

International Independent Inspection & Testing Company

Dubai: P.O.Box.5778, Plot No. TP/010305, Techno Park, Dubai, United Arab Emirates. Tel: 00 971 4 8867400.

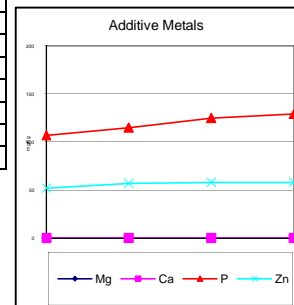
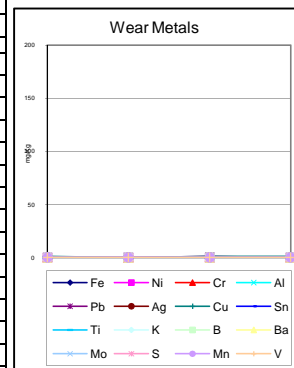
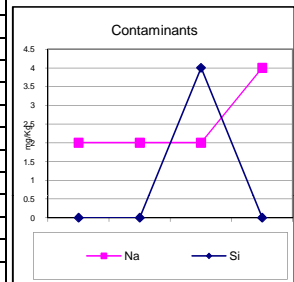
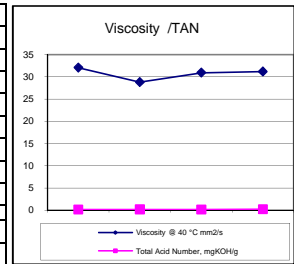
Operations: Fax: 00 971 4 8867401 Email: operations@geochem.ae Laboratory: Fax: 00 971 4 8867402, Email: laboratory@geochem.ae

Fujairah: Fujairah Free Zone 1, P.O Box. 3026, Fujairah - U.A.E., Tel.+971-9-2228360, Fax.+971-9-2228370, Email : geo\_chem @emirates.net.ae

**USED OIL ANALYSIS PROGRAM**

Company	:	Sample Identification	:	03-KT0603	URGENT CAUTION NORMAL
Address	:	Position drawn	:	Reservoir	
Phone	:	Machine	:	HP MR Comp. Driring Turbine	
Fax	:	Lubricant Make	:	Mobil DTE Light	
Attn.	:	Reservoir Capacity	:	N/P	
	:	Fuel in use	:	N/P	
	:	Label No	:	N/P	
	:	Make/ Model	:	Nuovo Pignone MS-5002/D	

TEST & UNIT	METHOD	Limits	RESULT	RESULT	RESULT	RESULT
Lab Report No : GC\LR\			65538/2010	77748/2010	89586/2011	102690/2011
Sample No. GC\			65538	77748	89586	102690
Date Sampled			05/07/2010	10/10/2010	11/01/2011	13/04/2011
Date Received			14/07/2010	17/10/2010	19/01/2011	19/04/2011
Date Reported			03/08/2010	25/10/2010	31/01/2011	30/04/2011
Hours on Unit			101879	104511	106730	108930
Hours on Oil			N/P	N/P	N/P	N/P
Oil Added			N/P	N/P	N/P	N/P
Viscosity @ 40 °C mm <sup>2</sup> /s	D445	25.6-38.4	32.07	28.80	30.94	31.18
Total Acid Number, mgKOH/g	D664	1.00	0.11	0.13	0.11	0.16
Water Content, ppm	D6304	<300	137	68	71	57
Fuel Dilution-Diesel(810cm-1),Abs/cm *	FTIR	-	0.00	0.00	0.00	0.00
Oxidation(1720cm-1),Abs/cm*	FTIR	-	0.00	0.00	0.00	0.00
Nitration(1640cm-1),Abs/cm*	FTIR	-	2.64	1.98	0.64	1.24
Sulphation(1150cm-1),Abs/cm*	FTIR	-	0.00	0.00	0.00	0.00
Soot(1980cm-1),Abs/cm*	FTIR	-	0.00	0.00	0.00	0.00
Particle count/100 ml, µm	ISO4406					
>4 µm		500000	219464	161400	23450	31735
>6 µm		130000	39514	48235	7064	9171
>14 µm		16000	1457	4092	385	678
>21 µm		-	307	1628	128	285
>38 µm		-	14	121	7	21
>70 µm		-	0	7	0	1
ISO Class		19/17/14	18/16/11	18/16/13	15/13/09	15/14/10
AS Class *	AS4059	10	9	8	5	6
Spectroscopy / Rotrode Filter Spectroscopy, mg/kg						
Sodium	Na	D 5185	20	2	2	4
Iron	Fe	D 5185	25	<1	<1	<1
Nickel	Ni	D 5185	10	<1	<1	<1
Chromium	Cr	D 5185	10	<1	<1	<1
Silicon	Si	D 5185	20	<1	<1	<1
Aluminium	Al	D 5185	10	<1	<1	<1
Lead	Pb	D 5185	25	<1	<1	<1
Silver	Ag	D 5185	10	<1	<1	<1
Copper	Cu	D 5185	25	1	1	1
Tin	Sn	D 5185	10	<1	<1	<1
Titanium	Ti	D 5185	10	<1	<1	<1
Pottassium	K	D 5185	20	<1	<1	<1
Boron	B	D 5185	10	<1	<1	<1
Barium	Ba	D 5185	10	<1	<1	<1
Molybdenum	Mo	D 5185	10	<1	<1	<1
Magnesium	Mg	D 5185	10	<1	<1	<1
Calcium	Ca	D 5185	10	<1	<1	<1
Phosphorous	P	D 5185	101(base line)	107	115	125
Zinc	Zn	D 5185	58(base line)	52	57	58
Sulphur, %wt *	S	D 4294	0.059(Baseline)	0.101	0.079	0.073
Mangnese	Mn	D 5185	10	<1	<1	<1
Vanadium	V	D 5185	10	<1	<1	<1



Note: \* \* \* - Test note accredited by ENAS  
 Test Method deviation : None  
 Sampling method : N/A  
 Test conducted by Emp# : 299, 249, 270  
 Report prepared by Emp# : 144  
 The above test results are only applicable to the sample(s) referred above

Root Cause Diagnostics : Satisfactory, suitable for continued service.

Reported by

Laboratory Manager  
 QA:F/44; Revision : 01; Issue Date : 01-06-2007.

