

OIL ANALYSIS REPORT

Area KEMP QUARRIES / MUSKOGEE SAND [69617] WL109

Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- G

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 changed filters and fluid)

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 acceptable for the time in service.

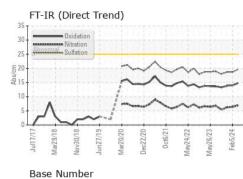
GAL)		12017 Mar2016	Nov2018 Jun2019 Mar20	20 Dec2020 Oct2021 May2022 May2	023 Feb2024					
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2				
Sample Number Sample Date Machine Age	hrs	Client Info Client Info Client Info		PCA0109268 04 Apr 2024 51204	PCA0086518 05 Feb 2024 50702	PCA0070594 22 Nov 2023 50215				
Oil Age Oil Changed Sample Status	hrs	Client Info Client Info		51204 51204 Changed NORMAL	50702 Changed NORMAL	50215 Changed NORMAL				
CONTAMINAT			limit/base		history1	history2				
Fuel Water Glycol		WC Method WC Method WC Method	>5 >0.2	<1.0 NEG NEG	<1.0 NEG NEG	<1.0 NEG NEG				
WEAR METAL	S	method	limit/base	current	history1	history2				
Iron Chromium	ppm ppm	ASTM D5185m ASTM D5185m	>100 >20	15 <1	14 <1	15 <1				
Nickel Titanium Silver	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>4 >3	<1 <1 0	0 0 0	0 <1 0				
Aluminum Lead	ppm ppm	ASTM D5185m ASTM D5185m	>20 >40	2 1	<1 0	1 0				
Copper Tin Vanadium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>330 >15	4 <1 0	3 <1 <1	5 0 0				
Cadmium	ppm	ASTM D5185m		<1	0	0				
ADDITIVES		method	limit/base	current	history1	history2				
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	0 0 63	7 0 57	<1 0 58				
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	0 1010	<1 992	<1 909	0 893				
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270	1152 1130 1260	1076 939 1193	1014 1032 1165				
Sulfur CONTAMINAN	ppm TS	ASTM D5185m method	2060 limit/base	3425 current	2992 history1	3223 history2				
Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>25	3 0	2 <1	2				
Potassium INFRA-RED	ppm	ASTM D5185m method	>20 limit/base	2 current	0 history1	2 history2				
Soot % Nitration	% Abs/cm	*ASTM D7844 *ASTM D7624	>3 >20	0.7 6.9	0.6	0.6 6.2				
Sulfation FLUID DEGRA	Abs/.1mm		>30 limit/base	19.6 current	18.7 history1	18.7 history2				
Oxidation Base Number (BN)	Abs/.1mm mg KOH/g	*ASTM D7414 ASTM D2896	>25 9.8	14.8 8.9	14.0 8.8	13.8 8.6				

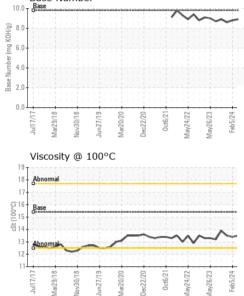
Sample Rating Trend

NORMAL



OIL ANALYSIS REPORT





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