

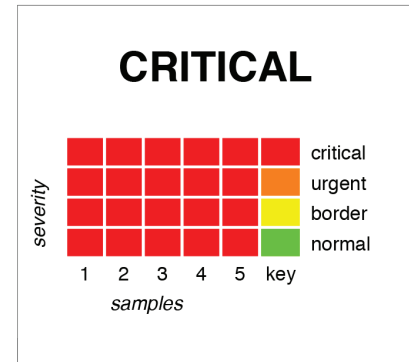
Report Example

Oil Analysis



Condition Monitoring Specialists

PROBLEM SEVERITY



Vehicle : B15
 Alt. ID : - -
 Model : FORKLIFT SZMC3500 WHEEL LOADER
 Component : ENGINE
 Model : FORKLIFT SZMC3500

Code : 1BBPMT
 Job No. : -
 Site : PLANT
 Oil : AUTOLUBBE 800 SAE 15W40
 Fuel Type :

DIAGNOSIS

5.) Sample Number E534386 on 04.02.2019 smr 1916 HRS
 Viscosity appears low for this grade of oil. 4.5% Fuel dilution taking place - check fuel system for malfunction.
 Top end wear rates are high. Check that blow-by is not excessive.
 Critical silicon (dust) level in the oil - check air intake system for leaks and for defective oil filler cap, breather or dipstick and dipstick holder.
 The oil is not fit for further use due to contamination and degradation. Change the oil. Please return feedback. REPEAT PROBLEM fuelx6. REPEAT PROBLEM air-cleanerx2. **** Workshop@bertsbricks_co_za: change oil filters replace air cleaner element. On 13 Feb 2019 @ 1870

PREVIOUS HISTORY

DIAGNOSES

- 1.) Sample Number E208797 on 18.05.2018 smr 653 HRS
 Wear rates are normal for a unit bedding in. 9% Fuel dilution taking place - check fuel system for malfunction. 0.2% Water present in the oil - check for point of entry. The oil is not fit for further use due to contamination and degradation. Change the oil and oil filters. Please return feedback. REPEAT PROBLEM fuelx2.
- 2.) Sample Number E245869 on 02.07.2018 smr 928 HRS
 Viscosity appears low for this grade of oil. 8.5% Fuel dilution taking place - check fuel system for malfunction. Warning, high levels of fuel can dilute wear and other contaminant levels making readings appear normal or low. Fuel dilution and decreased viscosity makes the oil unfit for further use. Change the oil and oil filters. Please return feedback. REPEAT PROBLEM fuelx3.
- 3.) Sample Number E306862 on 14.09.2018 smr 1290 HRS
 Viscosity appears low for this grade of oil. 10% Fuel dilution taking place - check fuel system for malfunction. Warning, high levels of fuel can dilute wear and other contaminant levels making readings appear normal or low. Fuel dilution and decreased viscosity makes the oil unfit for further use. Change the oil and oil filters. Please return feedback. REPEAT PROBLEM fuelx4.
- 4.) Sample Number E457603 on 29.11.2018 smr 1635 HRS
 Viscosity appears low for this grade of oil. All wear rates are high. Critical silicon (dust) level in the oil - check air intake system for leaks and for defective oil filler cap, breather or dipstick and dipstick holder.
 4.5% Fuel dilution taking place - check fuel system for malfunction.
 Check that blow-by is not excessive. Check for low oil pressure. The oil is not fit for further use due to contamination and degradation. Change the oil. Please return feedback. REPEAT PROBLEM fuelx5.

FEEDBACK

- On 31 May 2018 @ 712
 Workshop@bertsbricks_co_za: change oil filters oc ok replace oil filler cap o ring(water) check fan belt idling.
- On 13 Aug 2018 @ 991
 Workshop@bertsbricks_co_za: change oil filters check fuel and idling o. C. Ok.
- On 10 Oct 2018 @ 1366
 Workshop@bertsbricks_co_za: change oil filters check for smoking o. C. Ok.
- On 07 Dec 2018 @ 1662
 Workshop@bertsbricks_co_za: change oil filters repair air intake pipe.

Report Example

Oil Analysis

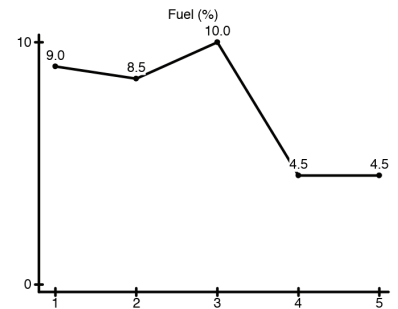
Vehicle: B15 - ENGINE - Alt. ID: - -

SAMPLE NUMBER	DATE SAMPLED	LAB DATE	OIL CONSUMPTION	SMR	UNITS	OIL IN SERVICE	FILTER CHANGE	OIL DRAIN	RRI	
1	E208797	18.05.18	21.05.18	0.00	653	HRS	364	No	No	250
2	E245869	02.07.18	05.07.18	0.01	928	HRS	216	No	No	250
3	E306862	14.09.18	17.09.18	0.01	1290	HRS	299	No	No	250
4	E457603	29.11.18	29.11.18	0.01	1635	HRS	269	No	No	250
5	E534386	04.02.19	05.02.19	0.01	1916	HRS	254	No	No	250

WEAR METALS

Sample	Iron	Chromium	Nickel	Aluminium	Copper	Tin	Lead	Titanium	Bismuth	PQ Index
1	106	3	0	13	10	9	12	0	0	13
2	46	1	0	11	4	4	3	0	0	21
3	66	3	0	19	5	5	7	0	0	14
4	149	27	0	91	14	10	10	3	0	27
5	104	18	0	74	9	6	4	4	0	9

FUEL



30 spectrometric analyses are carried out on all samples but only relevant results are reported in parts per million.

CONTAMINANTS

Sample	Silicon	Sodium	Manganese	Soot Value	Soot %	Oxidation	Sulphate	Nitrates	Fuel (%)	Water (%)
1	11	17	1	43	0.8	15	20	12	9.0	0.2
2	12	3	0	19	0.4	13	20	9	8.5	ND
3	19	2	0	29	0.6	16	22	11	10.0	ND
4	139	4	2	34	0.7	15	22	10	4.5	ND
5	96	4	1	24	0.5	13	20	10	4.5	ND

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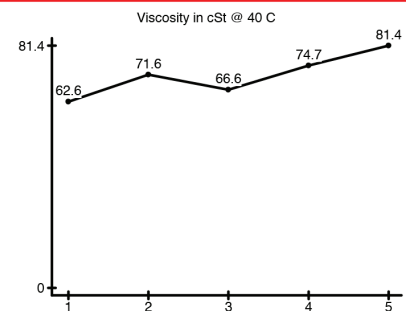
ADDITIVES & LUBRICANT CONDITION

Sample	Magnesium	Calcium	Molybdenum	Zinc	Phosphorous	Boron	Sulphur	TBN(D4739)	TBN by FTIR
1	9	2119	0	837	731	76	6003	3.8	
2	10	2655	1	972	870	149	5733	6.2	
3	12	2351	2	997	785	128	5230	5.3	
4	17	2450	2	1006	806	84	4583	6.3	
5	18	2775	1	1080	889	87	4704	6.8	

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VISCOSITY

Sample	Viscosity in cSt @ 40 C	Viscosity in cSt @ 100 C
1	62.6	11.0
2	71.6	10.7
3	66.6	10.2
4	74.7	11.1
5	81.4	11.5



GRAPHICAL REPRESENTATION OF KEY DATA

