

OIL ANALYSIS REPORT

Area (89700X) Walgreens - Tractor [Walgreens - Tractor] 136A69066

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

🔺 Wear

The aluminum level is abnormal. All other 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.

tor 69066						
GAL)		May2022	Aug2022 Mar2023	Aug2023 Oct2023	Feb2024	
SAMPLE INFOR		method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116432	PCA0106154	PCA0101034
Sample Date		Client Info		27 Feb 2024	30 Oct 2023	24 Aug 2023
Machine Age	mls	Client Info		763494	727803	704631
Oil Age	mls	Client Info		58863	23172	61187
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	NORMAL	SEVERE
CONTAMINAT	ΓΙΟΝ	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	0.3	4 0.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	71	52	44
Chromium	ppm	ASTM D5185m	>5	2	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	<mark>/</mark> 31	24	8
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	3	6	25
Tin	ppm	ASTM D5185m	>5	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	6	8	9
Barium	ppm	ASTM D5185m		2	0	<1
Molybdenum	ppm	ASTM D5185m	50	65	67	31
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m	950	980	1084	434
Calcium	ppm	ASTM D5185m	1050 995	1170 1092	1229 1178	664
Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m	995 1180	1092	1480	723 879
Sulfur	ppm	ASTM D5185m	2600	2298	2931	2450
CONTAMINAN		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	10	10	7
Sodium	ppm	ASTM D5185m		31	10	12
Potassium	ppm	ASTM D5185m	>20	27	12	20
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	2.1	1.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	14.4	12.7	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.3	27.6	49.2
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.1	23.2	48.8
Base Number (BN)	mg KOH/g	ASTM D2896		4.0	4.8	4.4
(-//)	9.101.19				-	

Sample Rating Trend

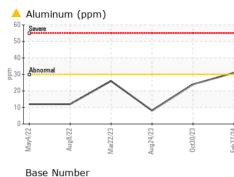
WEAR

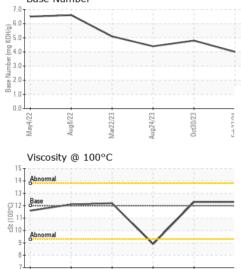


May4/22

Aug8/22 .

OIL ANALYSIS REPORT





Mar22/23

Aug24/23 -

0ct30/23

VISUAL		method	limit/base	current	history1	
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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	12.3	12.3	▲ 8.9
GRAPHS						
Ferrous Alloys						
D chromium						
0-						
	1					
0						
0						
0+						
0						
i i i						
0-						
	3	3	4			
	4/23	0/23	1/24			
	ug24/23	0ct30/23	eb27/24			
May4/122 Aug8/22	Aug24/23	0ct30/23 -	Feb27/24			
		0ct30/23	Feb27/24			
May4/122 Aug8/22		0ct30/23	Feb27/24			
cz/yAeW cz/yAeW Non-ferrous Metals		0ct30/23	Feb27/24			
CZ79/keW Non-ferrous Metals		0ct30/23	Feb27/24			
czzyłowe zzyłowe Non-ferrous Metals		0ct30/23	Feb21/24			
ZZIP ^{MeW} Non-ferrous Metals		0ct3023	Feb27/24			
CZ79/keW Non-ferrous Metals		0ct30/23	Feb27/24			
ZZIP ^{MeW} Non-ferrous Metals		0ct30/23	Feb27/24			
ZZZYbeeW Non-ferrous Metals		0ct3023	Feb27/24			
ZZIP ^{MeW} Non-ferrous Metals		0ct30/23	Feb27/24			
ZZI;Herw Non-ferrous Metals		Octaliza	Feb27/24			
ZZZYbeeW Non-ferrous Metals		0ct3023	Feb21/24			
ZZI;Herw Non-ferrous Metals		0dt3023	Feb27/24			
ZZIP ^{Me} W Non-ferrous Metals	5					
ZZIP ^{Me} W Non-ferrous Metals	5					
ZZIP ^{Me} W Non-ferrous Metals	5					
Non-ferrous Metals		0ct30/23	Feb.27/24			
Von-ferrous Metals	5			Base Number		
Viscosity @ 100°C	5			Base Number		
Von-ferrous Metals	5		Feb21/24			
Viscosity @ 100°C	5					
ZZ74-VeW Non-ferrous Metals Copper Land CZ74-VeW Viscosity @ 100°C	5					
ZZ74-VeW Non-ferrous Metals Copper Land CZ74-VeW Viscosity @ 100°C	5					
ZZ74-VeW Non-ferrous Metals Copper Land CZ74-VeW Viscosity @ 100°C	5					
Non-ferrous Metals	5					
Non-ferrous Metals	5					
ZZ74-VeW Non-ferrous Metals Copper Land CZ74-VeW Viscosity @ 100°C	5					
Non-ferrous Metals	5		7.0 6.0 (0) WOW Guil 9898 800 800 800 800 800 800 800 800 80			
ZZIPH ^E W Non-ferrous Metals Copper EZZPH ^E W Viscosity @ 100°C	5					
ZZIPH ^E W Non-ferrous Metals CZIPH ^E W Viscosity @ 100°C	5 5 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Oct30/23	7.0 6.0 9.0 9.0 1.0 1.0 0.0 1.0 0.0 0.0			
ZZIPH ^E W Non-ferrous Metals CZIPH ^E W Viscosity @ 100°C	5 5 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Oct30/23	7.0 6.0 9.0 9.0 1.0 1.0 0.0 1.0 0.0 0.0		203	
ZZIPH ^E W Non-ferrous Metals CZIPH ^E W Viscosity @ 100°C	5 5 7 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	Oct30/23	7.0 6.0 9.0 9.0 1.0 1.0 0.0 1.0 0.0 0.0		ar22/23 924/23	d30/23
Non-ferrous Metals	5		1.0 1.0 1.0 1.0 1.0		Mar22/23	0dd30/23

