

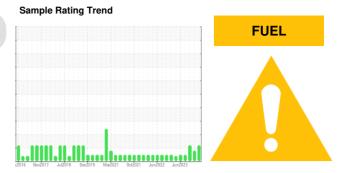
OIL ANALYSIS REPORT



Machine Id 2413 MACK GU713

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (42 QTS)



DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

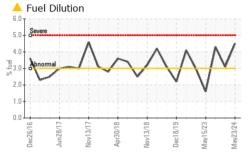
▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

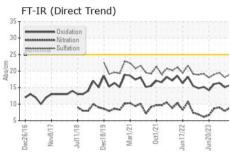
Sample Number Client Info GFL0103181 GFL0117448 GFL0103218 Sample Date Client Info 23 May 2024 15 Apr 2024 10 Jan 2024 Machine Age hrs Client Info 29701 29488 29144 29144 29144							
Client Info 23 May 2024 15 Apr 2024 10 Jan 2024 Machine Age hrs Client Info 29701 29488 29144 29144 29101 29488 29144 29144 29101 29488 29144 29144 2016 29701 29488 29144 29144 29144 203 29144 29144 203 29144 29144 203 29144 29144 203 29144 29144 203 29144 2014 29144 203 20444 203 20444	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 29701 29488 29144	Sample Number		Client Info		GFL0103181	GFL0117448	GFL0103218
Oil Age hrs Client Info Not Changd ABNORMAL Not Changed Changed Changed Changed ABNORMAL Changed ABNORMAL ABNO	Sample Date		Client Info		23 May 2024	15 Apr 2024	10 Jan 2024
Client Info	Machine Age	hrs	Client Info		29701	29488	29144
ABNORMAL ABNORMAL	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG Glycol WC Method Image: NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 3 7 Chromium ppm ASTM D5185m >20 0 <1	Oil Changed		Client Info		Not Changd	Not Changd	Changed
Water WC Method >0.2 NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 3 7 Chromium ppm ASTM D5185m >20 0 <1 0 <1 Nickel ppm ASTM D5185m >2 0 0 <1 1 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >20 3 2 2 Lead ppm ASTM D5185m >40 <1 0 2 Copper ppm ASTM D5185m >15 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 3 7 Chromium ppm ASTM D5185m >20 0 <1	CONTAMINATIO	NC	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 3 7 Chromium ppm ASTM D5185m >20 0 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 0 <1 <1 Nickel ppm ASTM D5185m >5 <1	WEAR METALS	,	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>120	6	3	7
Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 3 2 2 Cedad ppm ASTM D5185m >40 <1 0 2 Copper ppm ASTM D5185m >330 2 0 2 Tin ppm ASTM D5185m 0 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 2 9 1 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 10	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Aluminum ppm ASTM D5185m >20 3 2 2 Lead ppm ASTM D5185m >40 <1 0 2 Copper ppm ASTM D5185m >330 2 0 2 Tin ppm ASTM D5185m >15 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 57 57 61 Manganese ppm ASTM D5185m 0 1 0 <1 Calcium ppm ASTM D5185m 1070 1001 1112	Titanium	ppm	ASTM D5185m	>2	0	0	0
Lead ppm ASTM D5185m >40 <1 0 2 Copper ppm ASTM D5185m >330 2 0 2 Tin ppm ASTM D5185m >15 <1 <1 1 Vanadium ppm ASTM D5185m 0 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 57 57 61 Manganese ppm ASTM D5185m 0 -1 0 <1 Magnesium ppm ASTM D5185m 100 1001 1112 1145 Phosphorus ppm ASTM D5185m 1270 1148 1199	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 2 0 2 Tin ppm ASTM D5185m >15 <1			ASTM D5185m	>20	3	2	2
Tin	Lead	ppm	ASTM D5185m	>40	<1	0	2
Vanadium ppm ASTM D5185m 0 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1	Copper	ppm	ASTM D5185m	>330	2	0	2
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 57 57 61 Manganese ppm ASTM D5185m 0 <1	Tin	ppm	ASTM D5185m	>15	<1	<1	1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1	Vanadium	ppm	ASTM D5185m		0	0	<1
Boron ppm ASTM D5185m 0 2 9 1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 60 57 57 61 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 0 Fuel % ASTM D5185m >20 2 0 0 0 Fuel % ASTM D5185m >20 2 0 0 0 Fuel % ASTM D5185m >20 8.8 7.9 9.0 Sulfation Abs/:Imm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/:Imm *ASTM D7415 >25 15.7 15.1 16.4	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 57 57 61 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 57 57 61 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m	Davas	nnm	ACTM DE105m	0	2	0	1
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20	Boron	ppiii	MOTIVI DOTOJIII	U	2	9	1
Magnesium ppm ASTM D5185m 1010 882 895 1011 Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D544 >3.0							
Calcium ppm ASTM D5185m 1070 1001 1112 1145 Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D3524 >3.0 4.5 3.1 4.3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm	Barium	ppm	ASTM D5185m	0	0	0	0
Phosphorus ppm ASTM D5185m 1150 978 1000 1038 Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D3524 >3.0 4.5 3.1 4.3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 <td>Barium Molybdenum</td> <td>ppm ppm</td> <td>ASTM D5185m ASTM D5185m</td> <td>0</td> <th>0 57</th> <td>0 57</td> <td>0 61</td>	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0	0 57	0 57	0 61
Zinc ppm ASTM D5185m 1270 1148 1199 1329 Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m 20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D5185m >20 2 0 0 Fuel % ASTM D3524 >3.0 4.5 3.1 4.3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.	Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 57 <1	0 57 0	0 61 <1
Sulfur ppm ASTM D5185m 2060 3246 3379 3406 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m 4 <1	Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 57 <1 882	0 57 0 895	0 61 <1 1011
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m 4 <1	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 57 <1 882 1001	0 57 0 895 1112	0 61 <1 1011 1145
Silicon ppm ASTM D5185m >25 7 7 5 Sodium ppm ASTM D5185m 4 <1 3 Potassium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D3524 >3.0 4.5 3.1 4.3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 57 <1 882 1001 978	0 57 0 895 1112 1000	0 61 <1 1011 1145 1038
Sodium ppm ASTM D5185m 4 <1	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270	0 57 <1 882 1001 978 1148	0 57 0 895 1112 1000 1199	0 61 <1 1011 1145 1038 1329
Potassium ppm ASTM D5185m >20 2 0 0 Fuel % ASTM D3524 >3.0 ▲ 4.5 ▲ 3.1 ▲ 4.3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 57 <1 882 1001 978 1148 3246	0 57 0 895 1112 1000 1199 3379	0 61 <1 1011 1145 1038 1329 3406
Fuel	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 57 <1 882 1001 978 1148 3246	0 57 0 895 1112 1000 1199 3379 history1	0 61 <1 1011 1145 1038 1329 3406 history2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 57 <1 882 1001 978 1148 3246 current	0 57 0 895 1112 1000 1199 3379 history1	0 61 <1 1011 1145 1038 1329 3406 history2
Soot % % *ASTM D7844 >4 0.3 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 57 <1 882 1001 978 1148 3246 current 7	0 57 0 895 1112 1000 1199 3379 history1 7	0 61 <1 1011 1145 1038 1329 3406 history2 5
Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 57 <1 882 1001 978 1148 3246 current 7 4	0 57 0 895 1112 1000 1199 3379 history1 7 <1	0 61 <1 1011 1145 1038 1329 3406 history2 5 3
Nitration Abs/cm *ASTM D7624 >20 8.8 7.9 9.0 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3
Sulfation Abs/.1mm *ASTM D7415 >30 19.0 18.1 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0 ▲ 3.1	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3
Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.1 16.4	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5 current 0.3	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0 ▲ 3.1 history1 0.2	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7824	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >4 >20	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5 current 0.3 8.8	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0 ▲ 3.1 history1 0.2 7.9	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3 history2 0.3 9.0
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7824 *ASTM D7844 *ASTM D7624 *ASTM D76145	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >4 >20 >30	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5 current 0.3 8.8 19.0	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0 ▲ 3.1 history1 0.2 7.9 18.1	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3 history2 0.3 9.0 19.5
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD/	ppm	ASTM D5185m ASTM D7624 *ASTM D7624 *ASTM D7624 *ASTM D7415 method	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >3.0 limit/base >4 >20 >30 limit/base	0 57 <1 882 1001 978 1148 3246 current 7 4 2 ▲ 4.5 current 0.3 8.8 19.0 current	0 57 0 895 1112 1000 1199 3379 history1 7 <1 0 ▲ 3.1 history1 0.2 7.9 18.1 history1	0 61 <1 1011 1145 1038 1329 3406 history2 5 3 0 ▲ 4.3 history2 0.3 9.0 19.5 history2

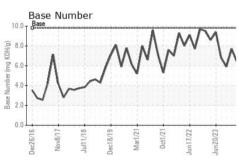


OIL ANALYSIS REPORT



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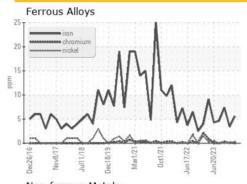


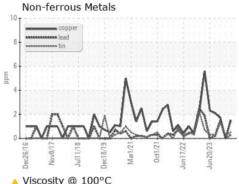


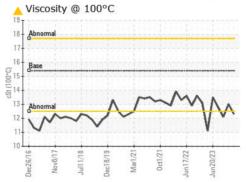
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

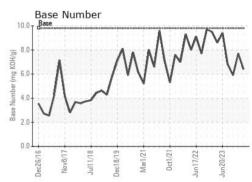
FLUID PROPE	RHES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.3</b>	13.0	<u> </u>

# **GRAPHS**













Certificate 12367

Laboratory

Sample No.

Unique Number : 11050495

: GFL0103181 Lab Number : 06193743

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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

: 29 May 2024 **Tested** : 30 May 2024 Diagnosed

: 30 May 2024 - Wes Davis Test Package : FLEET ( Additional Tests: PercentFuel )

3741 Conquest Drive

Contact: Craig Johnson craig.johnson@gflenv.com T: (919)662-7100

GFL Environmental - 001 - Raleigh(CNG)

* - 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)

Report Id: GFL001 [WUSCAR] 06193743 (Generated: 05/30/2024 16:14:08) Rev: 1

Submitted By: aka Keith - Ronald Gregory

F: (919)662-7130

Garner, NC US 27529