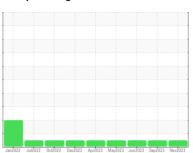


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id
654M
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (28 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

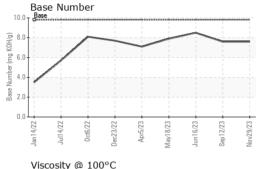
Fluid Condition

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

Client Info 29 Nov 2023 12 Sep 2023 16 Jun 2023 17 Sep 2024 18 Sep 2024	Judozz Octorz Octorz Apriloza Junitozz Judozz Octorz Apriloza Maydoza Junitoza Sapitoza Nevitoza						
Client Info 29 Nov 2023 12 Sep 2023 16 Jun 2023 17 Sep 2024 18 Sep 2024	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 600	Sample Number		Client Info		GFL0096594	GFL0091509	GFL0082809
Machine Age	Sample Date		Client Info		29 Nov 2023	12 Sep 2023	16 Jun 2023
Client Info Changed NORMAL NORMAL NORMAL	Machine Age	hrs	Client Info		8224		0
NORMAL NORMAL NORMAL CONTAMINATION method imilibase current history1 history2 history2	Oil Age	hrs	Client Info		600	600	600
NORMAL NORMAL NORMAL CONTAMINATION method imilibase current history1 history2 history2			Client Info		Changed	Not Changd	Changed
Fuel	Sample Status				_	NORMAL	NORMAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 13 10 5 Chromium ppm ASTM D5185m >20 <1 <1 <1 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 2 2 <1 0 Copper ppm ASTM D5185m >40 0 <1 0 0 Cadd mium ppm ASTM D5185m >15 0 <1 0 0 Vanadium ppm ASTM D5185m 0 2 2 4 4 Barium	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Description Description	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	13	10	5
Titanium	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>5	0	0	0
Aluminum	Titanium	ppm	ASTM D5185m	>2	0	<1	0
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 2 2 <1 Tin ppm ASTM D5185m >15 0 <1	Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Tin	Lead	ppm	ASTM D5185m	>40	0	<1	0
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 2 4 Barium ppm ASTM D5185m 0 2 0 0 Molybdenum ppm ASTM D5185m 0 2 0 0 Manganese ppm ASTM D5185m 0 0 0 1 1 Magnesium ppm ASTM D5185m 1010 865 1070 967 Calcium ppm ASTM D5185m 1070 1068 1225 1073 Phosphorus ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current	Copper	ppm	ASTM D5185m	>330	2	2	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 2 4 Barium ppm ASTM D5185m 0 2 0 0 Molybdenum ppm ASTM D5185m 0 0 <1	Tin	ppm	ASTM D5185m	>15	0	<1	0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 2 4 Barium ppm ASTM D5185m 0 2 0 0 Molybdenum ppm ASTM D5185m 60 59 60 57 Manganese ppm ASTM D5185m 0 0 <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Barium	Cadmium	ppm	ASTM D5185m		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 59 60 57 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 865 1070 967 Calcium ppm ASTM D5185m 1070 1068 1225 1073 Phosphorus ppm ASTM D5185m 1150 871 1009 995 Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m >20 3 1 <1 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7624 >20	Boron	ppm	ASTM D5185m	0	2	2	4
Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 865 1070 967 Calcium ppm ASTM D5185m 1070 1068 1225 1073 Phosphorus ppm ASTM D5185m 1150 871 1009 995 Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m >20 3 1 <1	Barium	ppm	ASTM D5185m	0	2	0	0
Magnesium ppm ASTM D5185m 1010 865 1070 967 Calcium ppm ASTM D5185m 1070 1068 1225 1073 Phosphorus ppm ASTM D5185m 1150 871 1009 995 Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m >20 3 1 <1	Molybdenum	ppm	ASTM D5185m	60	59	60	57
Calcium ppm ASTM D5185m 1070 1068 1225 1073 Phosphorus ppm ASTM D5185m 1150 871 1009 995 Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m >20 3 1 <1	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus ppm ASTM D5185m 1150 871 1009 995 Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1	Magnesium	ppm	ASTM D5185m	1010	865	1070	967
Zinc ppm ASTM D5185m 1270 1127 1345 1269 Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1	Calcium	ppm	ASTM D5185m	1070	1068	1225	1073
Sulfur ppm ASTM D5185m 2060 2740 3344 3472 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1	Phosphorus	ppm	ASTM D5185m	1150	871	1009	995
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1	Zinc	ppm	ASTM D5185m	1270	1127	1345	1269
Silicon ppm ASTM D5185m >25 7 5 3 Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.5 7.0 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.1 19.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Sulfur	ppm	ASTM D5185m	2060	2740	3344	3472
Sodium ppm ASTM D5185m 7 6 2 Potassium ppm ASTM D5185m >20 3 1 <1	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.5 7.0 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.1 19.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Silicon	ppm	ASTM D5185m	>25	7	5	3
INFRA-RED	Sodium	ppm	ASTM D5185m		7	6	2
Soot % % *ASTM D7844 >4 0.4 0.3 0.2 Nitration Abs/cm *ASTM D7624 >20 7.5 7.0 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.1 19.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Potassium	ppm	ASTM D5185m	>20	3	1	<1
Nitration Abs/cm *ASTM D7624 >20 7.5 7.0 5.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.1 19.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.6 19.1 19.2 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Soot %	%	*ASTM D7844	>4	0.4	0.3	0.2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Nitration	Abs/cm	*ASTM D7624	>20	7.5	7.0	5.9
Oxidation Abs/.1mm *ASTM D7414 >25 15.4 15.5 14.6	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.1	19.2
	FLUID DEGRA	OATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	15.5	14.6
	Base Number (BN)				7.6		



OIL ANALYSIS REPORT

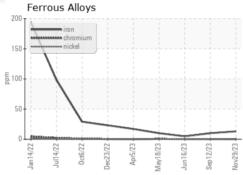


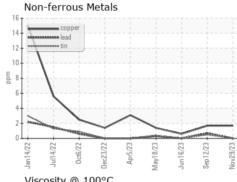
Visc	osity	@ 100	0°C					
18 Abno	rmal							
17- © 16- p								
0016 Base 15 14								
13 Abno	rmal							_
11 2				23	23	23	22	_
Jan14/2	Jul14/2	0ct6/2	Dec23/2	Apr5/2	May18/2	Jun16/2	Sep12/2	

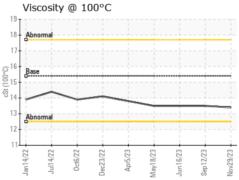
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

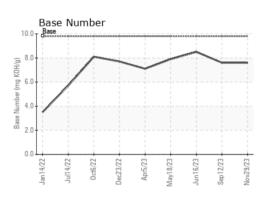
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.5	13.5

GRAPHS













Laboratory Sample No. Lab Number

: GFL0096594 : 06026111 Unique Number : 10775902 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 06 Dec 2023 Diagnosed

: 07 Dec 2023 Diagnostician : Wes Davis

GFL Environmental - 465 - Pontiac

888 Baldwin Pontiac, MI US 48340

Contact: Ricky Matthews rickymathews@gflenv.com T: (586)825-9514

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)