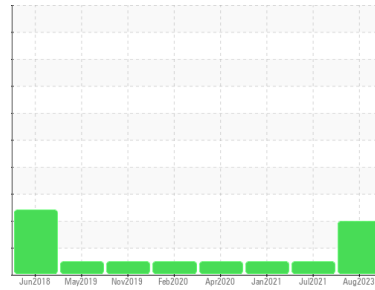


Machine Id
ISUZU 189629

Component
Diesel Engine

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



DIAGNOSIS

Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. 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.

Contamination

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

Fluid Condition

The oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0102907	PCA0033429	PCA0033439
Sample Date	Client Info		04 Aug 2023	19 Jul 2021	16 Jan 2021
Machine Age	mls	Client Info	114530	72000	61814
Oil Age	mls	Client Info	114530	6000	8000
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	▲ 139	57	28
Chromium	ppm	ASTM D5185m >20	2	1	<1
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m	5	1	4
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	6	<1	2
Lead	ppm	ASTM D5185m >40	13	2	1
Copper	ppm	ASTM D5185m >330	6	3	1
Tin	ppm	ASTM D5185m >15	2	1	<1
Antimony	ppm	ASTM D5185m	---	0	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	3	13	10
Barium	ppm	ASTM D5185m 0	2	0	0
Molybdenum	ppm	ASTM D5185m 50	61	57	55
Manganese	ppm	ASTM D5185m 0	1	<1	<1
Magnesium	ppm	ASTM D5185m 950	898	790	885
Calcium	ppm	ASTM D5185m 1050	1261	1412	1147
Phosphorus	ppm	ASTM D5185m 995	996	1001	1052
Zinc	ppm	ASTM D5185m 1180	1263	1190	1251
Sulfur	ppm	ASTM D5185m 2600	3210	2658	2772

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	9	5	3
Sodium	ppm	ASTM D5185m	2	2	2
Potassium	ppm	ASTM D5185m >20	3	1	<1
Fuel	%	ASTM D3524 >5	<1.0	<1.0	<1.0

INFRA-RED

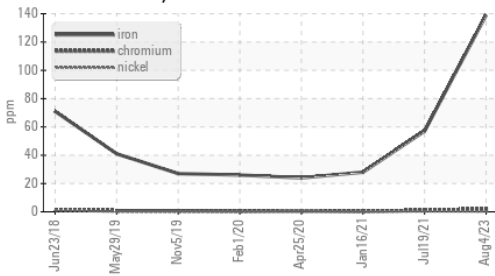
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	▲ 3	1.1	0.7
Nitration	Abs/cm	*ASTM D7624 >20	19.7	13.4	10.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	31.6	23.1	20.7

FLUID DEGRADATION

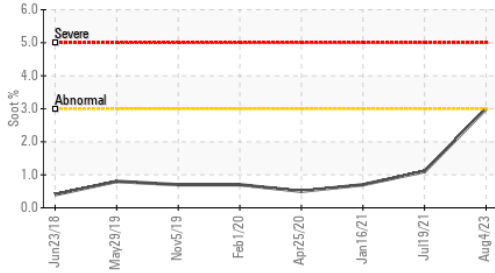
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	29.5	19.7	17.4
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	---	---

OIL ANALYSIS REPORT

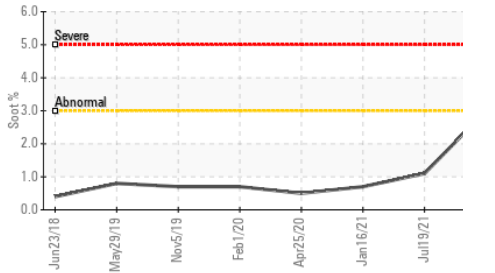
▲ Ferrous Alloys



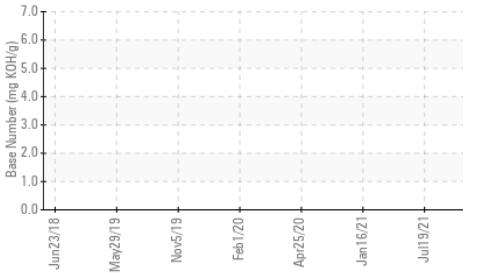
▲ Soot %



▲ Soot %



Base Number



VISUAL

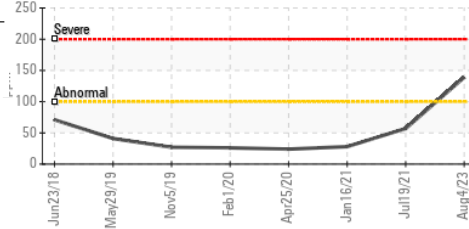
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar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

FLUID PROPERTIES

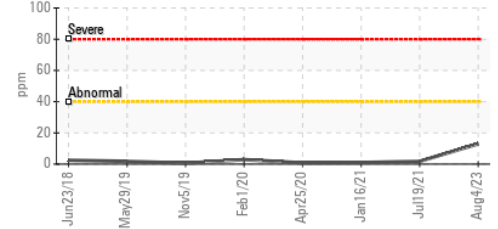
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	▲ 12.6	11.2	11.5

GRAPHS

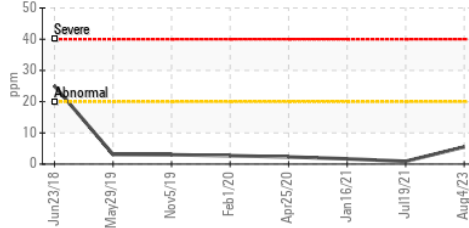
▲ Iron (ppm)



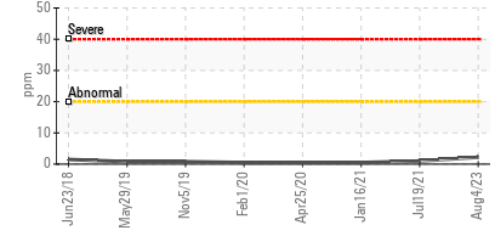
Lead (ppm)



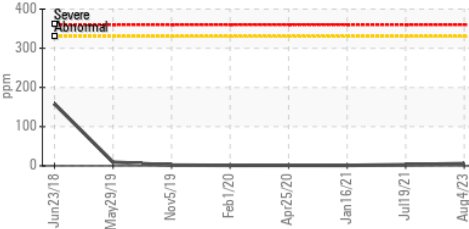
Aluminum (ppm)



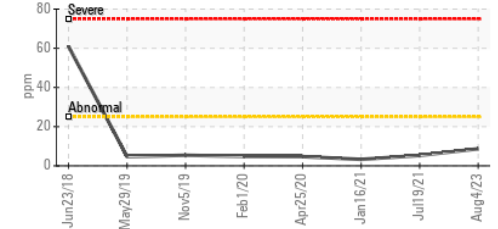
Chromium (ppm)



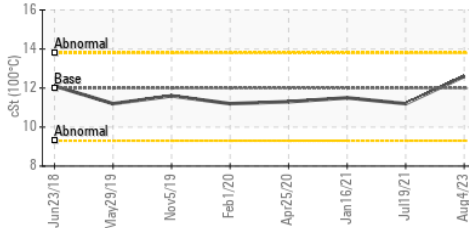
Copper (ppm)



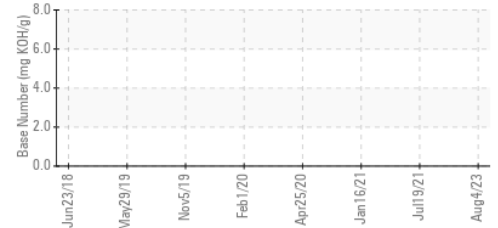
Silicon (ppm)



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0102907 **Received** : 10 Aug 2023
Lab Number : 05921274 **Diagnosed** : 11 Aug 2023
Unique Number : 10593188 **Diagnostician** : Jonathan Hester
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

MILLER TRUCK LEASING #118
 2196 BENNETT ROAD
 PHILADELPHIA, PA
 US 19116
 Contact: ROSTY VITER
 rviter@millertransgroup.com
 T: (215)552-9832
 F: (215)552-9892

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)