

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

CUMMINS 10672

Component Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (7 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.



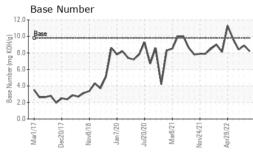


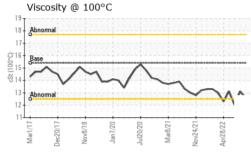
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0086230	GFL0086241	GFL0057615
Sample Date		Client Info		13 Jul 2023	07 Jun 2023	18 Jan 2023
Machine Age	hrs	Client Info		27306	25272	25272
Oil Age	hrs	Client Info		27306	27134	26501
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	1.1
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	18	19	32
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	6	4	0
Lead	ppm	ASTM D5185m	>25	0	0	<1
Copper	ppm	ASTM D5185m	>100	2	6	2
Tin	ppm	ASTM D5185m	>4	0	1	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	<1	0
C a alma is una		AOTH DEVOE				
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	ASTM D5185m	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base 0			
ADDITIVES		method	0	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 24	history1 26	history2 236
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 24 0	history1 26 11	history2 236 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 24 0 63	history1 26 11 49	history2 236 0 1
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 24 0 63 <1	history1 26 11 49 2	history2 236 0 1 <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 24 0 63 <1 693	history1 26 11 49 2 552	history2 236 0 1 <1 22
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	current 24 0 63 <1 693 1112	history1 26 11 49 2 552 1624	history2 236 0 1 <1 22 3782 1236 1466
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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 24 0 63 <1 693 1112 864	history1 26 11 49 2 552 1624 766	history2 236 0 1 <1 22 3782 1236
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 24 0 63 <1 693 1112 864 1057	history1 26 11 49 2 552 1624 766 994	history2 236 0 1 <1 22 3782 1236 1466
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	0 0 60 0 1010 1070 1150 1270 2060 limit/base	Current 24 0 63 <1 693 1112 864 1057 2870	history1 26 11 49 2 552 1624 766 994 2976	history2 236 0 1 <1 22 3782 1236 1466 3522
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 0 1010 1070 1150 1270 2060 limit/base	current 24 0 63 <1 693 1112 864 1057 2870 current	history1 26 11 49 2 552 1624 766 994 2976 history1	history2 236 0 1 <1 22 3782 1236 1466 3522 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	current 24 0 63 <1 693 1112 864 1057 2870 current 5	history1 26 11 49 2 552 1624 766 994 2976 history1	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 limit/base >25	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6 8	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22 24	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8 1
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 >25 >20 limit/base	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6 8 current	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22 24	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8 1 + 1 + 1 + 1 + history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 >25 >20 limit/base >6	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6 8 current 0 0.4	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22 24 history1 0.5	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8 1 history2 0.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >20	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6 8 current 0.4 6.6	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22 24 history1 0.5 8.2	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8 1 history2 0.4 8.3
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 ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 limit/base >20 limit/base >20	current 24 0 63 <1 693 1112 864 1057 2870 current 5 6 8 current 0.4 6.6 17.5	history1 26 11 49 2 552 1624 766 994 2976 history1 10 22 24 history1 0.5 8.2 22.6	history2 236 0 1 <1 22 3782 1236 1466 3522 history2 12 8 1 history2 0.4 8.3 19.3



OIL ANALYSIS REPORT

VISUAL





Λ	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Nh	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
22	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Apr28/22	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
				>0.2			
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	15.4	12.6	13.1	▲ 12.0
_ ^^	GRAPHS						
	Ferrous Alloys						
22	iron	N		A			
Apr28/22	40 - nickel	1		·A			
AI		11		1			
		11					
3	20-1Wh	11	1	1			
	· /	1 4	A I	-			
	10		1NV				
	0 IIIIII	and the same same		and the second			
		Jul20/20 -	Mar8/21- Nov24/21-				
		20	arl	3			
	Ma Nov Jan	Jul	Mov Mov				
			Nov				
	Non-ferrous Meta		An Nov				
	Non-ferrous Meta		Mov And	ŧ.			
	Non-ferrous Meta		Mov Mov				
	Non-ferrous Meta		N0 Nov				
	Non-ferrous Meta		Mi Nov				
	Non-ferrous Meta		Mo Nov				
	Non-ferrous Meta		Mo Nov				
;	Non-ferrous Meta		Mo Nov				
	Non-ferrous Meta	ls		h			
	Non-ferrous Meta	ls		h			
	Non-ferrous Meta	ls	Mar8/21M Nov24/21Nov24/21Nov24/21Nov24/21Nov24/21Nov24/21Nov24/21Nov24/21NOV2	h			
	Non-ferrous Meta	ls		h	Base Number		
	Non-ferrous Meta	ls		h	Base Number		
	Non-ferrous Meta	ls		12.0			Λ
	Non-ferrous Meta	ls		12.0 10.0) - Base	Α.	$\wedge A$
	Non-ferrous Meta	ls		12.0 10.0) - Base	M	$\wedge A$
	Non-ferrous Meta	ls		12.0 10.0) - Base	M	$\wedge \Lambda$
	Non-ferrous Meta	ls		12.0 10.0) - Base	M	$\wedge \Lambda$
	Non-ferrous Meta	ls		12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Base	M	A
	Non-ferrous Meta	ls		12.0 10.0	Base	M	λ
	Non-ferrous Meta		Maß(21) Nov24/21	12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0		M	ΛA
	Non-ferrous Meta		Maß(21) Nov24/21	12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0		M	2421
	Non-ferrous Meta			12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Base	Jai720 - 02/TieL	Mou24/21 Apr28/22
	Non-ferrous Meta		Maß(21) Nov24/21	12.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0		M	Mov24/21 Apr28/22
oratory	Non-ferrous Meta	Ls	1/2/Japa (1/2/h2/non) 1/2/h2/non 1/2/h2/h2/h2/h2/h2/h2/h2/h2/h2/h2/h2/h2/h	12.0 10.0	Mat/1/17	02/Ump nvironmental	- 009 - Fairbur
poratory nple No.	Non-ferrous Meta	Ls	LIZHERM LIZHERM Soon Ave., Ca 1 19 .	12.0 10.0	Mat/1/17	02/Ump nvironmental	- 009 - Fairbur 5 Roosevelt Hw
ooratory nple No. Number	Non-ferrous Meta	ls OZOZIPP C 501 Madis Received Diagnose	12/0±W 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow	12.0 10.0	Mat/1/17	02/Ump nvironmental	- 009 - Fairbur 5 Roosevelt Hw Fairburn, G
	Non-ferrous Meta	Ls	12/0±W 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow 12/b2/vow	12.0 10.0	Mat/1/17	02/Ump nvironmental 6905	- COB

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)

Certificate L2367

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