



MOBILE OIL ANALYSIS REPORT

CONTAMINATION	NORMAL
OIL CONDITION	NORMAL
WEAR	NORMAL

[R12] R12-F-02 - Diesel Engine

Unit Make : CATERPILLAR
 Unit Model : C-18
 Comp Make : {n/a}
 Comp Model : {n/a}

Serial No : WJH04812
 Cust. Ref No. : {n/a}
 Stub No. : KL-M2300066

Date Rec'd : Jul 19, 2012
 Sample Date : Jun 28, 2012
 Diagnostician : Jonathan Hester

RECOMMENDATION

Resample at the next service interval to monitor.

Sample Date	04/20/12	05/08/12	06/08/12	Current	UOM
Time on Unit	7269	7605	8295	8746	hrs
Time on Oil	0	335	1025	1476	hrs
Time on Fltr	0	335	1025	1476	hrs
Oil Maint.	changed	not chg	not chg	changed	---
Filter Maint.	changed	not chg	not chg	changed	---

CONTAMINATION

There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Sample Date	04/20/12	05/08/12	06/08/12	Current	Abn
Silicon	3.9	4.6	2.3	3.6	25
Fuel (%)	<2.0	<2.0	<2.0	<2.0	5
Glycol	---	---	---	---	0.06
Water (%)	<0.1	<0.1	<0.1	<0.1	0.1
Soot (%)	0.3	0	0.1	0.2	3
>4µm(c)	641	2141	1115	756	---
>6µm(c)	349	1166	607	412	---
>14µm(c)	59	198	103	70	---
>21µm(c)	20	67	34	23	---
>38µm(c)	3	10	5	3	---
>70µm(c)	0	1	0	0	---
ISO 4406(c)	16/13	17/15	16/14	16/13	---

OIL CONDITION

Oil Type: 17 GAL of CHEVRON DELO 400 LE 15W40

The condition of oil is suitable for further service.

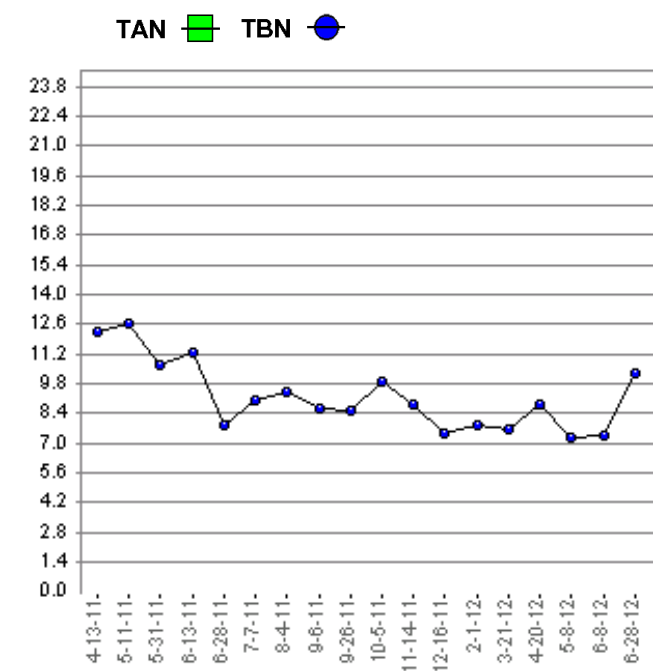
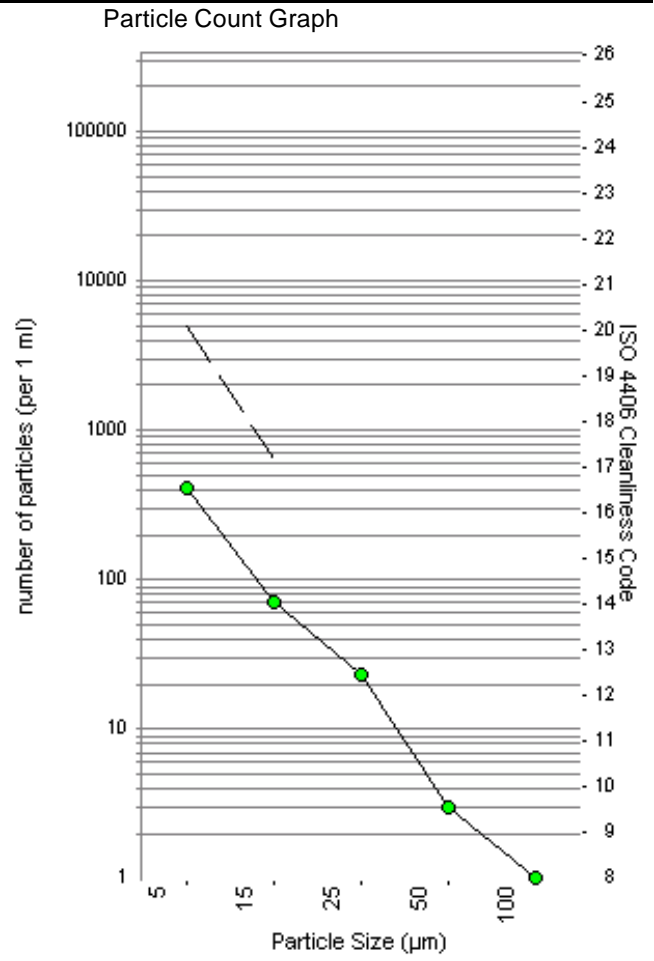
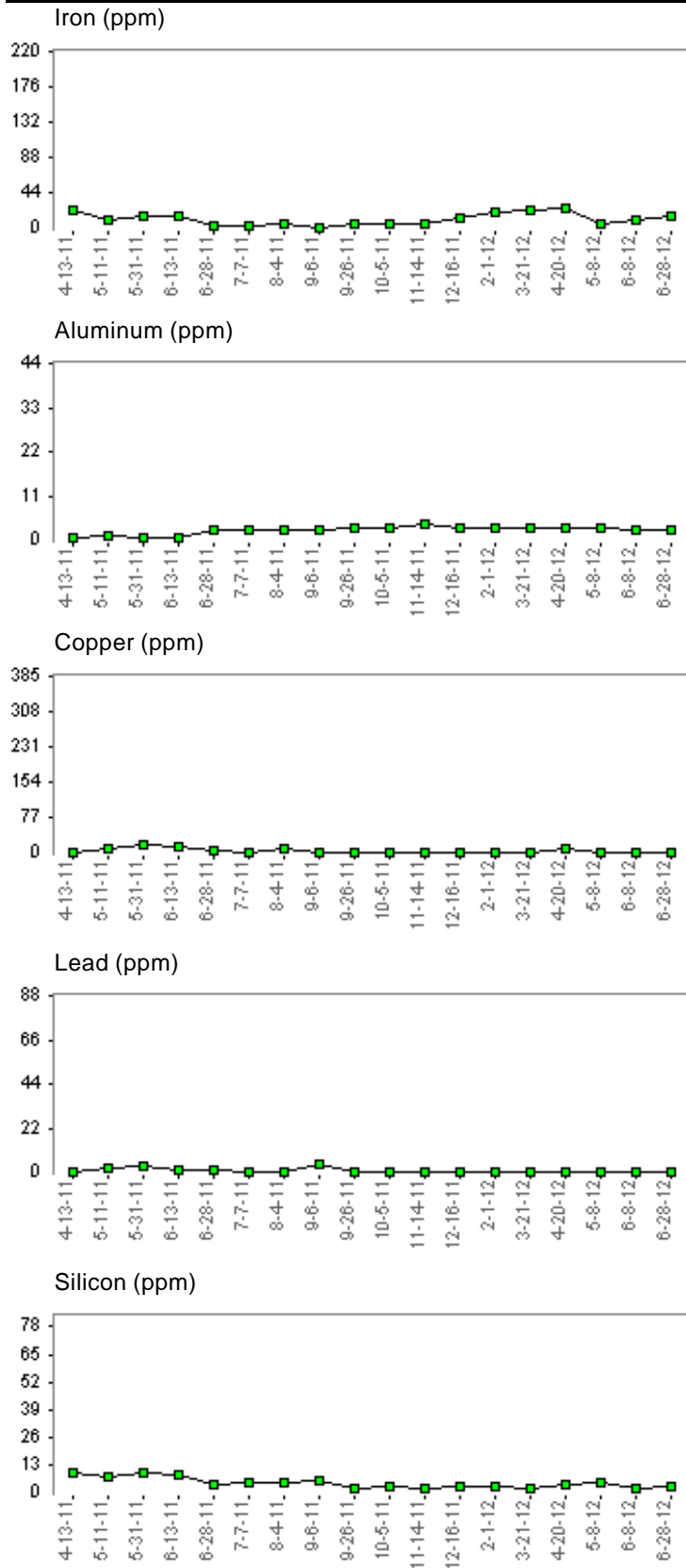
Sample Date	04/20/12	05/08/12	06/08/12	Current	Base
Potassium	0.3	1.2	0.9	4.8	---
Boron	391	404	373	410	---
Barium	0.0	0.0	0.0	0.0	---
Calcium	1627	1654	1597	1809	---
Magnesium	391	302	320	379	---
Molybdenum	85	68	70	80	---
Sodium	2.5	2.6	2.1	2.2	---
Phosphorus	1131	985	1056	1142	---
Sulfur	3198	2922	2831	3044	---
Zinc	1240	1177	1152	1336	---
Visc@100°C	13.69	13.89	13.29	13.35	---
TBN	8.79	7.31	7.38	10.3	---

WEAR

All component wear rates are normal.

Sample Date	04/20/12	05/08/12	06/08/12	Current	Abn
PQ	---	---	---	---	---
Iron	26	4.9	10	15	100
Nickel	0.2	0.1	0.1	0.1	2
Chromium	0.5	0.1	0.2	0.1	20
Titanium	0.1	0.0	0.0	0.0	2
Copper	9.9	2.7	2.2	2.0	330
Aluminum	3.2	3.3	2.8	2.9	25
Tin	0.0	0.0	0.3	0.0	15
Lead	0.0	0.0	0.4	0.0	40

Graphs



If you have any questions concerning this sample report (work order no 03107104) please call 1-800-237-1369.

The leader in oil analysis
WearCheck International
 Africa, Asia, Australia, Europe, North America

ATTN: EDDIE LARUE
 SILVER OAK DRILLING
 PO BOX 1370
 ARTESIA, NM 88211
 (575)746-4405