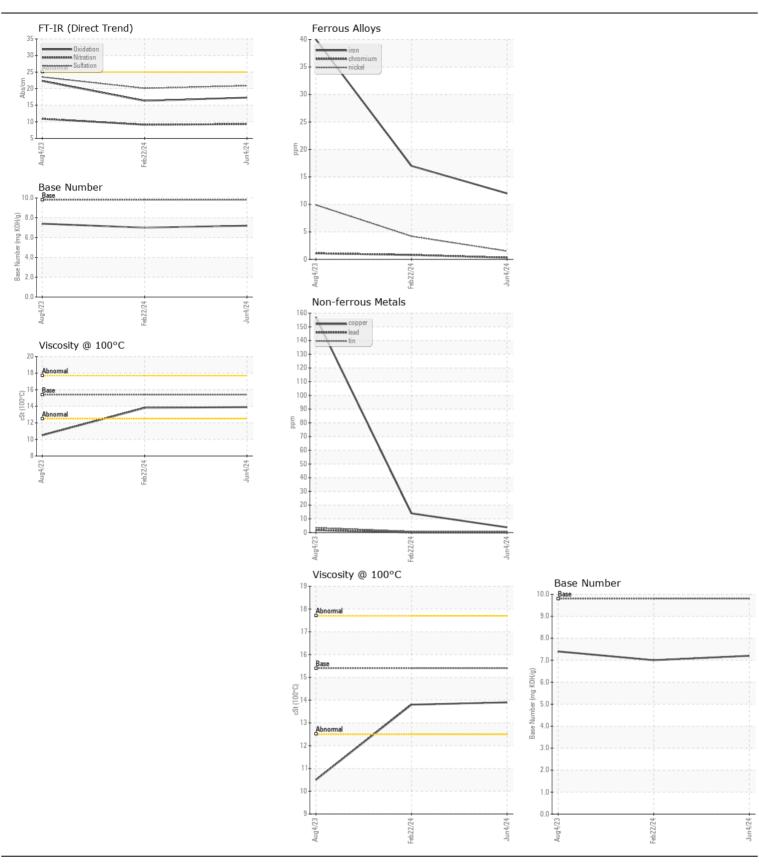
**WEAR** CONTAMINATION **FLUID CONDITION** 

**NORMAL NORMAL NORMAL** 



Machine Id 813033 Diesel Engine

Sample at the next service interval to monitor.	PETRO CANADA DURON SHP	15W40 ( C	AL)					
Resample at the next service interval to monitor.	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machino Age   hrs   Client Info   2994   699   200   200		Sample Number		Client Info		GFL0084832	GFL0084795	GFL0084851
Ci Age   hrs   Cilent Info   0   0   0   200     Filter Age   hrs   Cilent Info   0   0   0   200     Changed   Filter Changed   Cilent Info   0   0   0   200     Changed	Resample at the next service interval to monitor.	Sample Date		Client Info		04 Jun 2024	22 Feb 2024	04 Aug 2023
Filter Age		Machine Age	hrs	Client Info		2994	2349	699
Cilcrit   Cil		Oil Age	hrs	Client Info		2349	699	200
Filter Changed   Change		Filter Age	hrs	Client Info		0	0	200
Normation   Nor		Oil Changed		Client Info		Changed	Changed	Changed
Iron		Filter Changed		Client Info		Changed	Changed	Changed
All component wear rates are normal.		Sample Status				NORMAL	NORMAL	ABNORMAL
Nickel   ppm   ASTM D6156m   >5   2   4   10	WEAR	Iron	ppm	ASTM D5185m	>120	12	17	40
Titanium   ppm   ASTM 0518tm   >2		Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Silver   ppm   ASTM D5185m   >20   2   2   5		Nickel	ppm	ASTM D5185m	>5	2	4	10
Aluminum   ppm   ASTM D5185m   >20   2   2   5		Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Lead		Silver	ppm	ASTM D5185m	>2	<1	0	0
Copper		Aluminum		ASTM D5185m	>20	2	2	5
Copper		Lead		ASTM D5185m	>40	0	0	
Time   Pym   ASTM D5185m   >15   <1   4   4   4   4   4   4   4   4   4		Copper		ASTM D5185m	>330	4	14	157
White Metal Yellow Metal Scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON		Tin	ppm	ASTM D5185m	>15	<1	<1	4
Yellow Metal   Scalar   *Visual   NONE		Vanadium		ASTM D5185m		0	0	<1
Potassium   ppm   ASTM D5185m   >25   5   6   109		White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium   ppm   ASTM 05185m   20   4   3   8		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium   ppm   ASTM 05185m   20   4   3   8	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	6	<u> </u>
Water   WC Method   So.0   NEG   N		Potassium	ppm	ASTM D5185m	>20	4	3	8
Water   WC Method   So.2   NEG   N		Fuel		WC Method	>3.0	<1.0	<1.0	
Glycol   WC Method   NEG   NEG   NEG   NEG   NEG   Soot % % 'ASTM D7844   >4   0.5   0.6   0.6   0.6   0.6   Nitration   Abs/.tmm 'ASTM D7645   >20   9.3   9.1   10.9   23.5   Sulfation   Abs/.tmm 'ASTM D7645   >30   20.9   20.1   23.5   Sulfation   Abs/.tmm 'ASTM D7645   >30   20.9   20.1   23.5   Sulfation   Abs/.tmm 'ASTM D7645   >30   20.9   20.1   23.5   Sulfation   Abs/.tmm 'ASTM D7645   >30   NONE   NON		Water		WC Method	>0.2		NEG	NEG
Soot %		Glycol				NEG	NEG	
Nitration			%	*ASTM D7844	>4	0.5		
Sulfation   Abs/.tmm   *ASTM D7415   >30   20.9   20.1   23.5		Nitration	Abs/cm	*ASTM D7624	>20	9.3		10.9
Debris   Scalar   *Visual   NONE   NORML   N		Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	20.1	23.5
Sand/Dirt   Scalar   *Visual   NONE   NONE   NONE   Appearance   Scalar   *Visual   NORML		Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance		Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water   scalar *Visual   >0.2   NEG   NEG   NEG		Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium   ppm   ASTM D5185m   D   D   D   D   D   D   D   D   D		Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron   ppm   ASTM D5185m   0   0   0   0   0   0   0   0   0		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Boron   ppm   ASTM D5185m   0   0   0   0   0   0   0   0   0	FLUID CONDITION	Sodium	ppm	ASTM D5185m		5	6	2
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.    Barium   ppm   ASTM D5185m   0   0   0   0   0     Molybdenum   ppm   ASTM D5185m   60   58   66   116     Manganese   ppm   ASTM D5185m   0   <1   <1   5     Magnesium   ppm   ASTM D5185m   1010   991   1006   757     Calcium   ppm   ASTM D5185m   1070   1085   1164   1546     Phosphorus   ppm   ASTM D5185m   1150   1019   1131   728     Zinc   ppm   ASTM D5185m   1270   1295   1316   947     Sulfur   ppm   ASTM D5185m   2060   3253   3036   2744     Oxidation   Abs/.tmm *ASTM D7414   >25   17.3   16.3   22.3     Base Number (BN)   mg KOH/g   ASTM D2896   9.8   7.2   7.0   7.4				ASTM D5185m	0	3	2	175
Molybdenum ppm ASTM D5185m 0 <1 5 66 116  Manganese ppm ASTM D5185m 0 <1 5 5  Magnesium ppm ASTM D5185m 1010 991 1006 757  Calcium ppm ASTM D5185m 1070 1085 1164 1546  Phosphorus ppm ASTM D5185m 1150 1019 1131 728  Zinc ppm ASTM D5185m 1270 1295 1316 947  Sulfur ppm ASTM D5185m 2060 3253 3036 2744  Oxidation Abs/.1mm *ASTM D7414 >25 17.3 16.3 22.3  Base Number (BN) mg KOH/g ASTM D2896 9.8 7.2 7.0 7.4		Barium	ppm			0	0	
Manganese         ppm         ASTM D5185m         0         <1				ASTM D5185m	60	58	66	116
Magnesium         ppm         ASTM D5185m         1010         991         1006         757           Calcium         ppm         ASTM D5185m         1070         1085         1164         1546           Phosphorus         ppm         ASTM D5185m         1150         1019         1131         728           Zinc         ppm         ASTM D5185m         1270         1295         1316         947           Sulfur         ppm         ASTM D5185m         2060         3253         3036         2744           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4						<1	<1	
Calcium         ppm         ASTM D5185m         1070         1085         1164         1546           Phosphorus         ppm         ASTM D5185m         1150         1019         1131         728           Zinc         ppm         ASTM D5185m         1270         1295         1316         947           Sulfur         ppm         ASTM D5185m         2060         3253         3036         2744           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4		_						
Phosphorus         ppm         ASTM D5185m         1150         1019         1131         728           Zinc         ppm         ASTM D5185m         1270         1295         1316         947           Sulfur         ppm         ASTM D5185m         2060         3253         3036         2744           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4		Calcium		ASTM D5185m	1070		1164	
Zinc         ppm         ASTM D5185m         1270         1295         1316         947           Sulfur         ppm         ASTM D5185m         2060         3253         3036         2744           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4				ASTM D5185m	1150		1131	
Sulfur         ppm         ASTM D5185m         2060         3253         3036         2744           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4		·						
Oxidation         Abs/.1mm         *ASTM D7414         >25         17.3         16.3         22.3           Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4		Sulfur						
Base Number (BN)         mg KOH/g         ASTM D2896         9.8         7.2         7.0         7.4				*ASTM D7414	>25		16.3	
		Base Number (BN)	mg KOH/g	ASTM D2896	9.8			







Certificate L2367

Laboratory Sample No.

: GFL0084832 Lab Number : 06214411 Unique Number : 11087275 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 19 Jun 2024 : 20 Jun 2024

**Tested** Diagnosed : 20 Jun 2024 - Wes Davis

GFL Environmental - 959A - Urbana HC

4808 cunningham Rd Urbana, IL US 61802

Contact: Kristine Tryon Ktryon@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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