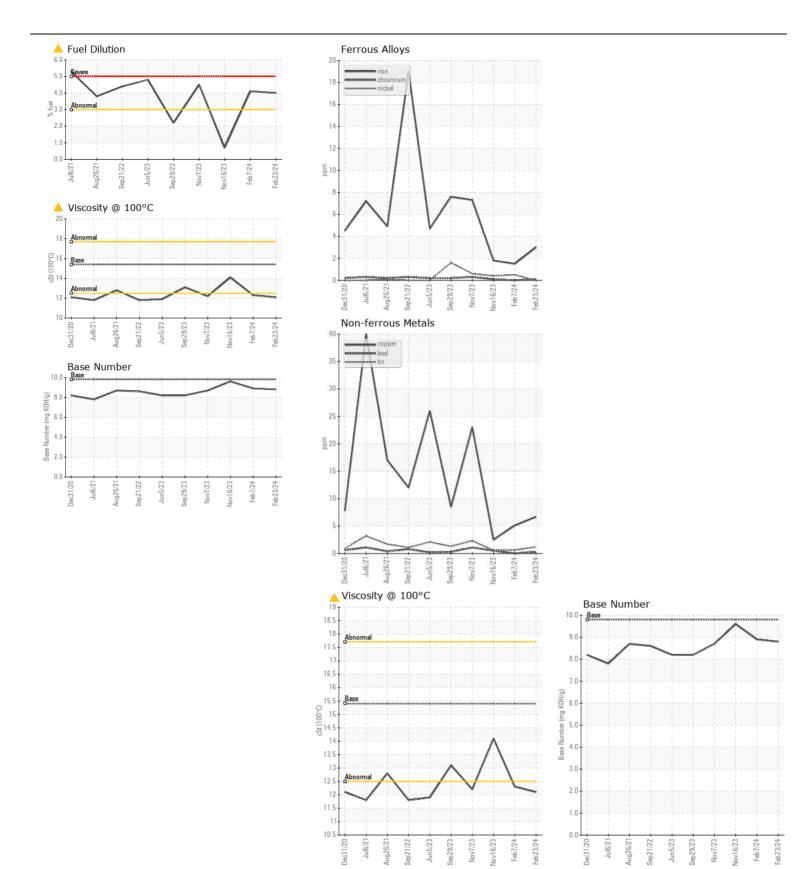
WEAR CONTAMINATION FLUID CONDITION

NORMAL ABNORMAL



Machine Id 427022-423 Component Diesel Engine

Mathod M	PETRO CANADA DURON SHP	15W40 (L	TR)					
We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Machine Age Institute Ins	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Varieticommend that you drain the oil from the component it this bas not already been done. We recommend an early resample to monitor this condition. Sample Date National College National Colleg	We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor	Sample Number		Client Info				
this condition. Machine Age Inst Client Info SayRes 38y86 2895		•				23 Feb 2024	07 Feb 2024	16 Nov 2023
Oil Age hrs Client Info 0 0 0 0 0 0 0 0 0		Machine Age	hrs	Client Info		549763	28967	28537
Mac Mot Changed Changed Chent Info Mac Mot Changed		Oil Age	hrs	Client Info		549763	0	0
		Filter Age	hrs	Client Info		0	0	0
No		Oil Changed		Client Info		N/A	Not Changd	Changed
Iron		Filter Changed		Client Info		N/A	Not Changd	Changed
All component wear rates are normal. Chromium ppm ASTM D5165m > 0		Sample Status				ABNORMAL	ABNORMAL	NORMAL
All component wear rates are normal. Chromium Smitkele ppm ASTM DSISSm >5 0 <1 <1 <1 <1 <1 <1 <1	WEAR	Iron	ppm	ASTM D5185m	>120	3	2	2
Nicker Diff D		Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Silver ppm ASTM D5185m >2	All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Aluminum ppm ASTM DS186m >20 2 2 2 2 2 2 2 2 2		Titanium	ppm	ASTM D5185m	>2	0	0	<1
Lead ppm ASTM DS185m >40 <1 0 <1		Silver	ppm	ASTM D5185m	>2	0	0	0
Copper		Aluminum	ppm	ASTM D5185m	>20	2	2	2
Tin ppm ASTM D5185m >15 1 <1 <1 <1 <1 <1 <1 <		Lead	ppm	ASTM D5185m	>40	<1	0	<1
Vanadium ppm ASTM D5185m NONE NON		Copper	ppm	ASTM D5185m	>330	7	5	2
White Metal Yellow Metal Scalar Visual NONE NON		Tin	ppm	ASTM D5185m	>15	1	<1	<1
		Vanadium	ppm	ASTM D5185m		0	0	0
Silicon ppm ASTM D5185m >25 4 3 4		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 12 <1 2		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium ppm ASTM D5185m >20 12 <1 2	CONTAMINATION	Silicon	nnm	ASTM D5185m	>25	1	Q	1
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Fuel	CONTAMINATION		• • • • • • • • • • • • • • • • • • • •					
Water WC Method So.2 NEG NEG NEG NEG	There is a moderate amount of fuel present in the oil. Tests confirm the							
Glycol	presence of fuel in the oil.		70					
Soot %					70.L			
Nitration Abs/cm 'ASTM D7624 >20 6.8 6.3 4.5		•	%		\4			
Sulfation Absi.tmm *ASTM D7415 >30 17.6 17.7 17.6								
Silt Scalar *Visual NONE NO								
Debris Scalar *Visual NONE NORML								
Sand/Dirt Scalar *Visual NONE NONE NONE NONE Appearance Scalar *Visual NORML NORML								
Appearance								
Codor Scalar *Visual NORML NORML NORML NORML NEG		Appearance						
Emulsified Water scalar *Visual >0.2 NEG NEG NEG								
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Boron ppm ASTM D5185m 0 0 0 0 0 0 0 0 0		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Boron ppm ASTM D5185m 0 0 0 0 0 0 0 0 0	ELLID CONDITION	Codium	nnm	ACTM DE10Em		2	4	0
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants. Barium ppm ASTM D5185m 0 0 0 0 0 0 0 0 0	FLUID CONDITION				0			
Molybdenum ppm ASTM D5185m 60 56 58 59 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 886 932 950 Calcium ppm ASTM D5185m 1070 974 1011 1090 Phosphorus ppm ASTM D5185m 1150 1028 1042 966 Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6	oil. The oil is no longer serviceable due to the presence of							
Manganese ppm ASTM D5185m 0 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 886 932 950 Calcium ppm ASTM D5185m 1070 974 1011 1090 Phosphorus ppm ASTM D5185m 1150 1028 1042 966 Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.tmm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6								
Magnesium ppm ASTM D5185m 1010 886 932 950 Calcium ppm ASTM D5185m 1070 974 1011 1090 Phosphorus ppm ASTM D5185m 1150 1028 1042 966 Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6		•						
Calcium ppm ASTM D5185m 1070 974 1011 1090 Phosphorus ppm ASTM D5185m 1150 1028 1042 966 Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6		-						
Phosphorus ppm ASTM D5185m 1150 1028 1042 966 Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6		0						
Zinc ppm ASTM D5185m 1270 1211 1268 1199 Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6								
Sulfur ppm ASTM D5185m 2060 3003 3173 3404 Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6		•						
Oxidation Abs/.1mm *ASTM D7414 >25 14.2 13.9 13.3 Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6								
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.8 8.9 9.6								
Visc @ 100°C cSt ASTM D445 15.4 ▲ 12.1 🖊 ▲ 12.3 14.1		Visc @ 100°C	cSt			▲ 12.1	▲ 12.3	14.1







Certificate L2367

Report Id: GFL654 [WUSCAR] 06105092 (Generated: 03/04/2024 17:34:45) Rev: 1

Laboratory Sample No.

: GFL0101314 Lab Number : 06105092 Unique Number: 10903322

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

Diagnosed Test Package : FLEET (Additional Tests: PercentFuel)

: 29 Feb 2024 : 04 Mar 2024

: 04 Mar 2024 - Wes Davis

GFL Environmental - 654 - Richmond Hauling 11800 Lewis Road Chester, VA

US 23831 Contact: Jimmy Mayes

jmayes@gflenv.com

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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F: