

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 12035

Component Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (11 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.

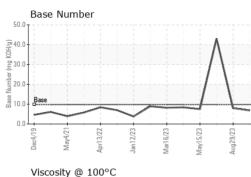
Fluid Condition

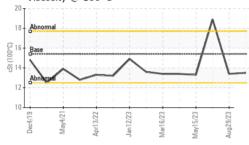
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0089584	GFL0089598	GFL0046609
Sample Date		Client Info		17 Nov 2023	29 Aug 2023	12 Jul 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	19	5	20
Chromium	ppm	ASTM D5185m	>4	<1	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	2	2
Lead	ppm	ASTM D5185m	>45	<1	0	<1
Copper	ppm	ASTM D5185m	>85	1	0	6
Tin	ppm	ASTM D5185m	>4	0	<1	3
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	nnm	ASTM D5185m		•	0	<1
Gaumum	ppm	ASTIVI DSTOSIII		0	0	< 1
ADDITIVES	ppin	method	limit/base	current	0 history1	<1 history2
	ppm	method	limit/base		-	
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 2	history1 8	history2 80
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 2 0	history1 8 0	history2 80 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 2 0 62	history1 8 0 60	history2 80 0 58
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 2 0 62 <1	history1 8 0 60 <1	history2 80 0 58 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 2 0 62 <1 914	history1 8 0 60 <1 904	history2 80 0 58 <1 645
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	Current 2 0 62 <1 914 1039	history1 8 0 60 <1 904 1026	history2 80 0 58 <1 645 793
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	Current 2 0 62 <1 914 1039 954	history1 8 0 60 <1 904 1026 998	history2 80 0 58 <1 645 793 771
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	Current 2 0 62 <1 914 1039 954 1184	history1 8 0 60 <1 904 1026 998 1233	history2 80 0 58 <1 645 793 771 1038
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	Current 2 0 62 <1 914 1039 954 1184 2704	history1 8 0 60 <1 904 1026 998 1233 3726	history2 80 0 58 <1 645 793 771 1038 2987
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	Current 2 0 62 <1 914 1039 954 1184 2704 Current	history1 8 0 60 <1 904 1026 998 1233 3726 history1	history2 80 0 58 <1 645 793 771 1038 2987 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	current 2 0 62 <1 914 1039 954 1184 2704 current 6	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3	history2 80 0 58 <1 645 793 771 1038 2987 history2 16
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base	current 2 0 62 <1 914 1039 954 1184 2704 6 7	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 ▲ 401
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30	current 2 0 62 <1 914 1039 954 1184 2704 current 6 7 4	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2 4 history1 0.2	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 401 21
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20 limit/base	Current 2 0 62 <1 914 1039 954 1184 2704 Current 6 7 4 X	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2 4 history1	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 401 21
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >30 200 limit/base	Current 2 0 62 <1 914 1039 954 1184 2704 current 6 7 4 current 0.8	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2 4 history1 0.2	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 ▲ 401 ▲ 21 history2 0.7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 200 imit/base >30	Current 2 0 62 <1 914 1039 954 1184 2704 current 6 7 4 current 0.8 9.8	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2 4 history1 0.2 5.3	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 401 21 history2 0.7 30.8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 imit/base >3 20	Current 2 0 62 <1 914 1039 954 1184 2704 current 6 7 4 current 0.8 9.8 20.6	history1 8 0 60 <1 904 1026 998 1233 3726 history1 3 2 4 history1 0.2 5.3 16.9	history2 80 0 58 <1 645 793 771 1038 2987 history2 16 401 21 0.7 30.8 0.0



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROP	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.4	1 8.9
GRAPHS						
Ferrous Alloys						
0 - chromium	Λ					
00 - nickel	11					
80	11					
60	11					
10						
20-		1-	1			
	and a line of the local division of the loca	~ `	\leq			
Dec4/19 May4/21 Apr13/22	Jan 12/23 Mar 16/23	May15/23	Aug 29/23			
De Ma Apri	Jan	May	Aug			
Non-ferrous Meta	als					
10 copper						
8 - tin			+			
6						
		٨				
4	٨	\wedge	1000			
	/					
2			1			
			m m			
Dec4/19 May4/21 Apr13/22	Jan 12/23	May15/23	Aug 29/23			
	- 64 - F-	Ma	Au			
Viscosity @ 100°	C			Base Number	-	
19			45.0			
18 - Abnormal		Λ	40.0 			Λ
17-			(B) 35.0 (D) 30.0 (E) 25.0			
Base		- / \	Ĕ 25.0			- / \
15	•	1	a 20.0			1

15.0 Base Num

Aug29/23

: 22 Nov 2023

: 23 Nov 2023

5.0

0.0

Dec4/19

Mav4/21.

Apr13/22

Jan 12/23



 Certificate L2367
 Test Package
 : FLEET

 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)

Mar16/23 -

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

Received

Diagnosed

May15/23

Diagnostician : Wes Davis

Jan 12/23

12

11

Unique Number : 10753911

Laboratory

Sample No.

Lab Number

Dec4/19

Mav4/21

: GFL0089584

: 06014767

Apr13/22

Mar16/23

Mav15/23

Page 2 of 2

Aug29/23