

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



FREIGHTLINER 90

Component

Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)

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 INFORM Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS Iron Chromium	mls mls ON ppm ppm	method Client Info Client Info Client Info Client Info Client Info WC Method WC Method WC Method MC Method MC Method	limit/base limit/base >5	14 Sep 2023 76443 15000 Changed	history1	history2 history2
Sample Number Sample Date Machine Age Oil Age Oil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS	mls mls ON ppm ppm	Client Info Client Info Client Info Client Info Client Info Client Info WC Method WC Method method	limit/base	PCA0082959 14 Sep 2023 76443 15000 Changed NORMAL current <1.0	history1	
Sample Date Machine Age Dil Age Dil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS	ON Ppm ppm	Client Info Client Info Client Info Client Info WC Method WC Method Mc Method	>5	14 Sep 2023 76443 15000 Changed NORMAL current <1.0	history1	
Machine Age Dil Age Dil Age Dil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS	ON Ppm ppm	Client Info Client Info Client Info method WC Method WC Method method	>5	76443 15000 Changed NORMAL current <1.0	 history1	
Dil Age Dil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS	ON Ppm ppm	Client Info Client Info method WC Method WC Method method	>5	15000 Changed NORMAL current <1.0	history1	
Dil Changed Sample Status CONTAMINATION Fuel Glycol WEAR METALS	ON S ppm ppm	Client Info method WC Method WC Method method	>5	Changed NORMAL current <1.0	history1	
Sample Status CONTAMINATION Fuel Glycol WEAR METALS ron	ppm ppm	method WC Method WC Method	>5	current <1.0	history1	
CONTAMINATION Fuel Glycol WEAR METALS ron	ppm ppm	WC Method WC Method method	>5	current	history1	
Fuel Glycol WEAR METALS ron	ppm ppm	WC Method WC Method method	>5	<1.0		history2
Glycol WEAR METALS ron	ppm	WC Method method		-		
WEAR METALS	ppm	method	limit/base	NEC		
ron	ppm		limit/base	NEG		
-	ppm	ASTM D5185m		current	history1	history2
Chromium			>80	78		
HIOHIUH		ASTM D5185m	>5	2		
Nickel	ppm	ASTM D5185m	>2	<1		
- itanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	19		
ead	ppm	ASTM D5185m	>30	<1		
Copper	ppm	ASTM D5185m	>150	3		
- in	ppm	ASTM D5185m	>5	<1		
/anadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3		
Barium	ppm	ASTM D5185m		2		
Nolybdenum	ppm	ASTM D5185m		69		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		900		
Calcium	ppm	ASTM D5185m		1062		
Phosphorus	ppm	ASTM D5185m		947		
Zinc	ppm	ASTM D5185m		1190		
Gulfur	ppm	ASTM D5185m		3247		
CONTAMINANT	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	7		
Sodium	ppm	ASTM D5185m		1		
Potassium	ppm	ASTM D5185m	>20	48		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.7		
Nitration	Abs/cm	*ASTM D7624		11.8		
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8		
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2

Oxidation

Abs/.1mm *ASTM D7414 >25

Base Number (BN) mg KOH/g ASTM D2896 9.8

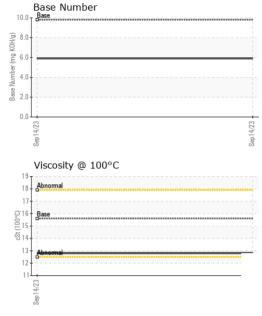
25.1

5.9

Contact/Location: DISPATCH ? - NOREAG



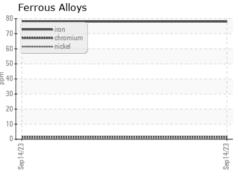
OIL ANALYSIS REPORT



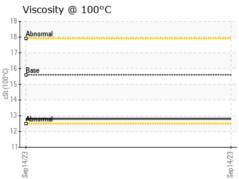
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID DDODE	DTIES		11 11 11			

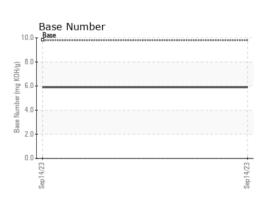
FLUID PROPE	ERITES	metnoa	ilmit/base	current	nistory i	nistory
Visc @ 100°C	cSt	ASTM D445	15.6	12.8		

GRAPHS



10	Non-ferrous Metals	
8	copper	
6 mdd		
d. 4		
2		
0	n	
	Sep 14/23	Sep14/23
	Viscosity @ 100°C	







Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10686836

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0082959

: 05974886 Test Package : FLEET

Received Diagnosed

: 10 Oct 2023

Diagnostician : Sean Felton

: 12 Oct 2023

Contact: DISPATCH dispatch@northfieldlines.com

T: (651)203-8888

NORTHFIELD LINES

1034 GEMINI RD

EAGAN, MN

US 55121

F:

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)