

<b>CUSTOMER:</b>	<b>LANCE WALRAB</b>	<b>Machine Condition</b>
<b>PLANT:</b>	<b>LANCES GARAGE</b>	
<b>MACHINE NAME:</b>	<b>GS-F</b>	<b>NORMAL</b>
<b>LOCATION</b>	<b>ATLANTA, GA</b>	
<b>MACHINE TYPE:</b>	<b>GAS ENGINE</b>	
<b>LUBE TYPE:</b>	<b>UNK UNKNOWN OIL</b>	
<b>MACH MFGR:</b>	<b>LEXUS</b>	
<b>MACH MOD:</b>	<b>GS-F</b>	<b>Lubricant Condition</b>
<b>RECEIVED:</b>	<b>01-JUN-17</b>	
<b>CONTACT 1:</b>	<b>LANCE WOLRAB</b>	
<b>REPORT:</b>	<b>07-JUN-17 14:54:42</b>	
<b>SAMPLE NO:</b>	<b>3144-1-1-1</b>	
<b>PO NUMBER:</b>	<b>CREDIT CARD</b>	<b>MARGINAL</b>

**RECOMMENDATIONS**

- When silicon begins to show an increase, a filter change is recommended.
- Locate and eliminate the source of water entry and resample.
- The type of lubricant (brand and manufacturer) was not specified on the sample bottle label. Kindly supply this information as it can DRAMATICALLY alter the diagnostic which takes into consideration comparison results with your unused lube specs.

**LOGIC**

- Viscosity level determined cannot be compared to the unused lubricant value as the specs of lube in service are not known.
- Silicon indicates contamination from dust, dirt, or other abrasive. Silicone is a constituent of some types of gaskets.

**MISCELLANEOUS**

- Lubricant refers to oil, fuel, biofuel, grease, coolant or varnish.
- The infrared analysis is limited to the interpretation of Joint Oil Analysis Program ( JOAP), US Military Specs for this type of oil.
- Trend analysis could not be performed. (Min. 4 tests required)
- Our database indicates no site contaminant for this unit. Please advise laboratory if this is not the case.
- Due to lubricant type submitted and registered as unknown, condition of lubricant is given as Normal by default as lubricant is self-referenced. Condition of lubricant might change upon receipt of updated lubricant information. Kindly submit this information.
- Tank capacity 9.8 liter(s).

**SAMPLING HISTORY**

LabNo	SAMPLE DATE MM-DD-YYYY	TIME ON OIL / TSN	TIME SINCE OVER- HAUL / TSO	OIL CHANGED (Y/N)	PREVIOUS CONDI- TION MACH/OIL
2279164	06-01-2017	5037	10220	N	(n/a)

**(SP) SPECTROSCOPIC ANALYSIS [ASTM D5185] (elements seen in ppm)**

TESTED ELEMENTS ARE: Fe, Cu, Pb, Sn, Cr, Al, Ni, Ti, Ag, V, Mg, Si, B, Na, Ba, Ca, P, Mn, Zn, Mo, Cd, K.

Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
Fe-IRON	14								-
Cu-COPPER	44								-
Sn-TIN	1.0								-
Al-ALUMINUM	4.0								-
Mo-MOLYBDENUM	174								-
Si-SILICON	33								-
Mg-MAGNESIUM	65								-
B-BORON	51								-
Ba-BARYUM	5.0								-
Ca-CALCIUM	2141								-
P-PHOSPHORUS	734								-
Mn-MANGANESE	1.0								-
Zn-ZINC	896								-

**(FTIR) FOURIER TRANSFORM INFRARED ANALYSIS (Absorbance)**

Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
SOOT	2								-
AW/EP	14								-
OXIDATION	12								-
SULFATE	18								-
NITRATION	8								-
GLYCOL	0								-
FUEL/DILUTION	238								-
WATER	15								-

**SOOT (%)**

Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
SOOT (%)	0.11								-

**VISCOSITY/40 [ASTM D445]**

Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
in cSt 40°C	51.24								-

**VISCOSITY/100 [ASTM D445]**

Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
in cSt 100°C	8.98								-

TBN [ASTM D4739] (mg KOH/g)									
Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
TOTAL BASE NO	6.16								-

TAN [ASTM D974 OR D664] (mg KOH/g)									
Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
TOTAL ACID NO	0.10								-

KARL FISHER (%)									
Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
WATER KF	0.072								-

VISCOSITY INDEX [ASTM D2270]									
Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
VISCOSITY INDEX	157.00								-

FUEL(%)									
Date(MM/DD/YY)	06-01-17	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REF
Labno	2279164								
FUEL	2.30								-

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