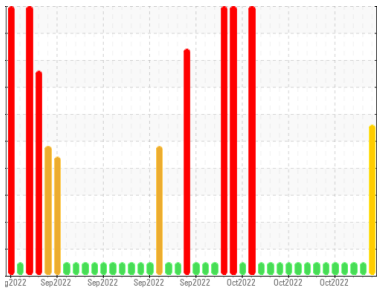
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
WCLSNC
Machine Id
QC DE NC 08012022
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0749346**	WC0749345	WC0749344
Sample Date		Client Info		**21 Oct 2022**	20 Oct 2022	19 Oct 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**9**	8	8
Iron	ppm	ASTM D5185m		**9**	10	9
Chromium	ppm	ASTM D5185m		**2**	2	3
Nickel	ppm	ASTM D5185m		**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m		**2**	1	<1
Lead	ppm	ASTM D5185m		**4**	4	3
Copper	ppm	ASTM D5185m		**<1**	<1	<1
Tin	ppm	ASTM D5185m		**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		▲ **37**	36	28
Barium	ppm	ASTM D5185m		**<1**	2	0
Molybdenum	ppm	ASTM D5185m		**90**	95	84
Manganese	ppm	ASTM D5185m		**<1**	<1	1
Magnesium	ppm	ASTM D5185m		▲ **510**	499	501
Calcium	ppm	ASTM D5185m		▲ **1568**	1562	1515
Phosphorus	ppm	ASTM D5185m		▲ **697**	686	645
Zinc	ppm	ASTM D5185m		**911**	929	892
Sulfur	ppm	ASTM D5185m		**2889**	2722	2622

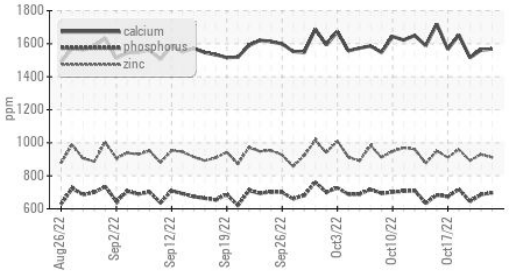
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		▲ **26**	28	25
Sodium	ppm	ASTM D5185m		▲ **1427**	1530	1345
Potassium	ppm	ASTM D5185m		▲ **6**	8	6
Fuel	%	ASTM D3524		**0.2**	0.2	0.2
Glycol	%	*ASTM D2982		**NEG**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624		**12.4**	12.5	12.5
Sulfation	Abs/.1mm	*ASTM D7415		**23.7**	24.2	24.3

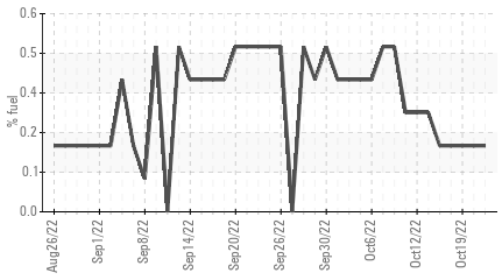
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**18.1**	18.2	18.2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.54**	0.75	0.69
Base Number (BN)	mg KOH/g	ASTM D2896		**11.6**	10.5	10.4

OIL ANALYSIS REPORT

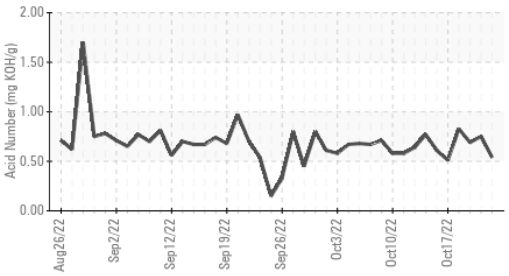
Additives



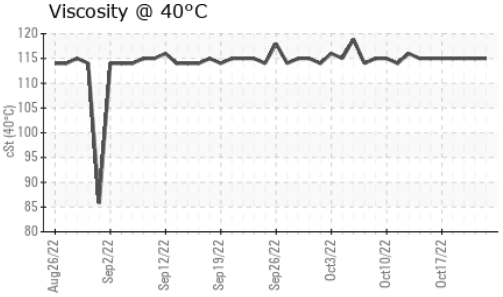
Fuel Dilution



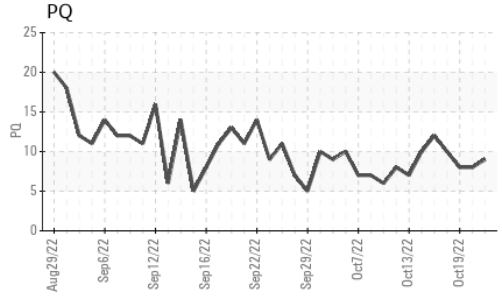
Acid Number



Viscosity @ 40°C



PQ

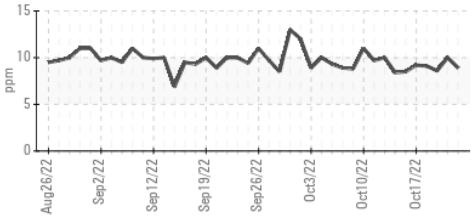


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

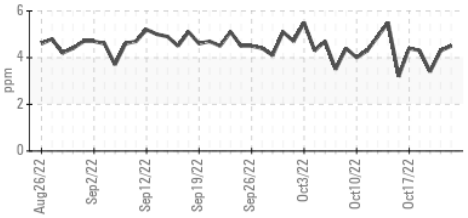
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**115**	115	115
Visc @ 100°C	cSt	ASTM D445		**14.7**	14.7	14.8
Viscosity Index (VI)	Scale	ASTM D2270		**131**	131	132

GRAPHS

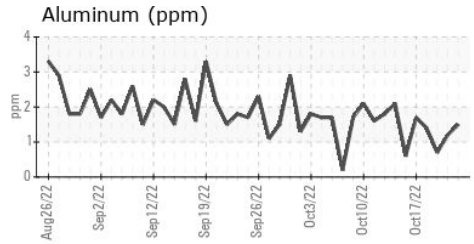
Iron (ppm)



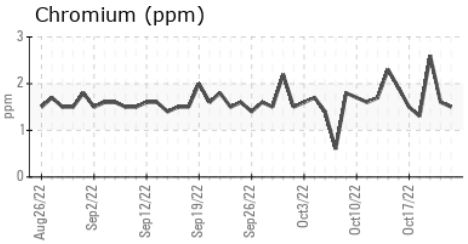
Lead (ppm)



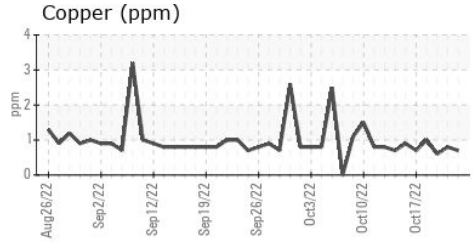
Aluminum (ppm)



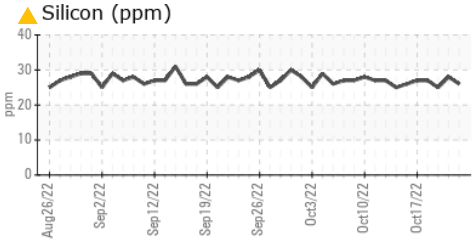
Chromium (ppm)



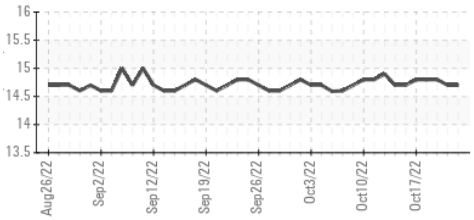
Copper (ppm)



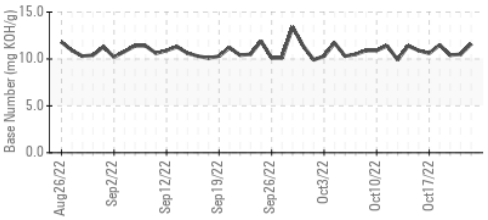
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0749346 **Received** : 21 Oct 2022
Lab Number : 05672914 **Diagnosed** : 02 Oct 2023
Unique Number : 10182484 **Diagnostician** : System
Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, PQ, VI)Contact: WCLS CARY NC

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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