

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL NORMAL



Machine Id
802M
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 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

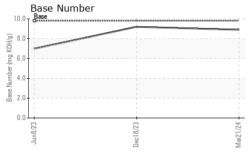
Fluid Condition

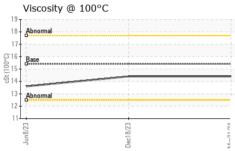
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Date Client Info 21 Mar 2024 18 Dec 2023 08 Jun 2023 Machine Age hrs Client Info 11392 11410 10843 600 Changed Nort Changd Nort Changd NoRMAL NEG	N SHP 15W40 (GAL)	Ju	2023	Dec2023 Mar20	124	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 11392 11410 10843 Oil Age hrs Client Info 0 10843 600 Oil Changed Client Info Not Changd Not Changd Changed Sample Status Contact Normal Normal Normal Normal CONTAMINATION method limitobase current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG WEAR METALS method limitobase current history1 history2 WEAR METALS method limitobase current history1 <t< td=""><td>Sample Number</td><td></td><td>Client Info</td><td></td><th>GFL0108735</th><td>GFL0105686</td><td>GFL0069826</td></t<>	Sample Number		Client Info		GFL0108735	GFL0105686	GFL0069826
Machine Age	Sample Date		Client Info		21 Mar 2024	18 Dec 2023	08 Jun 2023
Client Info Not Change Northal Not Change Northal Nort		hrs	Client Info		11392	11410	10843
CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		0	10843	600
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		Not Changd	Not Changd	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method WC Method NEG NEG NEG NEG	CONTAMINAT	ION	method	limit/base	current	history1	history2
NEG Neg	- uel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Nater		WC Method	>0.2	NEG	NEG	NEG
Chromium	Glycol		WC Method		NEG	NEG	NEG
Chromium Dpm ASTM D5185m >20 0 <1 <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Chromium	ron	ppm	ASTM D5185m	>90	6	3	21
Description	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Description	Nickel		ASTM D5185m	>2	0	0	0
Salver	Гitanium	ppm	ASTM D5185m	>2	0	0	0
December December	Silver		ASTM D5185m	>2	0	0	0
Copper	Aluminum	ppm	ASTM D5185m	>20	3	2	5
Princ	_ead	ppm	ASTM D5185m	>40	0	0	0
Canadium	Copper		ASTM D5185m	>330	0	15	0
ADDITIVES	• •		ASTM D5185m	>15	0	0	<1
ADDITIVES	/anadium	ppm	ASTM D5185m		0	0	0
Soron ppm ASTM D5185m 0 0 0 0 0 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	0
Description	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 58 60 56 Manganese ppm ASTM D5185m 0 0 0 <1 Magnesium ppm ASTM D5185m 1010 1008 876 944 Calcium ppm ASTM D5185m 1070 1149 981 1013 Phosphorus ppm ASTM D5185m 1150 1109 858 1046 Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m >20 <1 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844	Boron	ppm	ASTM D5185m	0	<1	16	4
Manganese ppm ASTM D5185m 0 0 0 <1 Magnesium ppm ASTM D5185m 1010 1008 876 944 Calcium ppm ASTM D5185m 1070 1149 981 1013 Phosphorus ppm ASTM D5185m 1150 1109 858 1046 Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Godium ppm ASTM D5185m >20 <1	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 1008 876 944 Calcium ppm ASTM D5185m 1070 1149 981 1013 Phosphorus ppm ASTM D5185m 1150 1109 858 1046 Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m >20 <1	Molybdenum	ppm	ASTM D5185m	60	58	60	56
Calcium ppm ASTM D5185m 1070 1149 981 1013 Phosphorus ppm ASTM D5185m 1150 1109 858 1046 Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >25 2 9 4 Solicon ppm ASTM D5185m 1 0 3 Potassium ppm ASTM D5185m >20 <1	Manganese	ppm	ASTM D5185m	0	0	0	<1
Phosphorus ppm ASTM D5185m 1150 1109 858 1046 Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m >20 <1	Magnesium	ppm	ASTM D5185m	1010	1008	876	944
Zinc ppm ASTM D5185m 1270 1312 1113 1267 Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m 1 0 3 Potassium ppm ASTM D5185m >20 <1	Calcium	ppm	ASTM D5185m	1070	1149	981	1013
Sulfur ppm ASTM D5185m 2060 3965 2886 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m >20 <1 0 3 Potassium ppm ASTM D5185m >20 <1 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.1 1 Nitration Abs/cm *ASTM D7624 >20 5.6 4.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	Phosphorus	ppm	ASTM D5185m	1150	1109	858	1046
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 9 4 Sodium ppm ASTM D5185m 1 0 3 Potassium ppm ASTM D5185m >20 <1	Zinc	ppm	ASTM D5185m	1270	1312	1113	1267
Solition ppm ASTM D5185m >25 2 9 4	Sulfur	ppm	ASTM D5185m	2060	3965	2886	2857
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 <1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.1 1 Nitration Abs/cm *ASTM D7624 >20 5.6 4.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	Silicon	ppm	ASTM D5185m	>25	2	9	4
INFRA-RED	Sodium	ppm	ASTM D5185m		1	0	3
Soot % % *ASTM D7844 >6 0.2 0.1 1 Nitration Abs/cm *ASTM D7624 >20 5.6 4.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	Potassium	ppm	ASTM D5185m	>20	<1	<1	2
Nitration Abs/cm *ASTM D7624 >20 5.6 4.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 5.6 4.4 10.2 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	Soot %	%	*ASTM D7844	>6	0.2	0.1	1
Sulfation Abs/.1mm *ASTM D7415 >30 18.1 17.7 20.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1	Vitration						10.2
Dxidation Abs/.1mm *ASTM D7414 >25 14.2 13.2 17.1							
	FLUID DEGRA	OITAC	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	13.2	17.1
	Base Number (BN)						



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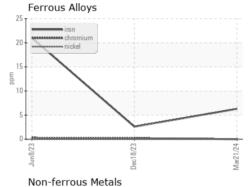


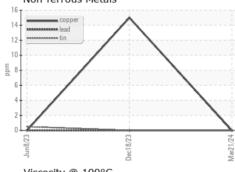


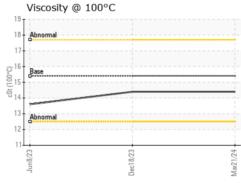
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

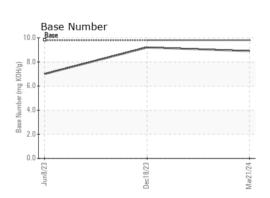
FLUID PROPI	ERIIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.4	13.6

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06127578 Unique Number: 10941729 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0108735 Received : 25 Mar 2024 **Tested** : 26 Mar 2024

Diagnosed : 26 Mar 2024 - Wes Davis

GFL Environmental - 415 - Michigan East

6200 Elmridge Sterling Heights, MI US 48313

Contact: Frank Wolak fwolak@gflenv.com T: (586)825-9514

* - 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)

Report Id: GFL415 [WUSCAR] 06127578 (Generated: 03/26/2024 15:37:03) Rev: 1

Submitted By: Frank Wolak