

Customer Code : **8888**  
 Customer Name : **ABC Manufacturing Co.,Ltd**  
 Address : 123 Sukhumvit Road , Map Ta Phut  
 Rayong 21150

Unit ID Number : **BWK Crane Ball Ring**

Unit Type : Bearing General  
 Unit Make : ROTEX  
 Unit Model : (not given)  
 Oil type / Viscosity : CALTEX EP2  
 Site Name :  
 Location :

Test code : 821

Lube System Capacity :

Overall Condition Rating

Wear Condition	Oil Condition	Contamination

### Recommendations and Notes

Please note comments on the following Ferrogram / Filtergram page.  
 Greased area condition appears to be in fair to poor condition, when compared to the other samples submitted.  
 Continue routine sampling interval.

WC / Andy Sitton

Condition History			Current Sample			Previous Sample			Alarm Limit Range					
			Wear	Oil	Cont.	Wear	Oil	Cont.	Wear	Oil	Cont.	Limit Name (Equipment / Oil) : Bearing Grease General		
<b>FocusLab ID</b> <b>Date sampled</b> <b>Hours on Oil</b> <b>Hours on Unit</b> <b>Bottle ID</b>			C	N	N	N	N	N	N	N				
Test Method Result			70582	65300			64103							
			06-Feb-07	21-Oct-06			16-Sep-06							
			Not Given	Not Given			Not Available							
			1031	Not Given			Not Available							
			857094	848741			848996							
Wear Condition											New Oil			
Wear Element	Method	Unit	RDE fine	RFS coarse	RDE fine	RFS coarse	RDE fine	RFS coarse			RDE fine		RFS coarse	
Iron	D-6595	PPM	623.5 C	1016.1	265.1	731.8	133.3	269.5			U-Caution	U-Action	U-Caution	U-Action
Chromium	D-6595	PPM	9.5	8.6	3.9	6.3	2.3	0.0			>500	>850	>1500	>2500
Lead	D-6595	PPM	3.0	5.3	2.4	11.2 C	0.3	6.7			>10	>15	>10	>15
Copper	D-6595	PPM	5.3 C	1.0	2.0	0.8	1.0	0.5			>10	>15	>15	>20
Tin	D-6595	PPM	2.5	10.3 A	1.8	10.4 A	0.5	6.8 C			>5	>10	>5	>10
Aluminum	D-6595	PPM	4.8	3.3	2.2	0.0	1.3	0.0			>15	>25	>40	>60
Nickel	D-6595	PPM	8.8	7.1	2.8	0.1	1.0	0.0			>10	>15	>10	>20
Silver	D-6595	PPM	0.3	0.4	0.0	0.0	0.0	0.0						
Molybdenum	D-6595	PPM	7.8	26.2	2.5	4.9	1.3	0.0						
Titanium	D-6595	PPM	1.3	3.1	0.1	0.0	0.0	0.0						
Oil Condition											New Oil			
Viscosity @ 40 °C	D-445	cSt									L-Action	L-Caution	U-Caution	U-Action
Viscosity @ 100 °C	D-445	cSt												
Oxidation	FTIR	Abs												
Nitration	FTIR	Abs												
TAN	D-974	mg KOH/g.												
TBN	D-4739	mg KOH/g.												
Contamination											New Oil			
Water	FTIR	% (Wt.)	2.800		2.900		1.700						U-Caution	U-Action
Fuel	SAW	% (Wt.)											>7.7	>11.3
Glycol	FTIR	Abs												
Soot	FTIR	% (Wt.)												
Sodium	D-6595	PPM	100		31		22				RDE fine		RFS coarse	
Silicon	D-6595	PPM	17.3	31.3	5.2	9.2	3.3	2.5			>75	>100	>100	>150
Additive Element											New Oil			
Boron	D-6595	PPM	1		0		0							
Magnesium	D-6595	PPM	13		4		2							
Calcium	D-6595	PPM	57		28		25							
Barium	D-6595	PPM	28		0		0							
Phosphorus	D-6595	PPM	1694		970		2334							
Zinc	D-6595	PPM	2890	5960	962	2805	2060	2728						
Additional Test											New Oil			
Flash Point	D-3828	°C									L-Action	L-Caution	U-Caution	U-Action
Viscosity Index	D-2270													
Other														

Note: Alarm Limits are variable and dependent upon dataset size and to be used as general guideline.  
 No Sign or N : NORMAL , C or C : CAUTION ( first level warning limit ) , A or A : ACTION required ( second level warning limit )  
U-Caution : Upper CAUTION Level L-Caution : Lower CAUTION Level First level warning limit in Upper level and/or Lower level  
U-Action : Upper ACTION required Level L-Action : Lower ACTION required Level Second level warning limit in Upper level and/or Lower level  
 Accuracy of interpretation and recommendation are based on representatives sample and information supplied. No warranty is expressed or implied for this report.

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Overall Condition Rating

Wear Condition	Oil Condition	Contamination

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Oil type / Viscosity : CALTEX EP2

Lube System Capacity :

Site Name :  
 Location :

	Current Sample		Previous Sample		 Typical Normal Ferrogram							
	FocusLab ID											
Date sampled	70582	65300	64103									
Hours on Oil	06-Feb-07	21-Oct-06	16-Sep-06									
Hours on Unit	Not Given	Not Given	Not Available									
Bottle ID	1031	Not Given	Not Available									
	857094	848741	848996									
Volume of Sample Used	ml		ml									
Image of Wear & Contaminants Magnification 40X												
Image of Wear & Contaminants Magnification 100X												
Image of Wear & Contaminants Magnification 400X												
Wear & Contaminants Particles	%Rating	Size (Micron)	Particle Type	%Rating	Size (Micron)	Particle Type	%Rating	Size (Micron)	Particle Type	%Rating	Size (Micron)	Particle Type
Normal Rubbing Wear												
Fatigue Wear	8	80-100	F	1	80-100	F						
Fatigue Sphere												
Sliding Wear												
Cutting Wear												
Black Oxides	2	40-120	F	6	40-120	F						
Red Oxides												
Corrosive Wear				3	20-40	F						
Dirt and Dust												

### Recommendations and Notes

Fatigue wear appears to be one of the major abnormal wear mode in progress.  
 Black oxides noted in ferrogram.

%Rating : Percent area covered by wear debris particles or contaminant particles  
 Size : Size in micron (0.001 mm) unit of wear debris particles or contaminant particles  
**F** : Ferrous Wear Particle, **N** : Non-ferrous Wear Particle, **C** : Contaminant Particle

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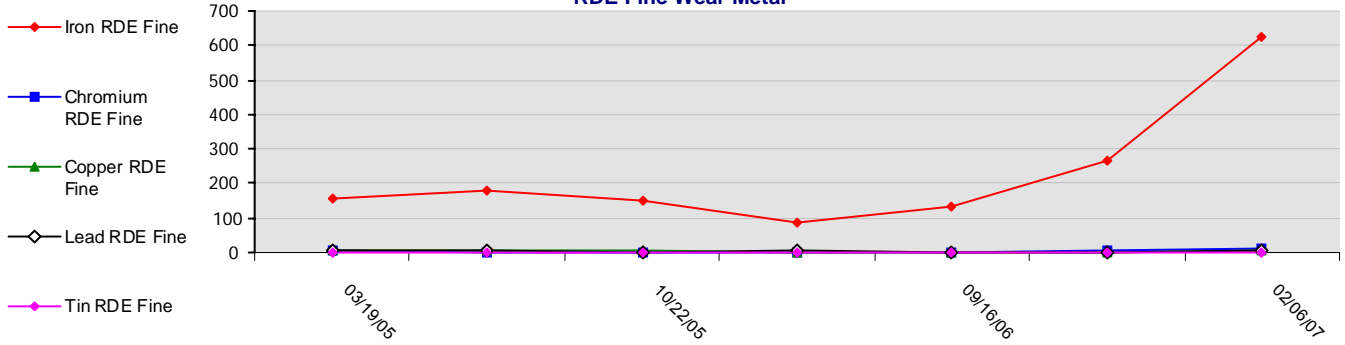
Site Name :

Location :

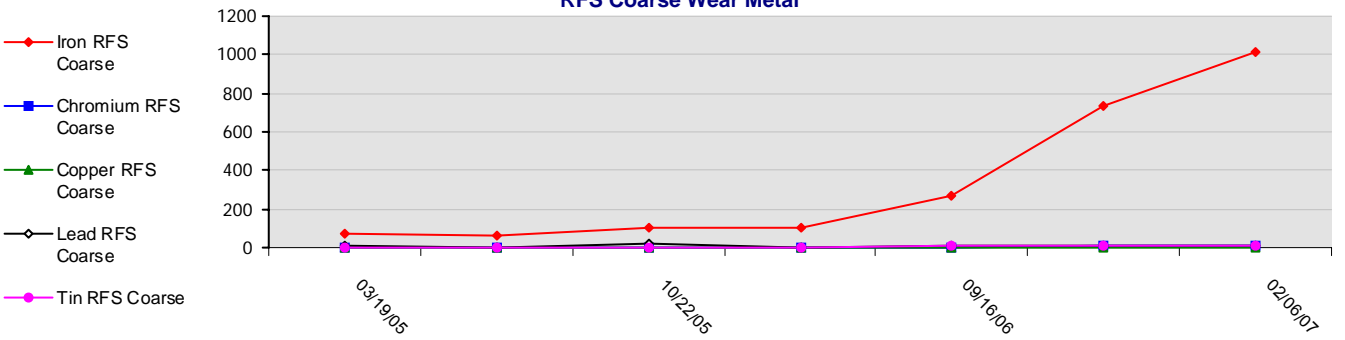
Lube System Capacity :

### Wear Condition

#### RDE Fine Wear Metal

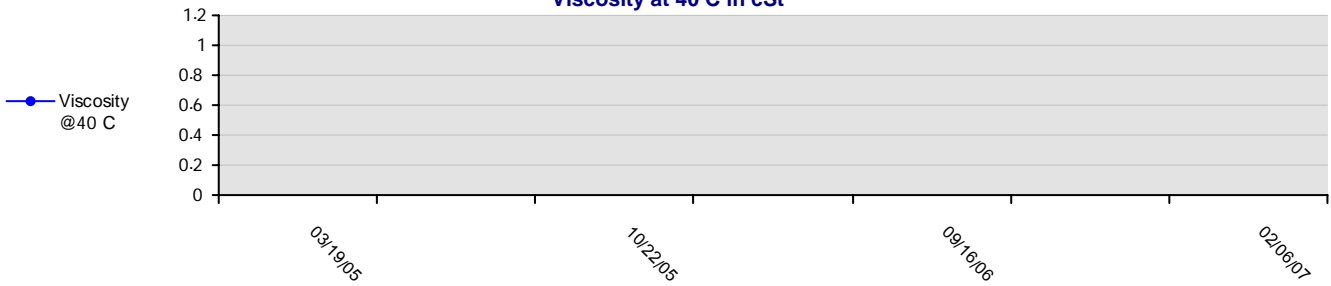


#### RFS Coarse Wear Metal

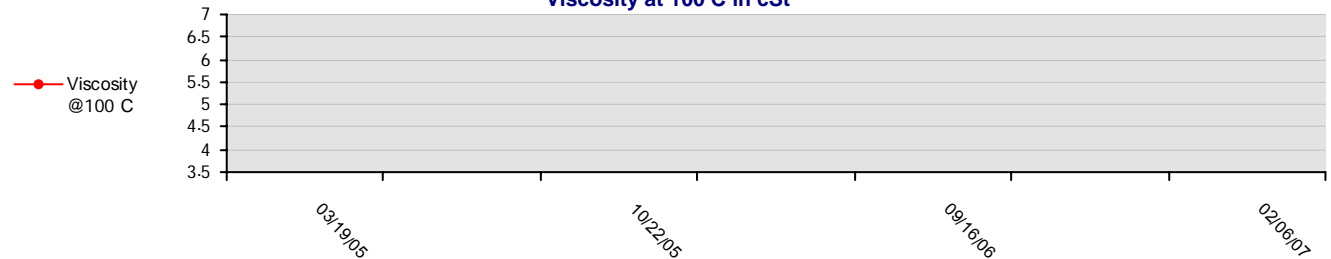


### Oil Condition

#### Viscosity at 40 C in cSt



#### Viscosity at 100 C in cSt



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