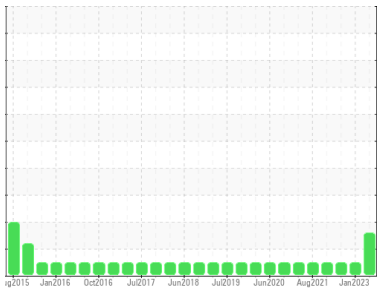
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Sample Rating Trend



DIRT

Machine Id
MACK 26361
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (33 QTS)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal.

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		**PCA0094594**	PCA0052361	PCA0052374
Sample Date		Client Info		**13 Dec 2023**	25 Jan 2023	25 Aug 2022
Machine Age	mls	Client Info		**747326**	696477	666568
Oil Age	mls	Client Info		**24438**	29909	29770
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**16**	19	21
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**5**	4	4
Lead	ppm	ASTM D5185m	>40	**1**	<1	0
Copper	ppm	ASTM D5185m	>330	**3**	2	3
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**14**	0	2
Barium	ppm	ASTM D5185m	0	**<1**	0	<1
Molybdenum	ppm	ASTM D5185m	50	**46**	60	52
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	950	**638**	904	729
Calcium	ppm	ASTM D5185m	1050	**1522**	1040	923
Phosphorus	ppm	ASTM D5185m	995	**870**	929	793
Zinc	ppm	ASTM D5185m	1180	**1024**	1175	942
Sulfur	ppm	ASTM D5185m	2600	**2584**	3390	2317

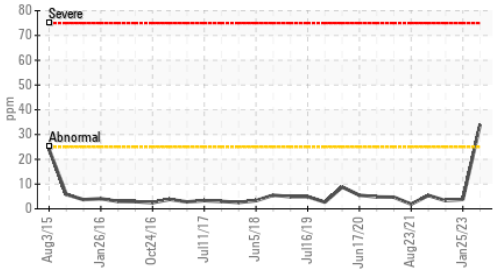
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **34**	4	3
Sodium	ppm	ASTM D5185m		**6**	6	13
Potassium	ppm	ASTM D5185m	>20	**2**	1	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.7**	0.9	1
Nitration	Abs/cm	*ASTM D7624	>20	**11.0**	11.1	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.8**	21.2	23.7

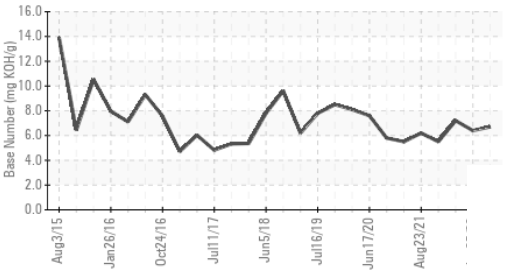
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**22.3**	17.4	18.9
Base Number (BN)	mg KOH/g	ASTM D2896		**6.7**	6.4	7.2

OIL ANALYSIS REPORT

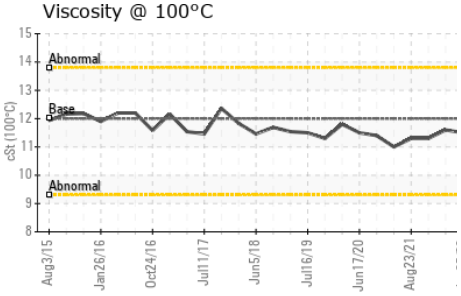
Silicon (ppm)



Base Number



Viscosity @ 100°C

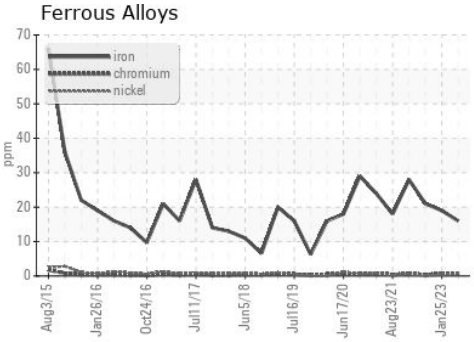


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

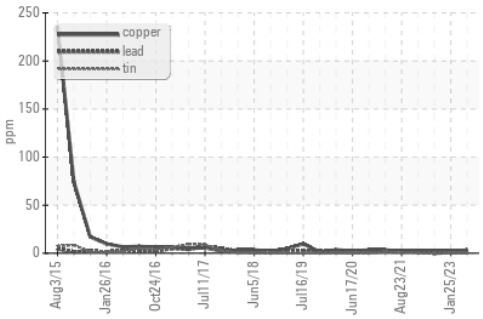
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**11.6**	11.5	11.6

GRAPHS

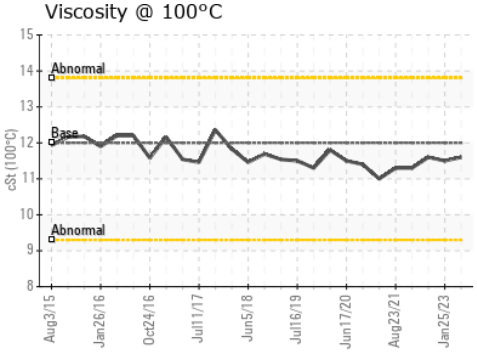
Ferrous Alloys



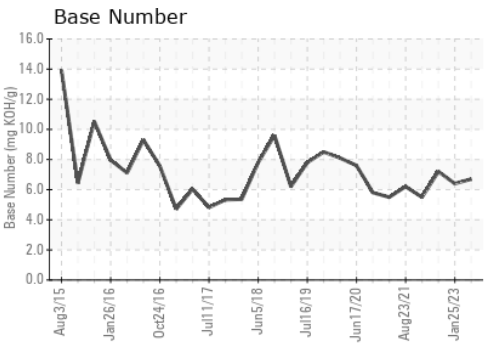
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0094594
Lab Number : 06043747
Unique Number : 10804355
Test Package : FLEET

Recieved : 22 Dec 2023
Diagnosed : 27 Dec 2023
Diagnostician : Don Baldridge

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)

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