

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL





Machine Id **729088** Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

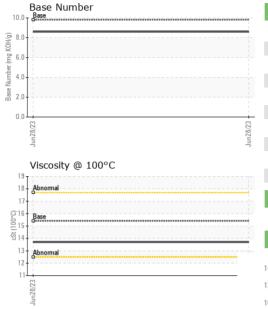
Fluid Condition

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

Sample Number Client Info GFL0085365	N SHP 15W40 (-	GAL)			Jun2023		
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history 1	history 2
Sample Date Client Info 28 Jun 2023	Sample Number		Client Info		GFL0085365		
Machine Age hrs Client Info 0 25533	•		Client Info		28 Jun 2023		
Oil Age	•	hrs	Client Info				
Contained Client Info Changed Contained Contained Normal Contained Contain							
CONTAMINATION method limit/base current history 1 history 2	-		Client Info		Changed		
WEAR METALS	Sample Status				_		
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history 1	history 2
WEAR METALS	Fuel		WC Method	>3.0	<1.0		
Chromium	Glycol			7 0.0			
Chromium	WEAR METAL	.S	method	limit/base	current	history 1	history 2
Chromium	Iron	nnm	ASTM D5185m	>120	13		
Nickel	-						
Titanium							
Silver							
Aluminum							
Lead							
Copper					-		
Tin							
Vanadium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history 1 history 2 Boron ppm ASTM D5185m 0 9 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 60 60 Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 1070 1115 Calcium ppm ASTM D5185m 1270 1265 Phosphorus ppm ASTM D5185m 2060 3699 Zinc ppm ASTM D5185m 2060 3699 CONTAMINANTS method limit/base <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
ADDITIVES				>15			
ADDITIVES							
Boron ppm ASTM D5185m 0 9		ррпп		lii+/l			
Barium						,	flistory 2
Molybdenum ppm ASTM D5185m 60 60 Manganese ppm ASTM D5185m 0 <1							
Manganese ppm ASTM D5185m 0 <1 Magnesium ppm ASTM D5185m 1010 971 Calcium ppm ASTM D5185m 1070 1115 Phosphorus ppm ASTM D5185m 1270 1265 Zinc ppm ASTM D5185m 2060 3699 Sulfur ppm ASTM D5185m 2060 3699 CONTAMINANTS method limit/base current history 1 history 2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot % % *ASTM D7624							
Magnesium ppm ASTM D5185m 1010 971 Calcium ppm ASTM D5185m 1070 1115 Phosphorus ppm ASTM D5185m 1150 1019 Zinc ppm ASTM D5185m 1270 1265 Sulfur ppm ASTM D5185m 2060 3699 CONTAMINANTS method limit/base current history 1 history 2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot % % *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D74							
Calcium ppm ASTM D5185m 1070 1115 Phosphorus ppm ASTM D5185m 1150 1019 Zinc ppm ASTM D5185m 1270 1265 Sulfur ppm ASTM D5185m 2060 3699 CONTAMINANTS method limit/base current history 1 history 2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 4 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot % % *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 FLUID DEGRADATION *ASTM D7414 >25 18.5	•						
Phosphorus					_		
Zinc ppm ASTM D5185m 1270 1265 Sulfur ppm ASTM D5185m 2060 3699 Sulfur ppm ASTM D5185m 2060 3699 Sulfucon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 4 Sulfaction ppm ASTM D5185m >20 2 Sulfaction Abs/cm *ASTM D7844 >4 0.5 Sulfaction Abs/.1mm *ASTM D7415 >30 21.2 Sulfaction Abs/.1mm *ASTM D7414 >25 18.5 Sulfaction Abs/.1mm *ASTM D7414 >25 18.5 Sulfaction Abs/.1mm *ASTM D7414 >25 18.5 Sulfaction Abs/.1mm *ASTM D7414 >25 18.5		ppm					
Sulfur ppm ASTM D5185m 2060 3699 CONTAMINANTS method limit/base current history 1 history 2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 4 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot % % *ASTM D7844 >4 0.5 Sulfation Abs/.1mm *ASTM D7624 >20 9.2 FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	•	ppm	ASTM D5185m		1019		
CONTAMINANTS method limit/base current history 1 history 2 Silicon ppm ASTM D5185m >25 6 Sodium ppm ASTM D5185m 4 Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot % % *ASTM D7844 >4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	Zinc	ppm	ASTM D5185m	1270	1265		
Silicon ppm ASTM D5185m >25 6	Sulfur	ppm	ASTM D5185m	2060	3699		
Sodium	CONTAMINAN	ITS	method	limit/base	current	history 1	history 2
Potassium ppm ASTM D5185m >20 2 INFRA-RED method limit/base current history 1 history 2 Soot %	Silicon	ppm	ASTM D5185m	>25	6		
INFRA-RED	Sodium	ppm	ASTM D5185m		4		
Soot % *ASTM D7844 >4 0.5 Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	Potassium	ppm	ASTM D5185m	>20	2		
Nitration Abs/cm *ASTM D7624 >20 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	INFRA-RED		method	limit/base	current	history 1	history 2
Sulfation Abs/.1mm *ASTM D7415 >30 21.2 FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	Soot %	%	*ASTM D7844	>4	0.5		
FLUID DEGRADATION method limit/base current history 1 history 2 Oxidation Abs/.1mm *ASTM D7414 >25 18.5	Nitration	Abs/cm	*ASTM D7624	>20	9.2		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2		
	FLUID DEGRA	DATION	method	limit/base	current	history 1	history 2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.6	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5		
	Base Number (BN)	mg KOH/q	ASTM D2896	9.8	8.6		



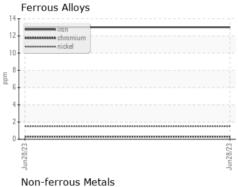
OIL ANALYSIS REPORT



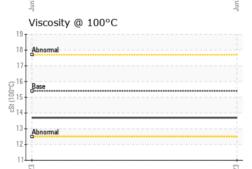
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPE	RTIFS	method	limit/base	current	history 1	history 2

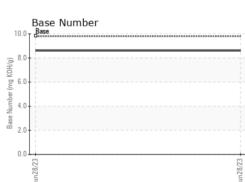
FLUID FROF		memod			HISTORY I	TIISTOLY 2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7		

GRAPHS



	10 T	copper	
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6 - udd	6-		
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	2 -		
	0		
		8	







Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10546559 Test Package : FLEET

: GFL0085365 : 05890749

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

: 05 Jul 2023 : 06 Jul 2023 Diagnostician : Wes Davis

GFL Environmental - 958A - Chillicothe Wigand

19908 N. State Rd 29 Chillicothe, IL US 61523

Contact: Stephanie Blount sblount@gflenv.com

T:

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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