Lubricant Analysis Report

North America: +1-877-458-3315

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

Overall report severity based on comments.

Account Information		Component Information		Sample Information	
Account Number:	OILANA-7501-8864	Component ID:	512	Tracking Number:	16099J00437
Company Name:	ALBERT L. BELL	Secondary ID:	2012 Peterbilt 386	Lab Number:	I-601271
Contact:		Component Type:	DIESEL ENGINE	Lab Location:	Indianapolis
Address:	P.O. BOX 4001 SAN N. ANGELO, TX 76902 US	Manufacturer:	CUMMINS	Data Analyst:	RMF
		Model:	ISX	Sampled:	11-Aug-2016
		Application:	O-T-R TRUCKING	Submitted:	12-Aug-2016
Phone Number:	940-389-3129	Sump Capacity:	46 qt	Received:	19-Aug-2016
				Completed:	22-Aug-2016

Filter Information		Miscellaneous Information	Product Information	
Filter Type:	BYPASS		Product Manufacturer:	CHEVRON
Micron Rating:	1		Product Name:	DELO 400 LE
			Viscosity Grade:	SAE 15W40

Comments	Flagged data does not indicate an immediate need for maintenance action. Continue to observe the trend and monitor equipment and fluid conditions. Base Number is MODERATELY LOW. As Base Number depletes, the ability to neutralize acids is diminished and corrosive wear may occur. Sludge and deposits may form. MODERATE POTASSIUM level could be a coolant indicator; Coolant leaks at this level will most likely not be detectable through normal diagnostics; Suggest MONITORING COOLANT LEVEL closely between samples; Aluminum is at a MINOR LEVEL; ALUMINUM sources in ENGINES include pistons, block and components (intake manifold, head, bearing caps), thrust bearings, main/rod bearing overlay or backing, alumina silica, or contamination from grease. Lubricant and filter change acknowledged. Your note was taken into consideration.

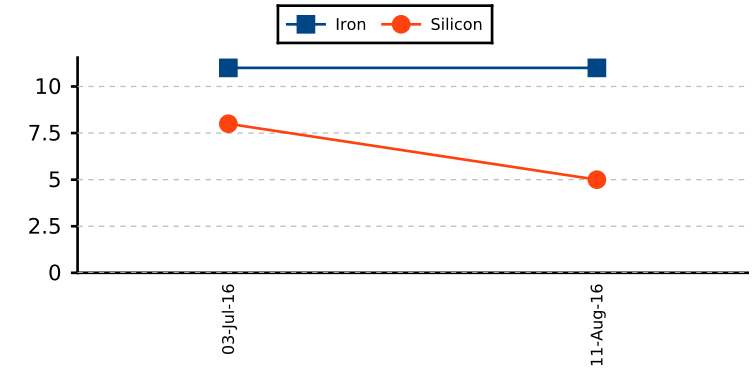
	Wear Metals (ppm)										Contaminant Metals (ppm)			Multi-Source Metals (ppm)						Additive Metals (ppm)				
Sample #	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
1	11	0	0	1	12	0	0	0	0	0	8	4	0	0	9	0	0	0	7	108	1979	0	881	952
2	11	1	0	16	0	0	0	0	0	0	5	4	41	0	78	0	0	0	244	390	1381	0	1012	1146

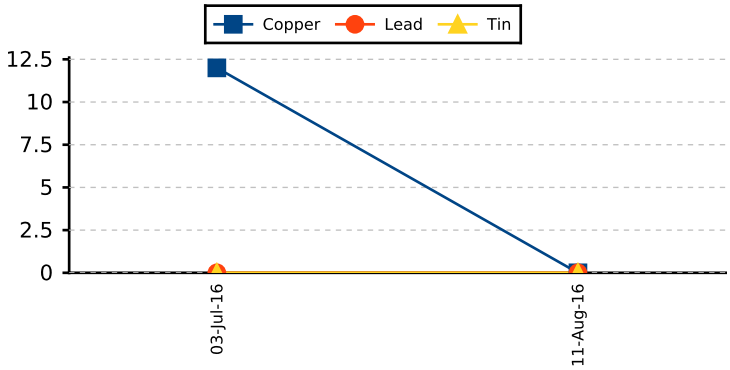
	Sample Information							Contaminants			Fluid Properties					
Sample #	Date Sampled	Date Received	Lube Time mi	Unit Time mi	Lube Change	Lube Added gal	Filter Change	Fuel Dilution % Vol	Soot % Vol	Water % Vol	Viscosity 40°C cSt	Viscosity 100 °C cSt	Acid Number mg KOH/g	Base Number mg KOH/g	Oxidation abs/cm	Nitration abs/0.1 mm
1	03-Jul-2016	11-Jul-2016	17998	514886	Yes	0	Yes	<1 - Estimate	0.1 - E2412	<.1 - FTIR		14.1		4.18	16	8
2	11-Aug-2016	19-Aug-2016	17395	532281	Yes	0	Yes	<1 - Estimate	0.3 - E2412	<.1 - FTIR		14.3		2.80	15	8

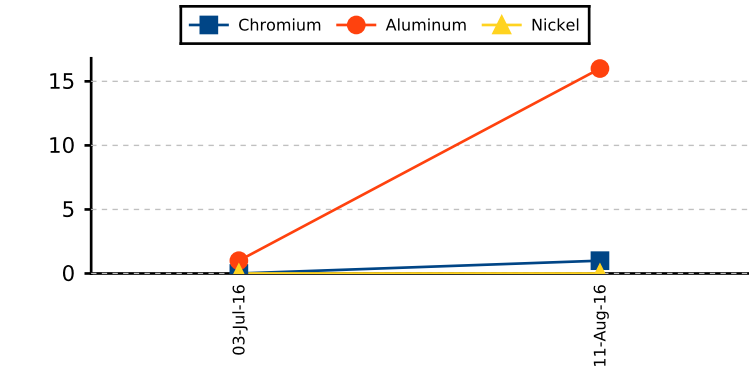
	Particle Count (particles/mL)									Additional Testing
Sample #	ISO Code Based On 4/6/14	> 4 µm	> 6 µm	> 10 µm	> 14 µm	> 21 µm	> 38 µm	> 70 µm	> 100 µm	Test Method
1	//									
2	//									

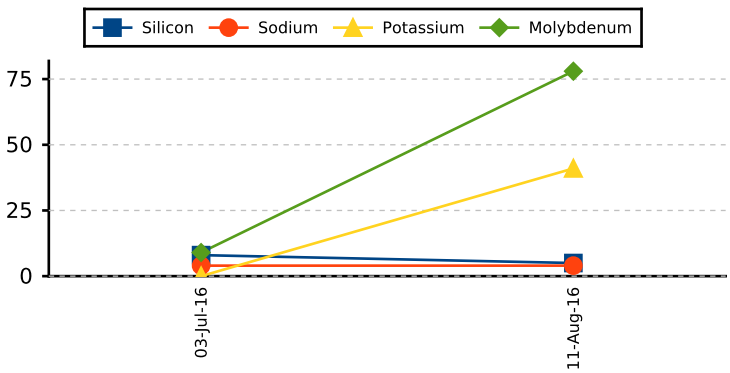
Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Missing fluid or component information limits the evaluation. No warranty is expressed or implied.

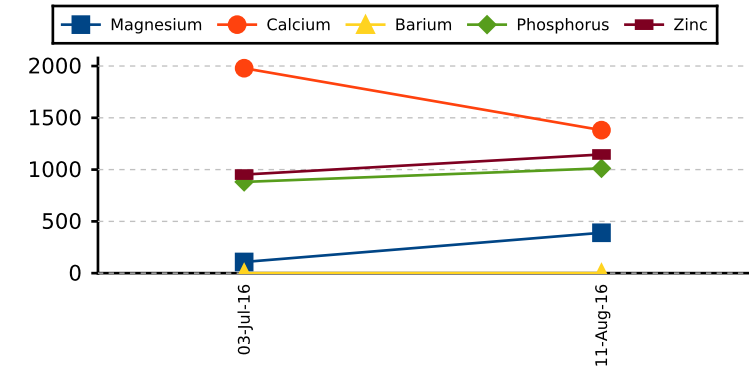
Historical Comments	1	Data indicates no abnormal findings. Resample at normal interval. Lubricant and filter change acknowledged. Please provide missing lubricant information. Manufacturer, product name, and viscosity grade are needed to properly evaluate data.

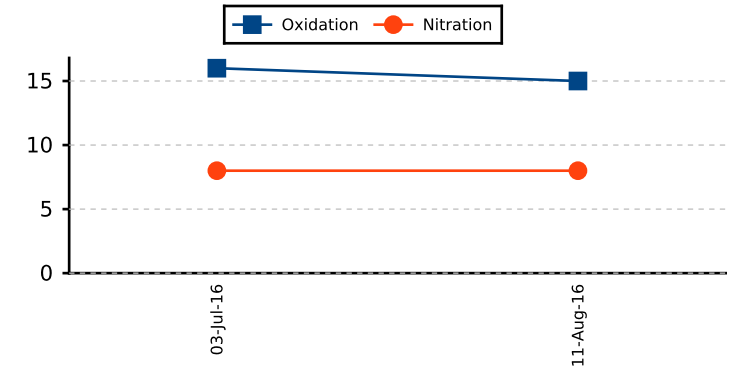

Iron
Silicon
10
7.5
5
2.5
0
03-Jul-16
11-Aug-16

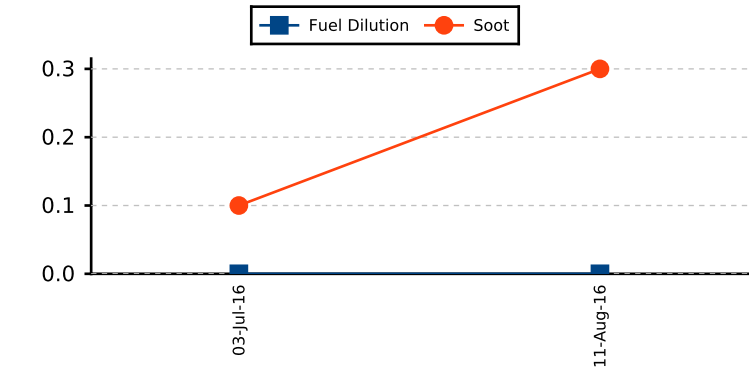

Copper
Lead
Tin
12.5
10
7.5
5
2.5
0
03-Jul-16
11-Aug-16

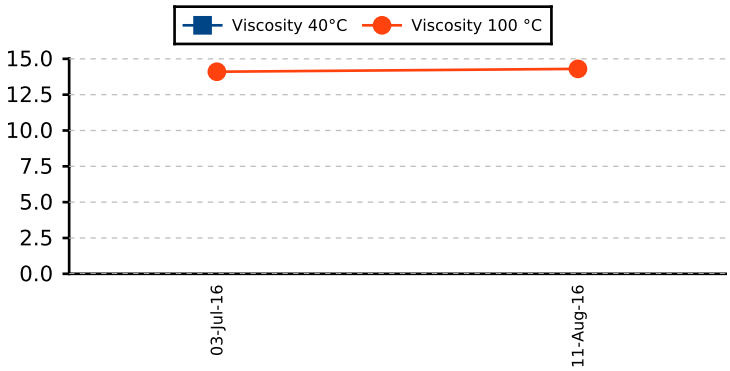

Chromium
Aluminum
Nickel
15
10
5
0
03-Jul-16
11-Aug-16

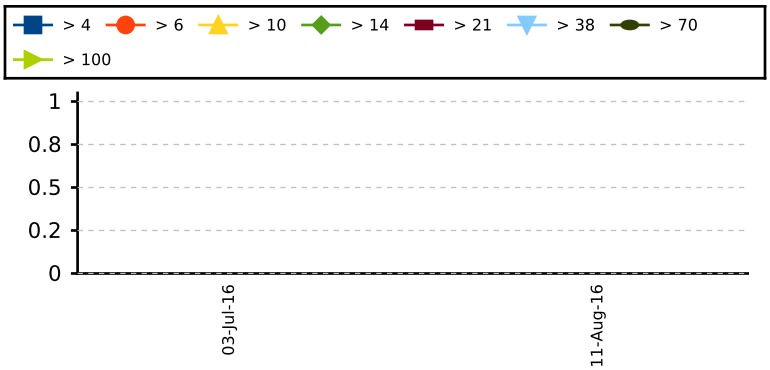

Silicon
Sodium
Potassium
Molybdenum
75
50
25
0
03-Jul-16
11-Aug-16

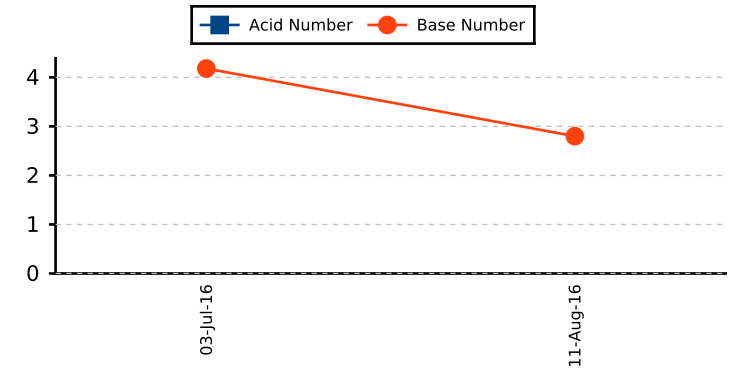

Magnesium
Calcium
Barium
Phosphorus
Zinc
2000
1500
1000
500
0
03-Jul-16
11-Aug-16


Oxidation
Nitration
15
10
5
0
03-Jul-16
11-Aug-16


Fuel Dilution
Soot
0.3
0.2
0.1
0.0
03-Jul-16
11-Aug-16


Viscosity 40°C
Viscosity 100 °C
15.0
12.5
10.0
7.5
5.0
2.5
0.0
03-Jul-16
11-Aug-16


> 4
> 6
> 10
> 14
> 21
> 38
> 70
> 100
1
0.8
0.5
0.2
0
03-Jul-16
11-Aug-16


Acid Number
Base Number
4
3
2
1
0
03-Jul-16
11-Aug-16