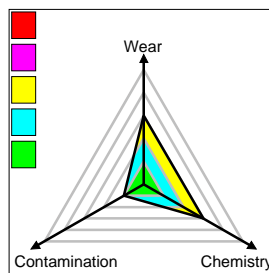


Sample Trend

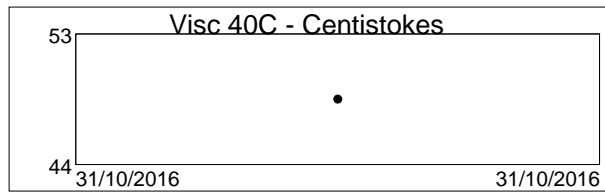
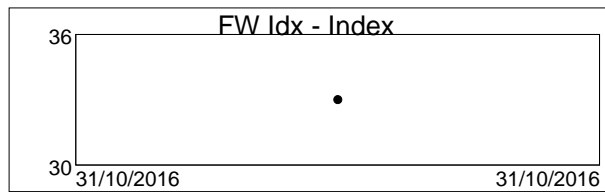
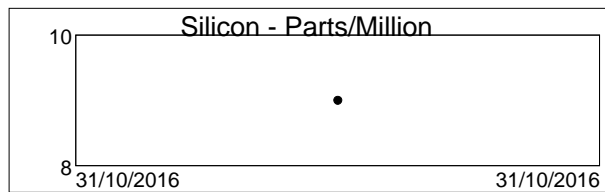
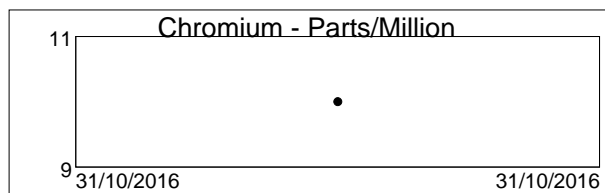
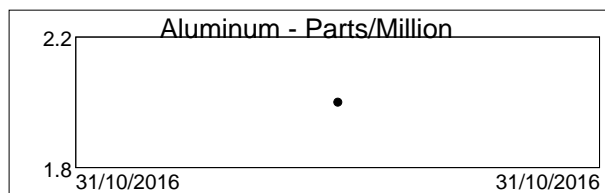
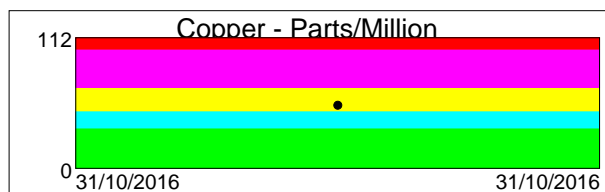
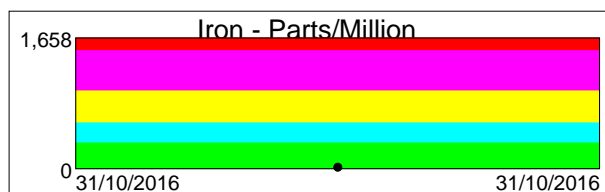
Database: OIL CHECK	Equipment: No1 - VAC PUMP
Area: K371 - ACE-GROUP	Point: P1 - VAC PUMP

Ref Oil	ACE GROUP - FULLY SYNTHETIC OIL - VACUUM PUMP OIL		
Sample Date	Reference	31/10/2016	
Sample #	Oil	1751901	
Lab #		1751901	
Analyst		dave	
Unit Usage - hrs			
Oil Usage - hrs			
Oil Added - gus			
Received Date		01/11/2016	
Report Date		02/11/2016	



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Wear			
Iron - ppm	0.0	21.0	
Copper - ppm	0.00	54.00	
Aluminum - ppm	0.00	2.00	
Chromium - ppm	0.00	10.00	
Lead - ppm	0.00	2.00	
Tin - ppm	0.00	26.00	
Nickel - ppm	0.00	0.00	
FW Idx - Idx		33	
Silver - ppm	0.00	0.00	
Manganese - ppm	0.00	1.00	



Contamination			
Silicon - ppm	8.00	9.00	
Sodium - ppm	336.00	281.00	
Water K.Fish - ppm	0.00	0.00	
Titanium - ppm	0.00	0.00	
ISO >2 - n/a			
ISO >5 - n/a			
ISO >15 - n/a			
Cnts >2 - pml			
Cnts >5 - pml			
Cnts >15 - pml			
Cnts >25 - pml			
Cnts >50 - pml			
Cnts >75 - pml			
Bacteria TC - cfu			
Potassium - ppm			
Fungus/Mold - cfu			

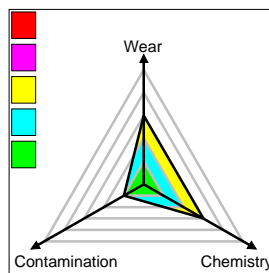
Chemistry			
Molybdenum - ppm	0.00	0.00	
Visc 40C - cSt	38.3	48.5	
Phosphorus - ppm	2.00	15.00	
Calcium - ppm	2.00	4.00	
Magnesium - ppm	0.00	8.00	
Zinc - ppm	5.00	377.00	
Potassium - ppm			
Sulfur - ppm			
Visc 100C - cSt			
Visc Idx - VI			
RPVOT - min			
Strong Acid # - ?			
RULER - Idx			

*** SAMPLE AFTER FAILURE; PRE FILTER *** Oil is very dark and opaque, in appearance, possibly oxidised through age or running hot. Viscosity is high. Readings suggest bearing wear has occurred. Zinc level is much higher than the virgin oil and suggests possible environmental contamination through zinc oxide (glassmaking chemical) or contamination by a different oil ? (also indicated by the high viscosity). Oil and filter change advised. If external contamination cannot be stopped, we advise more frequent oil changes to negate its effect.

Sample Trend

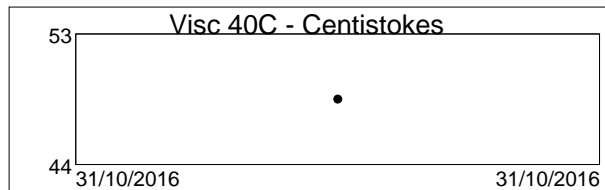
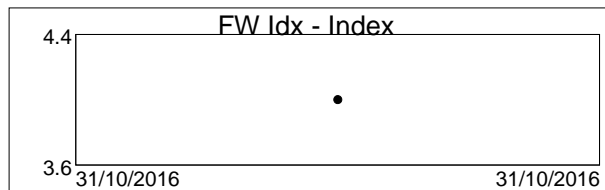
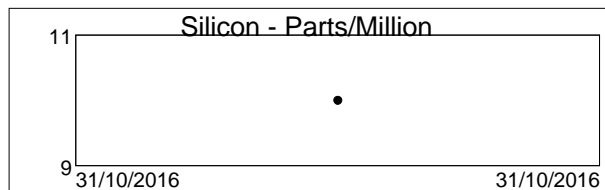
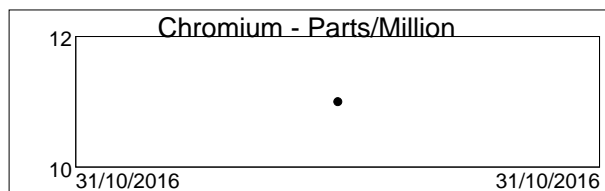
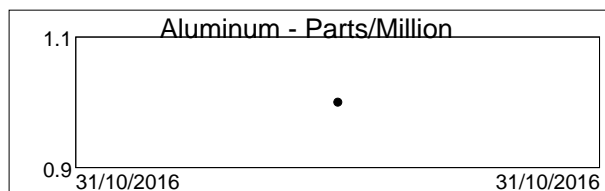
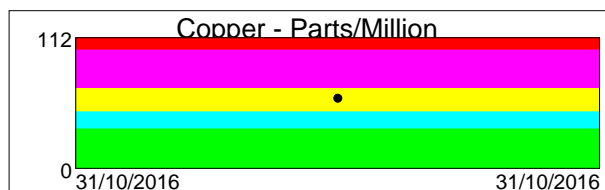
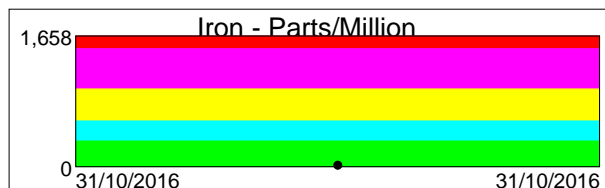
Database: OIL CHECK	Equipment: No3 - VAC PUMP
Area: K371 - ACE-GROUP	Point: P1 - VAC PUMP

Ref Oil	ACE GROUP - FULLY SYNTHETIC OIL - VACUUM PUMP OIL		
Sample Date	Reference	31/10/2016	
Sample #	Oil	1751902	
Lab #		1751902	
Analyst		dave	
Unit Usage - hrs			
Oil Usage - hrs			
Oil Added - gus			
Received Date		01/11/2016	
Report Date		02/11/2016	



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Wear			
Iron - ppm	0.0	21.0	
Copper - ppm	0.00	60.00	
Aluminum - ppm	0.00	1.00	
Chromium - ppm	0.00	11.00	
Lead - ppm	0.00	2.00	
Tin - ppm	0.00	29.00	
Nickel - ppm	0.00	0.00	
FW Idx - Idx		4	
Silver - ppm	0.00	0.00	
Manganese - ppm	0.00	1.00	



Contamination			
Silicon - ppm	8.00	10.00	
Sodium - ppm	336.00	310.00	
Water K.Fish - ppm	0.00	0.00	
Titanium - ppm	0.00	0.00	
ISO >2 - n/a			
ISO >5 - n/a			
ISO >15 - n/a			
Cnts >2 - pml			
Cnts >5 - pml			
Cnts >15 - pml			
Cnts >25 - pml			
Cnts >50 - pml			
Cnts >75 - pml			
Bacteria TC - cfu			
Potassium - ppm			
Fungus/Mold - cfu			

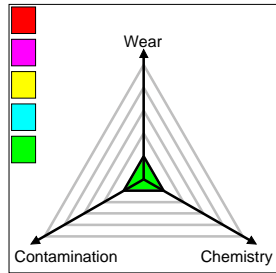
Chemistry			
Molybdenum - ppm	0.00	0.00	
Visc 40C - cSt	38.3	48.4	
Phosphorus - ppm	2.00	17.00	
Calcium - ppm	2.00	4.00	
Magnesium - ppm	0.00	9.00	
Zinc - ppm	5.00	432.00	
Potassium - ppm			
Sulfur - ppm			
Visc 100C - cSt			
Visc Idx - VI			
RPVOT - min			
Strong Acid # - ?			
RULER - Idx			

*** SAMPLE AFTER FAILURE; AFTER FILTER *** Oil is very dark and opaque, in appearance, possibly oxidised through age or running hot. Viscosity is high. Readings suggest some bearing wear has occurred. Zinc level is much higher than the virgin oil and suggests possible environmental contamination through zinc oxide (a chemical used in glassmaking or contamination by a different oil ? (also indicated by the high viscosity). Oil and filter change advised. If external contamination cannot be stopped, we advise more frequent oil changes to negate its effect.

Sample Trend

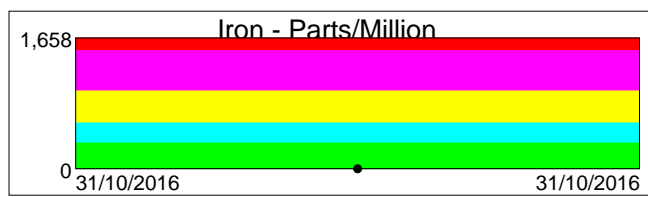
Database: OIL CHECK	Equipment: E3 - VIRGIN OIL
Area: K371 - ACE-GROUP	Point: P1 - VAC PUMP

Ref Oil	No Reference Oil
Sample Date	31/10/2016
Sample #	1751903
Lab #	1751903
Analyst	mike
Unit Usage - hrs	
Oil Usage - hrs	
Oil Added - gus	

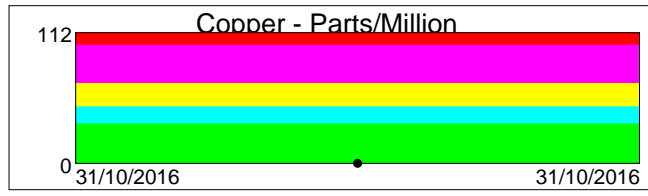


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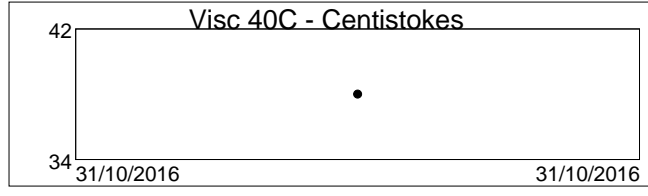
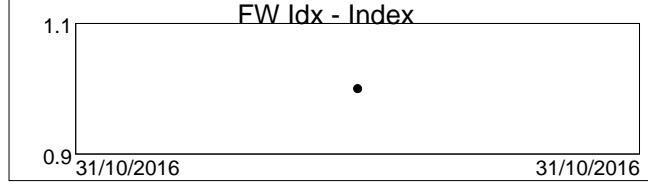
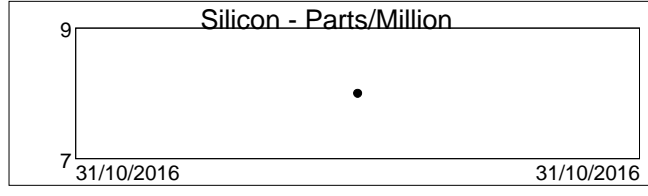
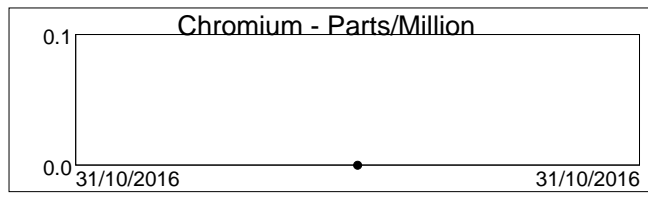
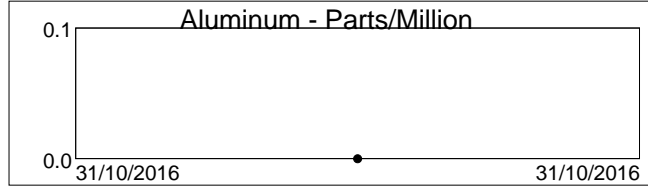
Wear	0
Iron - ppm	0.0
Copper - ppm	0.00
Aluminum - ppm	0.00
Chromium - ppm	0.00
Lead - ppm	0.00
Tin - ppm	0.00
Nickel - ppm	0.00
FW Idx - Idx	1
Silver - ppm	0.00
Manganese - ppm	0.00



Contamination	0
Silicon - ppm	8.00
Sodium - ppm	336.00
Water K.Fish - ppm	0.00
Titanium - ppm	0.00
ISO >2 - n/a	
ISO >5 - n/a	
ISO >15 - n/a	
Cnts >2 - pml	
Cnts >5 - pml	
Cnts >15 - pml	
Cnts >25 - pml	
Cnts >50 - pml	
Cnts >75 - pml	
Bacteria TC - cfu	
Potassium - ppm	
Fungus/Mold - cfu	



Chemistry	0
Molybdenum - ppm	0.00
Visc 40C - cSt	38.3
Phosphorus - ppm	2.00
Calcium - ppm	2.00
Magnesium - ppm	0.00
Zinc - ppm	5.00
Potassium - ppm	
Sulfur - ppm	
Visc 100C - cSt	
Visc Idx - VI	
RPVOT - min	
Strong Acid # - ?	
RULER - Idx	



VIRGIN SYNTHETIC OIL;