

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL





Natural Gas Engine	
PETRO CANADA DURON GEO	LD 15W40 (48 QTS)
DIAGNOSIS	SAMPLE

SAMPLE INFORMATION method GFL0089344 GFL0052295 GFL0052472 Sample Number **Client Info** 20 Jul 2023 09 Jul 2022 Sample Date Client Info 08 Jun 2022 Machine Age 15380 hrs **Client Info** 12357 12144 Oil Age hrs Client Info 3023 533 320 Oil Changed **Client Info** Changed Changed Not Changd NORMAL Sample Status NORMAL NORMAL WEAR METALS ASTM D5185m >50 5 5 4 Iron ppm Chromium ASTM D5185m ppm >4 <1 <1 <1 Nickel ppm ASTM D5185m >2 <1 0 <1 Titanium ASTM D5185m <1 0 <1 ppm 0 0 Silver ppm ASTM D5185m >3 0 Aluminum ASTM D5185m >9 3 2 2 ppm Lead ASTM D5185m >30 <1 <1 <1 ppm ASTM D5185m Copper >35 <1 <1 <1 ppm Tin ppm ASTM D5185m >4 <1 <1 <1 Vanadium ASTM D5185m 0 0 ppm <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES 19 22 ASTM D5185m 50 15 Boron ppm Barium ppm ASTM D5185m 5 0 0 0 50 53 51 Molybdenum ASTM D5185m 49 ppm Manganese ppm ASTM D5185m 0 <1 <1 <1 548 562 Magnesium ASTM D5185m 560 ppm 577 1730 Calcium ppm ASTM D5185m 1510 1587 1613 Phosphorus ppm ASTM D5185m 780 758 742 750 Zinc ASTM D5185m 870 972 989 943 ppm Sulfur ASTM D5185m 2040 2815 2424 ppm 2915 CONTAMINANTS Silicon ASTM D5185m >+100 14 4 3 ppm 4 5 Sodium ppm ASTM D5185m 10 Potassium ASTM D5185m >20 0 0 ppm <1 **INFRA-RED** % 0 0 Soot % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 10.8 9.3 11.0 Sulfation Abs/.1mm *ASTM D7415 >30 22.6 23.0 20.8 FLUID DEGRADATION *ASTM D7414 >25 19.5 19.8 17.9 Oxidation Abs/.1mm Base Number (BN) mg KOH/g ASTM D2896 10.2 4.4 7.4 6.8

Recommendation

Resample at the next service interval to monitor.

Wear

Machine Id 2707C Component

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

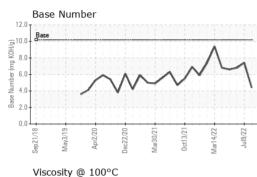
Fluid Condition

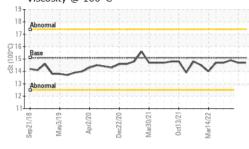
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



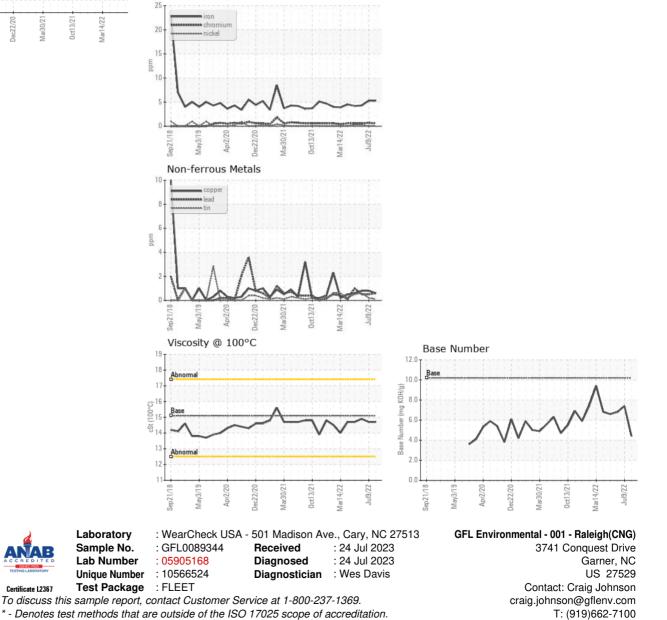
OIL ANALYSIS REPORT

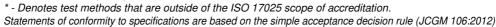
Ferrous Alloys





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	LIGHT
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	>0.1	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	15.1	14.7	14.7	14.9
GRAPHS						





F: (919)662-7130