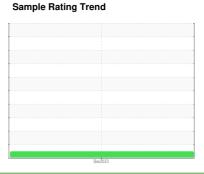


# **OIL ANALYSIS REPORT**



NORMAL



Machine Id **7833M** Component

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (--- 0

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a components first oil change.

### Contamination

There is no indication of any contamination in the

#### **Fluid Condition**

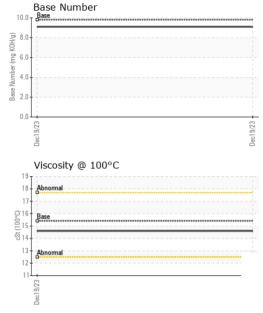
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION   method   limit/base   current   history2   history2   Sample Number   Client Info   GFL0105695       Machine Age   hrs   Client Info   7529       Machine Age   hrs   Client Info   7529							
Cample Number   Client Info   GFL0105695   Client Info   T529   Client Info   Not Changd   Client Info   Contact   Client Info   Not Changd   Client Info	AL)				Dec2023		
Sample Date   Client Info   19 Dec 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		GFL0105695		
Dil Changed	Sample Date		Client Info		19 Dec 2023		
Contample   Cont	Machine Age	hrs	Client Info		7529		
CONTAMINATION   method   mill/base   current   history1   history2	Oil Age	hrs	Client Info		7529		
CONTAMINATION	Oil Changed		Client Info		Not Changd		
Victor   V	Sample Status				NORMAL		
Wester   Wc Method   So.2   NEG   Silycol   Wc Method   NEG   Wc	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	uel		WC Method	>5	<1.0		
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >80         <1	Nater		WC Method	>0.2	NEG		
Chromium	Glycol		WC Method		NEG		
ASTM D5185m   STM D5185m   ST	WEAR METAL	.S	method	limit/base	current	history1	history2
Silver	ron	ppm	ASTM D5185m	>80	<1		
Silver	Chromium	ppm	ASTM D5185m	>5	0		
Silver	Nickel	ppm	ASTM D5185m	>2	0		
ASTM D5185m   >30	- itanium	ppm	ASTM D5185m		0		
December   December	Silver	ppm	ASTM D5185m	>3	0		
Description	Aluminum	ppm	ASTM D5185m	>30	1		
Acade   Acad	_ead	ppm	ASTM D5185m	>30	0		
Acade   Acad	Copper	ppm	ASTM D5185m	>150	0		
Anadium			ASTM D5185m	>5	<1		
ADDITIVES	/anadium		ASTM D5185m		<1		
Soron   ppm   ASTM D5185m   0   1	Cadmium		ASTM D5185m		<1		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         60         58             Manganese         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         1010         957             Calcium         ppm         ASTM D5185m         1070         1041             Phosphorus         ppm         ASTM D5185m         1150         1101             Zinc         ppm         ASTM D5185m         1270         1256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185	Boron	ppm	ASTM D5185m	0	1		
Manganese         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         1010         957             Calcium         ppm         ASTM D5185m         1070         1041             Phosphorus         ppm         ASTM D5185m         1150         1101             Zinc         ppm         ASTM D5185m         1270         1256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         4             Godium         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Soot %         *ASTM D7844         >3	Barium	ppm	ASTM D5185m	0	0		
Manganese         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         1010         957             Calcium         ppm         ASTM D5185m         1070         1041             Phosphorus         ppm         ASTM D5185m         1150         1101             Zinc         ppm         ASTM D5185m         1270         1256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m	Molybdenum	ppm	ASTM D5185m	60	58		
Magnesium         ppm         ASTM D5185m         1010         957             Calcium         ppm         ASTM D5185m         1070         1041             Phosphorus         ppm         ASTM D5185m         1150         1101             Zinc         ppm         ASTM D5185m         1270         1256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         4.5             Sulfation         Abs/.1mm         *ASTM D741	-		ASTM D5185m	0	0		
Calcium         ppm         ASTM D5185m         1 070         1041             Phosphorus         ppm         ASTM D5185m         1 150         1 101             Pinc         ppm         ASTM D5185m         1 270         1 256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         >20         4             Potassium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Soulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method	/lagnesium		ASTM D5185m	1010	957		
Phosphorus         ppm         ASTM D5185m         1 150         1101             Zinc         ppm         ASTM D5185m         1 270         1256             Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         >20         4             Solicon         ppm         ASTM D5185m         20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *AST	-		ASTM D5185m	1070	1041		
Time	Phosphorus		ASTM D5185m	1150	1101		
Sulfur         ppm         ASTM D5185m         2060         3346             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         4             Godium         ppm         ASTM D5185m         20         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Goot %         %         *ASTM D7844         >3         0.1             Sulfation         Abs/.1mm         *ASTM D7624         >20         4.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0			ASTM D5185m	1270	1256		
Solicon   ppm   ASTM D5185m   >20   4	Sulfur		ASTM D5185m	2060			
Sodium	CONTAMINAN	NTS	method	limit/base	current	history1	history2
Bodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Sultration         Abs/cm         *ASTM D7624         >20         4.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0		ppm	ASTM D5185m	>20	4		
Potassium         ppm         ASTM D5185m         >20         1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.1             Sultration         Abs/cm         *ASTM D7624         >20         4.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0					1		
Goot %         %         *ASTM D7844         >3         0.1             Vitration         Abs/cm         *ASTM D7624         >20         4.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0	Potassium			>20			
Nitration         Abs/cm         *ASTM D7624         >20         4.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Dxidation         Abs/.1mm         *ASTM D7414         >25         13.0	Soot %	%	*ASTM D7844	>3	0.1		
Sulfation         Abs/.1mm         *ASTM D7415         >30         17.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.0	Nitration	Abs/cm	*ASTM D7624	>20	4.5		
Dxidation							
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0		
	Base Number (BN)	mg KOH/g			9.1		

Submitted By: Frank Wolak



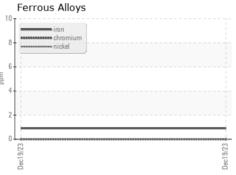
# **OIL ANALYSIS REPORT**

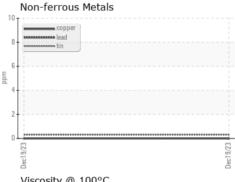


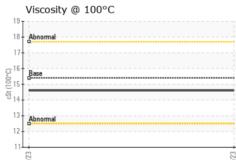
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID DDODE			11 11 11			

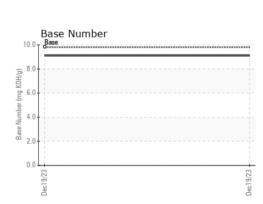
FLUID PROPE	ERITES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	14.6		

## **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

Unique Number : 10802469

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0105695 : 06041861

Recieved Diagnosed Diagnostician : Wes Davis

: 21 Dec 2023 : 22 Dec 2023

GFL Environmental - 415 - Michigan East

6200 Elmridge Sterling Heights, MI US 48313 Contact: Frank Wolak fwolak@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)