

## **OIL ANALYSIS REPORT**

#### Area {UNASSIGNED} Machine Id 414106

Component Diesel Engine

PETRO CANADA DURON HP 15W40 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

## 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.

L)				Mar2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0097822		
Sample Date		Client Info		25 Mar 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		290		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	6		
Chromium	ppm	ASTM D5185m		<1		
Nickel	ppm	ASTM D5185m	>15	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m		3		
_ead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m		39		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		17		
Barium	ppm	ASTM D5185m		<1		
Molybdenum	ppm	ASTM D5185m		54		
Vanganese	ppm	ASTM D5185m		<1		
Vagnesium	ppm	ASTM D5185m		820		
Calcium	ppm	ASTM D5185m		1246		
Phosphorus	ppm	ASTM D5185m		941		
Zinc	ppm	ASTM D5185m		1107		
Sulfur	ppm	ASTM D5185m		2871		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	5		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.2		
Nitration	Abs/cm	*ASTM D7624	>20	6.8		
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8		
FLUID DEGRA	DATI <u>ON</u>	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6		
Base Number (BN)	mg KOH/g	ASTM D7414 ASTM D2896	9.8	8.2		
	ing KOH/g	AO HIVI D2030	0.0	0.2	_	-

Sample Rating Trend

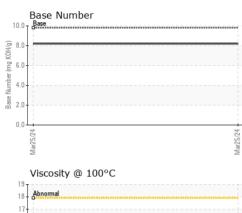
NORMAL



() 10.00 15 14 Base

13 Abnormal 12 11 Mar25/24

# **OIL ANALYSIS REPORT**



White Metal	scalar	*Visual				
Vallow Matal			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		
			>0.2			
Free Water	scalar	*Visual		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history
Visc @ 100°C	cSt	ASTM D445	15.6	13.4		
GRAPHS						
Ferrous Alloys						
iron						
8 - newsease chromium						
4						
2-						
0						
5/24			Mar25/24			
Mar25/24			Mar2			
Non-ferrous Meta	ls		Mar2			
Non-ferrous Meta	ls		Marž			
Non-ferrous Meta	ls		Marc			
Non-ferrous Meta	ls		Mari			
Non-ferrous Meta	ls		Marc			
Non-ferrous Meta	ls		Mac			
Non-ferrous Meta	ls		Mac			
Non-ferrous Meta	ls		Mac			
Non-ferrous Meta						
Non-ferrous Meta						
Non-ferrous Meta						
Non-ferrous Meta						
Non-ferrous Meta			Mar25/24	Base Number		
Non-ferrous Meta			Mar25/24			
Non-ferrous Meta			Mar25/24			
Non-ferrous Meta			Mar25/24			
Non-ferrous Meta			Mar25/24			
Non-ferrous Meta			Mar25/24	Base		
Non-ferrous Meta			ase Mumber (mg KOH(g) 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0 0	Base		
Non-ferrous Meta			Mar25/24	Base		
Non-ferrous Meta			ase Mumber (mg KOH(g) 0.0 0.0 0.0 0 0 0 0 0 0 0 0 0 0	Base		
	Appearance Odor Emulsified Water Free Water FLUID PROPE Visc @ 100°C GRAPHS Ferrous Alloys	Appearance scalar Odor scalar Emulsified Water scalar Free Water scalar FLUID PROPERTIES Visc @ 100°C cSt GRAPHS Ferrous Alloys	Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual FLUID PROPERTIES method Visc @ 100°C cSt ASTM D445 GRAPHS Ferrous Alloys ferrous Alloys	Appearance  scalar  *Visual  NORML    Odor  scalar  *Visual  NORML    Emulsified Water  scalar  *Visual  >0.2    Free Water  scalar  *Visual  >0.2    Free Water  scalar  *Visual  >0.2    Free Water  scalar  *Visual  >0.2    Visc @ 100°C  cSt  ASTM D445  15.6    GRAPHS  Ferrous Alloys  Imit/base  Imit/base    Image: the state of the state	Appearance  scalar  *Visual  NORML  NORML    Odor  scalar  *Visual  NORML  NORML    Emulsified Water  scalar  *Visual  >0.2  NEG    Free Water  scalar  *Visual  >0.2  NEG    Free Water  scalar  *Visual  >0.2  NEG    FLUID PROPERTIES  method  limit/base  current    Visc @ 100°C  cSt  ASTM D445  15.6  13.4    GRAPHS    Ferrous Alloys	Appearance  scalar  *Visual  NORML  NORML     Odor  scalar  *Visual  NORML  NORML     Emulsified Water  scalar  *Visual  >0.2  NEG     Free Water  scalar  *Visual  >0.2  NEG     Free Water  scalar  *Visual  NEG     FLUID PROPERTIES  method  limit/base  current  history1    Visc @ 100°C  cSt  ASTM D445  15.6  13.4     GRAPHS  Ferrous Alloys

Submitted By: Also GFL958,958A, 958B - Bryan Link