

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend

### NORMAL

## 10688C AUTOCAR ACX Component

**Natural Gas Engine** 

PETRO CANADA DURON SHP 15W40 (28 QTS)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

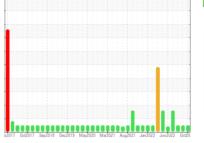
All component wear rates are normal.

#### 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.

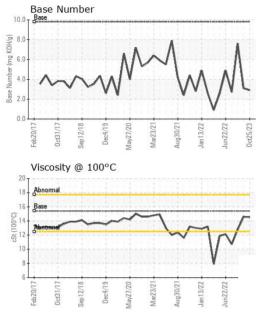




SAMPLE INFORI	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		GFL0094673	GFL0056760	GFL0052280	
Sample Date		Client Info		25 Oct 2023	04 Jun 2023	25 Jul 2022	
Machine Age	hrs	Client Info		17774	16565	15159	
Oil Age	hrs	Client Info		1209	660	435	
Oil Changed		Client Info		Changed	Changed	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	16	10	6	
Chromium	ppm	ASTM D5185m	>4	1	<1	<1	
Nickel	ppm	ASTM D5185m	>2	<1	<1	0	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	<1	
Aluminum	ppm	ASTM D5185m	>9	1	2	3	
Lead	ppm	ASTM D5185m	>30	3	1	<1	
Copper	ppm	ASTM D5185m	>35	2	2	1	
Tin	ppm	ASTM D5185m	>4	0	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	0	
Cadmium	ppm	ASTM D5185m		<1	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	8	10	45	
Barium	ppm	ASTM D5185m	0	0	0	0	
Molybdenum	ppm	ASTM D5185m	60	54	49	42	
Manganese	ppm	ASTM D5185m	0	0	<1	<1	
Magnesium	ppm	ASTM D5185m	1010	552	536	437	
Calcium	ppm	ASTM D5185m	1070	1556	1566	1327	
Phosphorus	ppm	ASTM D5185m	1150	739	697	674	
Zinc	ppm	ASTM D5185m	1270	933	941	794	
Sulfur	ppm	ASTM D5185m	2060	2579	2967	2651	
CONTAMINAN	TS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+100	15	4	4	
Sodium	ppm	ASTM D5185m		3	6	2	
Potassium	ppm	ASTM D5185m	>20	2	1	1	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0.1	0.1	
Nitration	Abs/cm	*ASTM D7624	>20	12.8	10.6	7.3	
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	21.4	23.2	
FLUID DEGRA	DATION	method	limit/base	current	history1	history2	
Oxidation							
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	19.0	22.0	



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	VISUAL		method	limit/base	current	history1	history2
and a standard standard and a standard of the standard	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
$\Lambda \wedge \Lambda$	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
A AA/\Ar	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
$\mathbf{V}$	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
20	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
May27/20 Mar23/21 Aug30/21 Jan13/22 Jun22/22 Oct25/23	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water		*Visual	>0.1	NEG	NEG	NEG
		scalar					
	FLUID PROPER		method	limit/base	current	history1	history2
Wint	Visc @ 100°C	cSt	ASTM D445	15.4	14.5	14.6	12.8
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	Ferrous Alloys	tinner:	1000000000000				
	50 - iron						
Aay2 Mar2 Jan1 Jun2	nickel						
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	Feb20/17 0ct31/17 Sep12/18 Dec4/19	May2///20 Mar23/21	Aug30/21 Jan13/22 Jun22/22	0ct25/23			
	Non-ferrous Metals						
	450 400 copper	man	110011000				
	400						
	300	huili					
E	250						
	150						
	100		14000140000				
	0						
	Feb20/17 0ct31/17 Sep12/18 Dec4/19	/lay2//20 Mar23/21	Aug30/21 Jan13/22 Jun22/22	0ct25/23			
	S S S	Mi	Jar Jur	0			
	Viscosity @ 100°C				Base Number		
	20	10170	11001000	10.0-	Base Number		
	20 18 Abnormal						
	20 18 Abnormal 16 Base	~					
	20 18 Abnormal 16 Base	~	~			M	
cst (100°C)	20 18 Abnormal 16 Base	~	~10			M	
	20 18 Abnormal 16 Base	~7	~7			M	MM
	20 18 - Abnormal 16 - Base 14 - Abnormal 14 - Abnormal 14 - Abnormal 14 - Abnormal	~	$\sim \gamma$	0.8 0.0 0.0 0.0		M	M
	20 18 <b>Abnormal</b> 16 <b>Base</b> 14 <b>Abnormal</b> 16 <b>Base</b> 14 <b>Abnormal</b> 10 <b>Base</b>	~	$\sim \sim$	(B/HOX) Bull 980 (B/HOX) Bull 980 Bull	Base	M	M
	20 18 <b>Abnormal</b> 16 <b>Base</b> 214 <b>Abnormal</b> 16 <b>Base</b> 20 20 20 20 20 20 20 20 20 20	2321	13021 1322 2202	(B/HOX) Bull 980 (B/HOX) Bull 980 Bull	Base	21/20 23/21 30/21	22/27 22/27
	20 18 <b>Abnormal</b> 16 <b>Base</b> 214 <b>Abnormal</b> 16 <b>Base</b> 20 20 20 20 20 20 20 20 20 20	Mar(21/20	Aug30/21 +	(0, 8.0 ° (0, HOX) But) (0, HOX) But) (0, HOX) (0, HOX) (	Base	May27/20 Mar23/21 Mar23/21 Aug30/21	Jan1322 Jun2222 Oct5523
cest (100*6)	20 18 <b>Abnormal</b> 16 <b>Base</b> 10 10 10 10 10 10 10 10 10 10			() () () () () () () () () () () () () (	Feb20/17 0ct31/17 Sep12/18	2 - 1	
cest (100*6)	20 18 <b>Abnormal</b> 16 <b>Base</b> 14 <b>Abnormal</b> 16 <b>Base</b> 14 <b>Abnormal</b> 16 <b>Base</b> 14 <b>Abnormal</b> 16 <b>Base</b> 17 17 18 <b>Abnormal</b> 16 <b>Base</b> 17 17 18 17 18 17 18 19 10 10 10 10 10 10 10 10 10 10		on Ave., Ca	() () () () () () () () () () () () () (	Feb20/17 0ct31/17 Sep12/18	ironmental - 001	- Raleigh(CNG
Laboratory Sample No. Lab Number	20 18 40 10 10 10 10 10 10 10 10 10 1	01 Madis Received Diagnose	on Ave., Ca   : 02   ed : 03	A (0)HOV BU 19900 6.0. (0)HOV BU 19900 6.0. 2.0. EUSSIPPO 0.0. FX, NC 27513 Nov 2023 Nov 2023	Feb20/17 0ct31/17 Sep12/18	ironmental - 001	<b>- Raleigh(CNG</b> Conquest Drive Garner, NC
Laboratory Sample No. Lab Number Unique Number	20 18 40 10 10 10 10 10 10 10 10 10 1	01 Madis Received	on Ave., Ca   : 02   ed : 03	(0)HOX Bull 19 (0)HOX BULL 19	Feb20/17 0ct31/17 Sep12/18	ironmental - 001 3741 (	- Raleigh(CNG Conquest Drive Garner, NC US 27529
Laboratory Sample No. Lab Number Unique Number Test Package	20 18 40 10 10 10 10 10 10 10 10 10 1	01 Madis Received Diagnose Diagnosti	con Ave., Ca 1 : 02 f ed : 03 f ician : Dor	A (0)HOU by WHOU by WHOU B CO CO CO CO CO CO CO CO CO CO	Feb20/17 0ct31/17 Sep12/18	ironmental - 001 3741 ( Contact:	- Raleigh(CNG Conquest Drive Garner, NC US 27529 Craig Johnson
Laboratory Sample No. Lab Number Unique Number	20 18 40 10 10 10 10 10 10 10 10 10 1	01 Madis Received Diagnose Diagnosti	con Ave., Ca l : 02 f ed : 03 f ician : Dor 00-237-1369	A (0)HOU by WHOU by WHOU Build COMPOSE 2.0. 0.0. C27513 Nov 2023 Nov 2023 Baldridge	Feb20/17 0ct31/17 Sep12/18	ironmental - 001 3741 ( Contact: craig.johnsc	<b>- Raleigh(CNG</b> Conquest Drive Garner, NC

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