Alloys



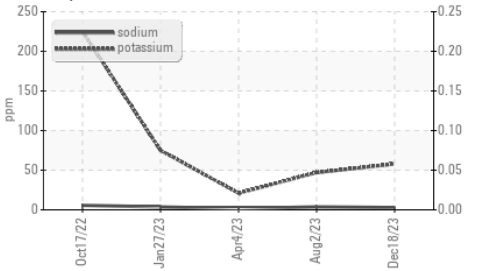
▲ Soot %



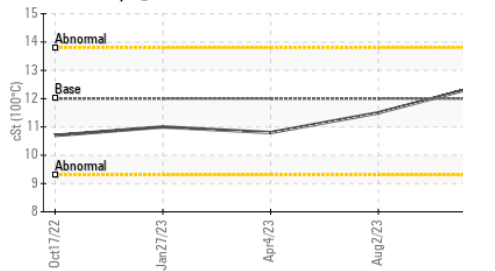
▲ Glycol Contamination



▲ Glycol Contamination



▲ Viscosity @ 100°C

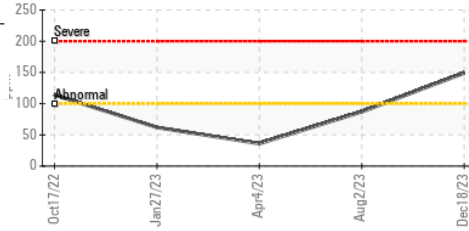


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual NONE	NONE	NONE	NONE
Silt	scalar	*Visual NONE	NONE	NONE	NONE
Debris	scalar	*Visual NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	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

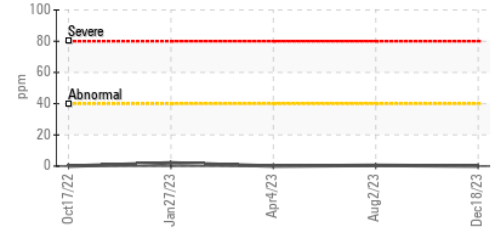
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 12.00	12.5	11.5	10.8

GRAPHS

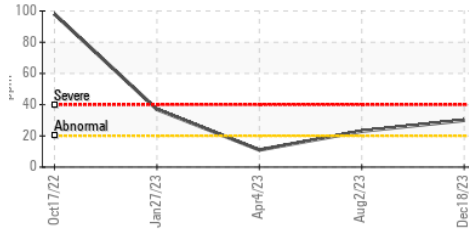
▲ Iron (ppm)



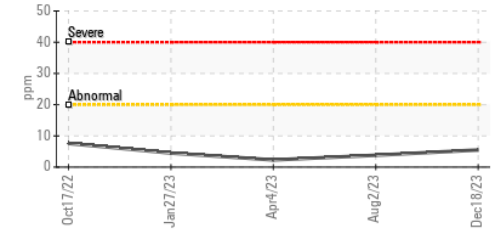
▲ Lead (ppm)



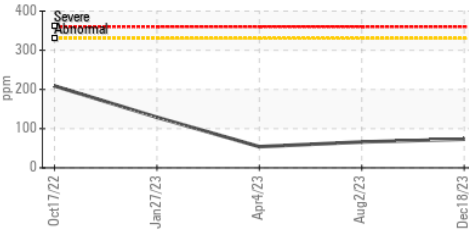
▲ Aluminum (ppm)



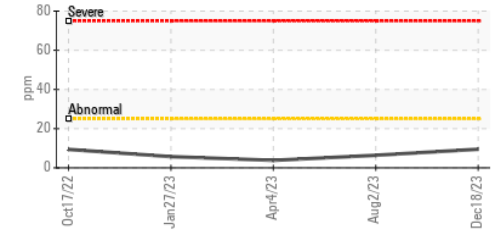
▲ Chromium (ppm)



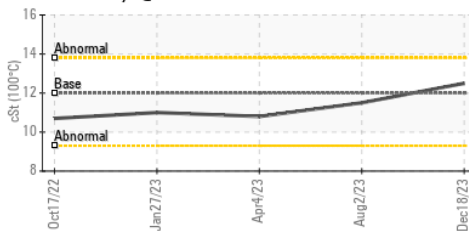
▲ Copper (ppm)



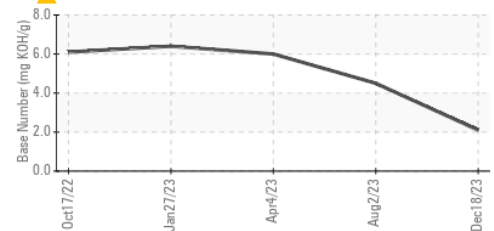
▲ Silicon (ppm)



▲ Viscosity @ 100°C



▲ Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0115235 **Received** : 21 Dec 2023
Lab Number : 06042600 **Diagnosed** : 26 Dec 2023
Unique Number : 10803208 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

MILLER TRUCK LEASING #119
 39 INDUSTRIAL AVE
 HASBROUCK HEIGHTS, NJ
 US 07604
 Contact: MIKE LONGETTE
 mlongette@millertransgroup.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)

T: (201)528-7053