WEAR CONTAMINATION FLUID CONDITION

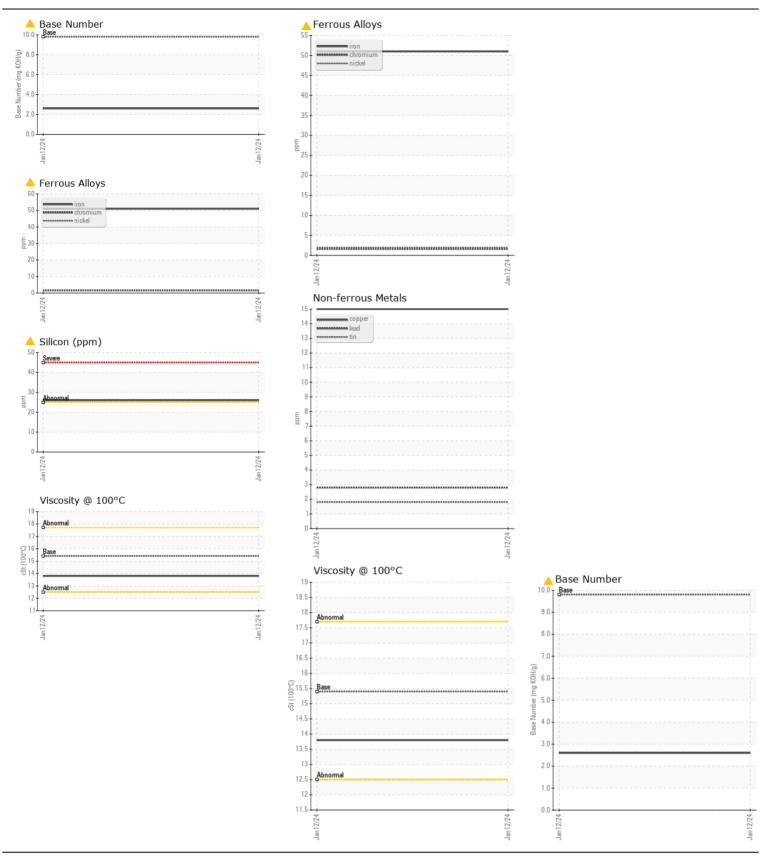
ABNORMAL ABNORMAL



Machine Id 834037 Component Natural Gas Engine

PETRO CANADA DURON SHP 15W40 (21 QTS)

Sample Number Client Info Sample Number Sample Number Sample Number Sample Date Client Info Sample Sample Date Sample Sample Date Sample Sample Sample Date Sample Sample Date Sample Sample Date Sample Sample Date Sample	PETRO CANADA DURON SITP	134440 (21 (<u> </u>					
Sample Number Client Info Client Info	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
It the next service interval to monitor.	Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0074619		
Machine Age Ints Client Info 1194 Coll Age Ints Client Info 1194 Filter Age Ints Client Info 1194 Coll Changed Client Info Changed Changed Changed Chromium ppm ASTM 05155m 50 2 Nickel ppm ASTM 05155m 44 2 Titanium ppm ASTM 05155m 44 2 Titanium ppm ASTM 05155m 44 2 Titanium ppm ASTM 05155m 45 0 Aluminum ppm ASTM 05155m 45 0 Copper ppm ASTM 05155m 45 0 Aluminum ppm ASTM 05155m 45 0 Copper ppm ASTM 05155m 50 Copper ppm ASTM 05155m		Sample Date		Client Info		12 Jan 2024		
Filter Age		Machine Age	hrs	Client Info		1194		
Oil Changed Cilent Info Cilent Info		Oil Age	hrs	Client Info		1194		
Filter Changed Sample Status		Filter Age	hrs	Client Info		1194		
VEAR		Oil Changed		Client Info		Changed		
Pron		Filter Changed		Client Info		Changed		
Chromium ppm ASTM D5186m >5 2 Nickel ppm ASTM D5186m >5 0 Titanium ppm ASTM D5186m >5 0 Titanium ppm ASTM D5186m >5 0 Silver ppm ASTM D5186m >5 0 ASTM D5186m >40 3 ASTM D5186m >40 3 ASTM D5186m >4 2 ASTM D5186m >2 2 2 2 ASTM D5186m >2 2 2 2 ASTM D5186m >2 2 2 2 2 ASTM D5186m >2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 2 ASTM D5186m >2 2 2 2 2 2 2 ASTM D5186m >2 2		Sample Status				ABNORMAL		
Chromium ppm ASTM D5165m >5 2 Nickel ppm ASTM D5165m >5 0 Titanium ppm ASTM D5165m >5 0 Silver ppm ASTM D5165m >5 0 Silver ppm ASTM D5165m >5 0 Silver ppm ASTM D5165m >5 0 ASTM D5165m >5 0 ASTM D5165m >5 0 ASTM D5165m >6 0 ASTM D5165m >6 0 3 ASTM D5165m >6 0 3 ASTM D5165m >6 0 3 ASTM D5165m >6 0 5 5 ASTM D5165m >6 0 0 0	WFAR	Iron	maa	ASTM D5185m	>50	<u> </u>		
Nickel ppm ASTM D5185m 3 0 Silver ppm ASTM D5185m 3 0 Aluminum ppm ASTM D5185m 3 0 3 ASTM D5185m 3 0 0 0 ASTM D5185m 3 0 0 0 0 ASTM D5185m 3 0 0 0 0 ASTM D5185m 3 0 0 0 0 ASTM D5185m 3 0 0 0 0 0 0 ASTM D5185m 3 0 0 0 0 0 0 ASTM D5185m 3 0	WEAR							
Titanium ppm ASTM D5185m 3-5 0	The iron level is abnormal.							
Silver ppm ASTM D5185m >25 5								
Aluminum ppm ASTM D5185m >25 5								
Lead								
Copper		Lead				3		
Vanadium		Copper		ASTM D5185m	>150	15		
White Metal Scalar *Visual NONE N		Tin	ppm	ASTM D5185m	>4	2		
Yellow Metal Scalar Visual NONE NONE		Vanadium	ppm	ASTM D5185m		<1		
Silicon ppm ASTM D5185m >25 26		White Metal	scalar	*Visual	NONE	NONE		
Potassium		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium	CONTAMINATION	Cilioon	nnm	ACTM DE10Em	. 25	• oe		
Water WC Method Solition Solition Solition Solition Solition Solition Solition Abs/Imm AsTM D7864 Solition Abs/Imm AsTM D7864 Solition Abs/Imm AsTM D7864 AsTM D7865 AsTM D7866	CONTAMINATION							
Soot % %	Elemental level of silicon (Si) above normal indicating ingress of seal material.		ppm					
Nitration Abs/cm *ASTM D7624 >20 13.8			0/		>0.1			
Sulfation Abs/.tmm ASTM D7415 >30 26.4					>20			
Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE								
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NORML NORML Sand Sand/Dirt Scalar *Visual NORML NORML Sand Sa								
Sand/Dirt Scalar *Visual NONE NONE Appearance Scalar *Visual NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NOR								
Appearance scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual NORML Emulsified Water scalar *Visual >0.1 NEG SCAUDITION The BN level is low. The condition of the oil is acceptable for the time in service. Sodium ppm ASTM D5185m 0 1 Barium ppm ASTM D5185m 0 0 1 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 13 Manganese ppm ASTM D5185m 0 13 Manganese ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Sulfur ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOHg ASTM D2896 9.8 2.66								
Odor Scalar *Visual NORML NO								
Emulsified Water scalar *Visual >0.1 NEG SELUID CONDITION The BN level is low. The condition of the oil is acceptable for the time in service. Sodium ppm ASTM D5185m 0 1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 13 Magnesium ppm ASTM D5185m 0 113 Calcium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.imm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6								
Boron ppm ASTM D5185m 0 1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 13 Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6		Emulsified Water	scalar	*Visual	>0.1			
Boron ppm ASTM D5185m 0 1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 64 Manganese ppm ASTM D5185m 0 13 Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 △ 2.6	ELUID CONDITION	Codium	nnm	ACTM DE10Em				
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 60 64 Manganese ppm ASTM D5185m 0 13 Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ■ 2.6	FLUID CONDITION				0			
Molybdenum ppm ASTM D5185m 60 64 Manganese ppm ASTM D5185m 0 13 Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6	The BN level is low. The condition of the oil is acceptable for the time in service.							
Manganese ppm ASTM D5185m 0 13 Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 2.6								
Magnesium ppm ASTM D5185m 1010 911 Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 △ 2.6		-						
Calcium ppm ASTM D5185m 1070 1289 Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 2.6		_						
Phosphorus ppm ASTM D5185m 1150 850 Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6		-						
Zinc ppm ASTM D5185m 1270 1040 Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 2.6								
Sulfur ppm ASTM D5185m 2060 2157 Oxidation Abs/.1mm *ASTM D7414 >25 25.1 Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6								
Base Number (BN) mg KOH/g ASTM D2896 9.8 ▲ 2.6		Sulfur		ASTM D5185m	2060	2157		
		Oxidation	Abs/.1mm					
		Base Number (BN)	mg KOH/g	ASTM D2896	9.8	2.6		
Visc @ 100°C cSt ASTM D445 15.4 13.8		Visc @ 100°C	cSt	ASTM D445	15.4	13.8		







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number**

: GFL0074619 : 06060720 : 10832102 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 16 Jan 2024 Diagnosed : 17 Jan 2024 Diagnostician : Jonathan Hester

GFL Environmental - 095 - Atlanta West 2699 Cochran Industrial Blvd Douglasville, GA

US 30127-1332 Contact: Darrell Welch darrell.welch@gflenv.com T: (800)207-6618

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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.

Report Id: GFL095 [WUSCAR] 06060720 (Generated: 01/17/2024 10:21:16) Rev: 1