

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id 814015 Component Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (14 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Moar

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

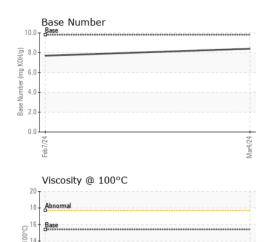
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Cample Number Client Info Client Info	N SHP 15W40 (14	I GAL)		Feb 2024	Mar2024		
Client Info	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		GFL0112951	GFL0098150	
	Sample Date		Client Info		04 Mar 2024	07 Feb 2024	
Client Info	Machine Age	hrs	Client Info		636	636	
CONTAMINATION method limit/base current history1 history1 history2 water WC Method >3.0 <1.0 0.4 water WC Method >0.2 NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG	Oil Age	hrs	Client Info		530	636	
CONTAMINATION method limit/base current history1 history1 uel WC Method >3.0 <1.0	Oil Changed		Client Info		N/A	Changed	
Well	Sample Status				NORMAL	ATTENTION	
WEAR METALS	CONTAMINATI	ON	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	0.4	
WEAR METALS method limit/base current history1 history1 on ppm ASTM D5185m >120 12 30 chromium ppm ASTM D5185m >20 <1	Nater		WC Method	>0.2	NEG	NEG	
Section Sect	Glycol		WC Method		NEG	NEG	
String S	WEAR METALS	S	method	limit/base	current	history1	history2
Standard Standard	ron	ppm	ASTM D5185m	>120	12	30	
STAN D5185m S2	Chromium	ppm	ASTM D5185m	>20	<1	<1	
ASTM D5185m >2	Nickel	ppm	ASTM D5185m	>5	3	7	
ASTM D5185m Part	Titanium	ppm	ASTM D5185m	>2	<1	<1	
Part	Silver	ppm	ASTM D5185m	>2	<1	<1	
ASTM D5185m ASTM D5185m ASTM D5185m December	Aluminum	ppm	ASTM D5185m	>20	1	5	
Action	_ead	ppm	ASTM D5185m	>40	<1	0	
Anadium	Copper	ppm	ASTM D5185m	>330	42	175	
ADDITIVES	Γin	ppm	ASTM D5185m	>15	<1	3	
ADDITIVES	/anadium	ppm	ASTM D5185m		0	0	
Soron ppm ASTM D5185m 0 19 197 197 19	Cadmium	ppm	ASTM D5185m		0	0	
ASTM D5185m O	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 64 111 Manganese ppm ASTM D5185m 0 1 4 Magnesium ppm ASTM D5185m 1010 1083 722 Malcium ppm ASTM D5185m 1070 1223 1246 Phosphorus ppm ASTM D5185m 1150 1103 724 Inc ppm ASTM D5185m 1270 1323 840 Sulfur ppm ASTM D5185m 2060 3416 2215 CONTAMINANTS method limit/base current history1 history1 Sidicon ppm ASTM D5185m >25 12 62 Codium ppm ASTM D5185m >20 2 3 INFRA-RED method limit/base current history1 history Sidicon % *ASTM D7844	Boron	ppm	ASTM D5185m	0	19	197	
Manganese ppm ASTM D5185m 0 1 4 Magnesium ppm ASTM D5185m 1010 1083 722 Jackium ppm ASTM D5185m 1070 1223 1246 Phosphorus ppm ASTM D5185m 1150 1103 724 Jinc ppm ASTM D5185m 1270 1323 840 Julfur ppm ASTM D5185m 2060 3416 2215 CONTAMINANTS method limit/base current history1 history1 Julfur ppm ASTM D5185m >25 12 62 Julfur ppm ASTM D5185m >20 2 3 Julfur ppm ASTM D5185m >20 2 3 Julfur ppm ASTM D5185m >20 2 3 Julfur ppm ASTM D5185m	Barium	ppm	ASTM D5185m	0	0	0	
Magnesium ppm ASTM D5185m 1010 1083 722 1246	Molybdenum	ppm	ASTM D5185m	60	64	111	
Part	Manganese	ppm	ASTM D5185m	0	1	4	
#hosphorus ppm ASTM D5185m 1150 1103 724 inc ppm ASTM D5185m 1270 1323 840 fulfur ppm ASTM D5185m 2060 3416 2215 CONTAMINANTS method limit/base current history1 history fulficon ppm ASTM D5185m >25 12 62 fulfum ppm ASTM D5185m >25 12 62 fulfum ppm ASTM D5185m >20 2 3 fulfum ppm ASTM D5185m >20 2 3 fulfum ASTM D5185m >20 2 3 fulfum ASTM D5185m >20 6.5 9.4 fulfum Abs/cm *ASTM D7844 >20 6.5 9.4 fulfation Abs/cm *ASTM D7415 >30 19.4 24.2 fulfum Abs/cm *ASTM D7414 >25 15.4 21.9 fulfum Abs/mm *ASTM D7414 >25 15.4 21.9	Magnesium	ppm	ASTM D5185m	1010	1083	722	
Sinc	Calcium	ppm	ASTM D5185m	1070	1223	1246	
CONTAMINANTS method limit/base current history1 history2 idicon ppm ASTM D5185m >25 12 62 iodium ppm ASTM D5185m <1	Phosphorus	ppm	ASTM D5185m	1150	1103	724	
CONTAMINANTS method limit/base current history1 history dilicon ppm ASTM D5185m >25 12 62 dodium ppm ASTM D5185m <1	Zinc	ppm	ASTM D5185m	1270	1323	840	
Solition ppm ASTM D5185m >25 12 62	Sulfur	ppm	ASTM D5185m	2060	3416	2215	
Sodium ppm ASTM D5185m <1 3 Sodium ppm ASTM D5185m >20 2 3 INFRA-RED method limit/base current history1 history1 Soot %	CONTAMINAN	TS	method	limit/base	current	history1	history2
INFRA-RED method limit/base current history1 history foot % *ASTM D7844 >4 0.2 0.4 ditration Abs/cm *ASTM D7624 >20 6.5 9.4 dulfation Abs/.1mm *ASTM D7415 >30 19.4 24.2 FLUID DEGRADATION method limit/base current history1 history2 oxidation Abs/.1mm *ASTM D7414 >25 15.4 21.9	Silicon	ppm	ASTM D5185m	>25	12		
INFRA-RED	Sodium	ppm	ASTM D5185m		<1	3	
Coot %	Potassium	ppm	ASTM D5185m	>20	2	3	
Abs/cm Abs/cm *ASTM D7624 >20 6.5 9.4	INFRA-RED		method	limit/base	current	history1	history2
FLUID DEGRADATION *ASTM D7415 >30 19.4 24.2 exidation Abs/.1mm *ASTM D7414 >25 current history1 history2 exidation Abs/.1mm *ASTM D7414 >25 15.4 21.9	Soot %	%	*ASTM D7844		0.2	0.4	
FLUID DEGRADATION method limit/base current history1 history Dividation Abs/.1mm *ASTM D7414 >25 15.4 21.9	Vitration	Abs/cm	*ASTM D7624	>20	6.5	9.4	
Oxidation Abs/.1mm *ASTM D7414 >25 15.4 21.9	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	24.2	
	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
ase Number (BN) mg KOH/g ASTM D2896 9.8 8.4 7.7	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	21.9	
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	7.7	



OIL ANALYSIS REPORT

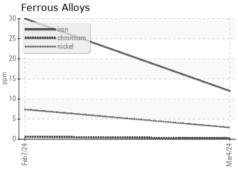


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance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

13.3

0.2

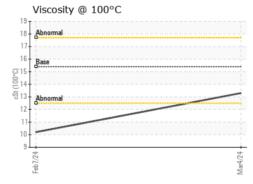
Visc @ 100°C
GRAPHS

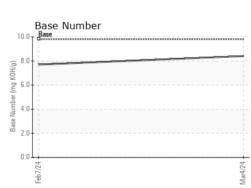


cSt

ASTM D445 15.4

Non-ferrous Metals	
180 T	
160 - copper	
140	
120	
E 100	
80	
60 +	
40	
20	
0	
Feb7/24	Mar4/24
型	Mar









Laboratory Sample No.

: GFL0112951 Lab Number : 06108019 Unique Number : 10911516

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 04 Mar 2024 **Tested**

: 05 Mar 2024 Diagnosed : 05 Mar 2024 - Wes Davis

GFL Environmental - 017 - Durham 148 Stone Park Court

Durham, NC US 27703

Contact: Todd Juniper tjuniper@gflenv.com T: (919)327-8666 F: (919)598-1852

Test Package : FLEET 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)