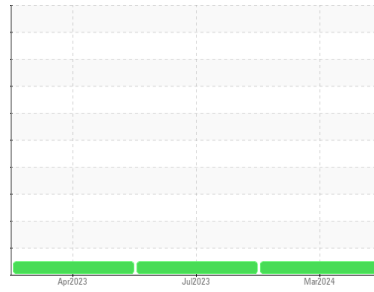




OIL ANALYSIS REPORT

Area
BARTO
 Machine Id
7077 [BARTO]
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is no indication of any contamination 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			SBP0006493	SBP0004381	SBP0002553
Sample Date	Client Info			20 Mar 2024	12 Jul 2023	27 Apr 2023
Machine Age	mls Client Info			231666	148961	112318
Oil Age	mls Client Info			35481	40000	40000
Oil Changed	Client Info			Changed	Changed	Not Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<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	>80	25	23	31
Chromium	ppm	ASTM D5185m	>5	2	2	2
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>30	6	8	13
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	7	26	27
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	<1	3
Barium	ppm	ASTM D5185m	0	<1	1	0
Molybdenum	ppm	ASTM D5185m	60	63	63	57
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	979	953	894
Calcium	ppm	ASTM D5185m	1070	1110	1217	1444
Phosphorus	ppm	ASTM D5185m	1150	971	975	894
Zinc	ppm	ASTM D5185m	1270	1286	1259	1262
Sulfur	ppm	ASTM D5185m	2060	2633	2488	2861

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	6	5	6
Sodium	ppm	ASTM D5185m		3	<1	5
Potassium	ppm	ASTM D5185m	>20	7	11	27

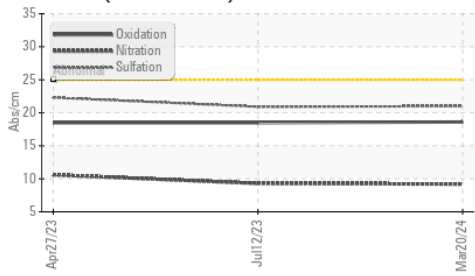
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.2	9.3	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	20.9	22.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	18.5	18.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.8	6.7	7.1

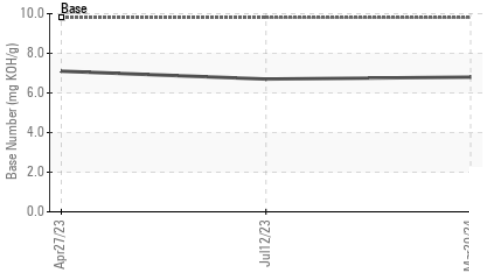


OIL ANALYSIS REPORT

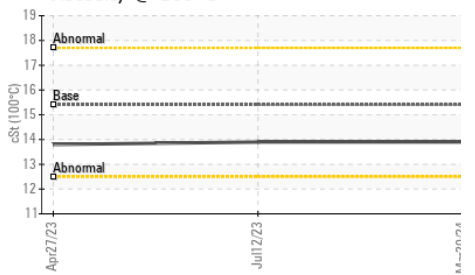
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

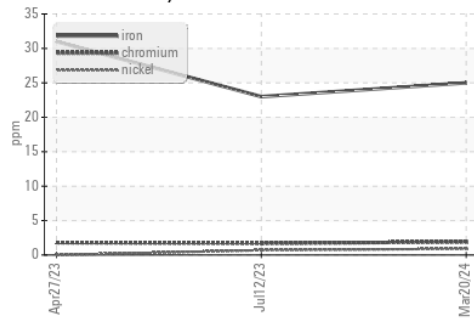


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

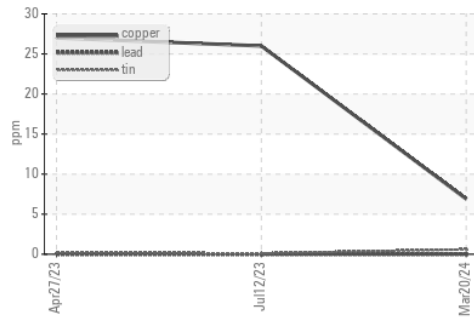
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.9	13.8

GRAPHS

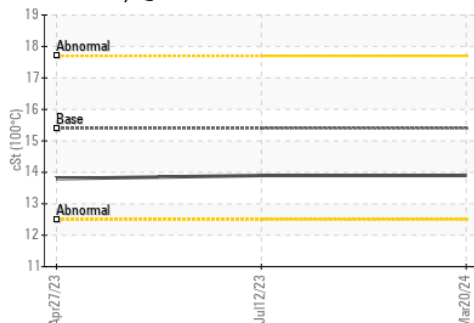
Ferrous Alloys



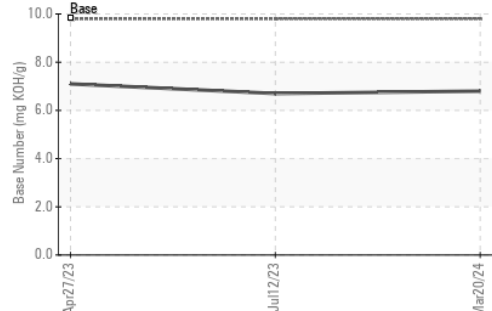
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0006493 **Received** : 22 Apr 2024
Lab Number : **06156603** **Tested** : 23 Apr 2024
Unique Number : 10992026 **Diagnosed** : 23 Apr 2024 - Wes Davis
Test Package : FLEET

SCHMIDT TRANSPORTATION - BARTO
 108 E Bay Road
 Plattsmouth, NE
 US 68048
 Contact: Service Manager

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:
F: