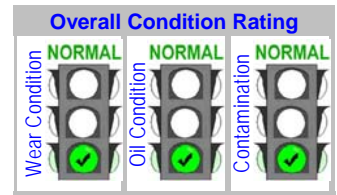


Customer Code : **8888**  
 Customer Name : **ABC Manufacturing Co.,Ltd**  
 Address : 123 Sukhumvit Road , Map Ta Phut Rayong 21150

Unit ID Number : **C 088**  
 Unit Type : Gearbox Railcar  
 Unit Make : Power Transmission Co  
 Unit Model : MRB 355  
 Oil type / Viscosity : SHELL OMALA 320  
 Site Name : 012 1023  
 Location : Axle 4



Test code : 804  
 Lube System Capacity : 3.3 Liters

### Recommendations and Notes

All oil conditions and oil tests appear in normal working range.  
 All wear conditions and wear tests appear in normal working range.  
 All contaminant conditions and contaminant levels appear in normal ranges.  
 No oil change recommended at this time, oil appears suitable for further use. Continue routine sampling interval.

AS / Andy Sitton

Condition History			Current Sample			Previous Sample			Alarm Limit Range							
			Wear	Oil	Cont.	Wear	Oil	Cont.	Wear	Oil	Cont.	Limit Name (Equipment / Oil) : Gearbox Railcar Omala 320 (Siemens)				
<b>FocusLab ID</b>	Test Method	Result	N	N	N	N	N	N	A	N	N					
Date sampled			66920	65710	64948											
Hours on Oil			21-Nov-06	28-Oct-06	10-Oct-06											
Hours on Unit			21045 kms	9289 kms	47882 kms											
Hours on Unit			447171 kms	435415 kms	426126 kms											
Hours on Unit	851986	851985	851982													
<b>Wear Condition</b>												New Oil	RDE fine		RFS coarse	
Wear Element	Method	Unit	RDE fine	RFS coarse	RDE fine	RFS coarse	RDE fine	RFS coarse	A	U-Caution	U-Action	U-Caution	U-Action			
Iron	D-6595	PPM	8.7	62.0	8.8	66.5	18.3	353.5	A	0	>19	>26	>161	>251		
Chromium	D-6595	PPM	0.2	0.0	0.9	0.6	0.1	2.4	C	0	>1	>2	>2	>3		
Lead	D-6595	PPM	0.7	3.2	2.4	A	0.0	0.2	3.8	0	>1	>2	>6	>8		
Copper	D-6595	PPM	1.8	1.1	3.2	1.1	8.6	6.5	0	>31	>52	>16	>27			
Tin	D-6595	PPM	0.0	0.0	0.9	0.0	0.0	0.3	0	>1	>2	>8	>13			
Aluminum	D-6595	PPM	0.1	0.0	0.9	0.0	0.0	4.3	0	>1	>2	>12	>21			
Nickel	D-6595	PPM	0.0	0.0	0.1	0.8	0.0	0.8	0	>1	>2	>1	>2			
Silver	D-6595	PPM	0.0	0.1	0.0	0.0	0.0	0.0	0							
Molybdenum	D-6595	PPM	0.2	3.9	1.6	0.0	0.5	2.1	0							
Titanium	D-6595	PPM	0.0	0.0	0.0	0.2	0.0	0.0	0							
<b>Oil Condition</b>												New Oil	L-Action	L-Caution	U-Caution	U-Action
Viscosity @40°C	D-445	cSt	304.4		303.9		303.7			316.5	<284.9	<300.7	>332.4	>348.2		
Viscosity @100°C	D-445	cSt														
Oxidation	FTIR	Abs	5.5		5.0		5.8			5.9		>6.2	>6.4			
Nitration	FTIR	Abs	4.6		4.4		4.6			4.6		>4.7	>4.8			
TAN	D-974	mg KOH/g	0.51		0.54	C	0.49			0.41		>0.54	>0.67			
TBN	D-4739	mg KOH/g														
<b>Contamination</b>												New Oil			U-Caution	U-Action
Water	T-H2O Check™	%(Wt.)	0.010		0.008		0.010			0.006		>0.03	>0.06			
Sodium	D-6595	PPM	1		1		2									
Silicon	D-6595	PPM	2.1	5.0	2.1	5.2	2.4	13.3		1						
<b>Additive Element</b>												New Oil				
Boron	D-6595	PPM	2		1		0			8						
Magnesium	D-6595	PPM	0		0		0			0						
Calcium	D-6595	PPM	4		4		3			5						
Barium	D-6595	PPM	0		8		0			0						
Phosphorus	D-6595	PPM	173		172		176			144						
Zinc	D-6595	PPM	3	2	4	2	7	7		4						
<b>Additional Test</b>												New Oil	L-Action	L-Caution	U-Caution	U-Action
Flash Point	Seta Flash	°C														
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 **▲** : CAUTION ( first level warning limit ) , **A** or **▲** : 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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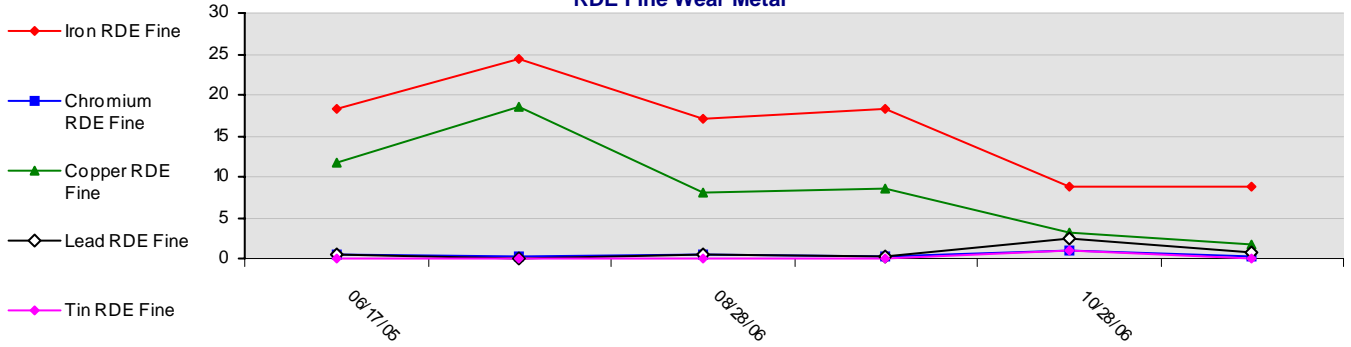
Unit ID Number : **C 088**

Unit Type : Gearbox Railcar  
 Unit Make : Power Transmission Co  
 Unit Model: MRB 355  
 Oil type / Viscosity : SHELL OMALA 320  
 Site Name: 012 1023  
 Location : Axle 4

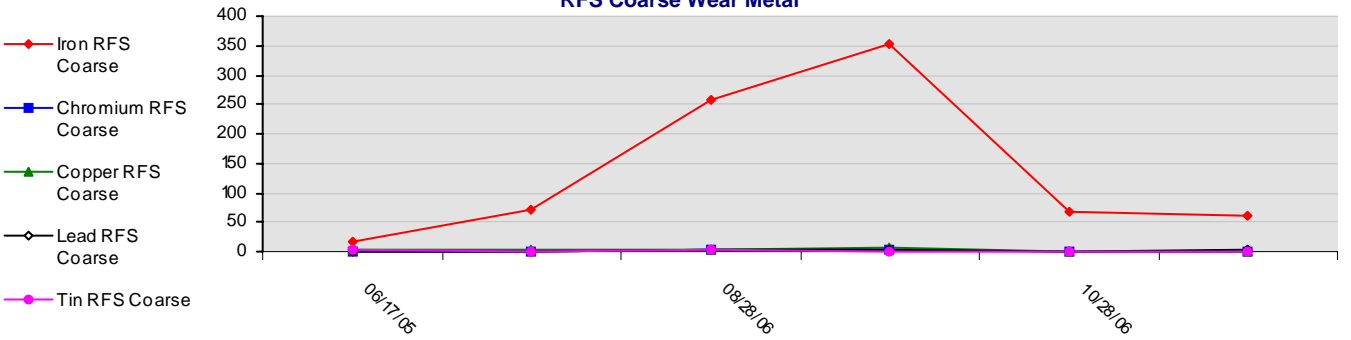
**Lube System Capacity** : 3.3 Liters

### Wear Condition

#### RDE Fine Wear Metal

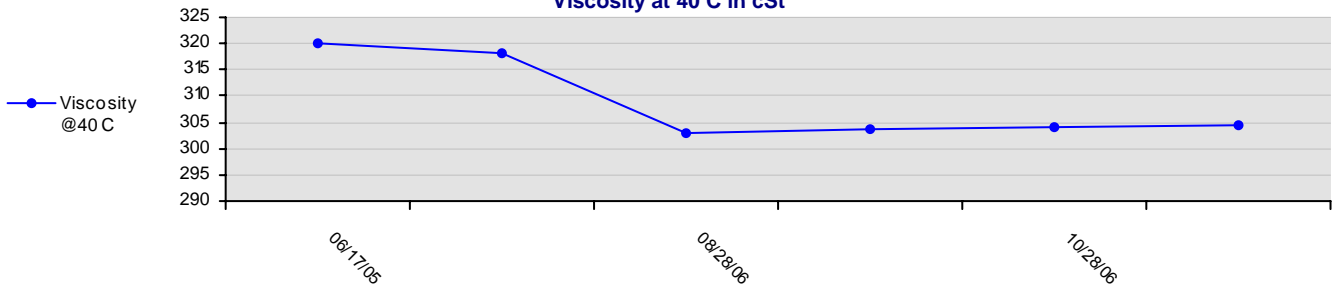


#### RFS Coarse Wear Metal

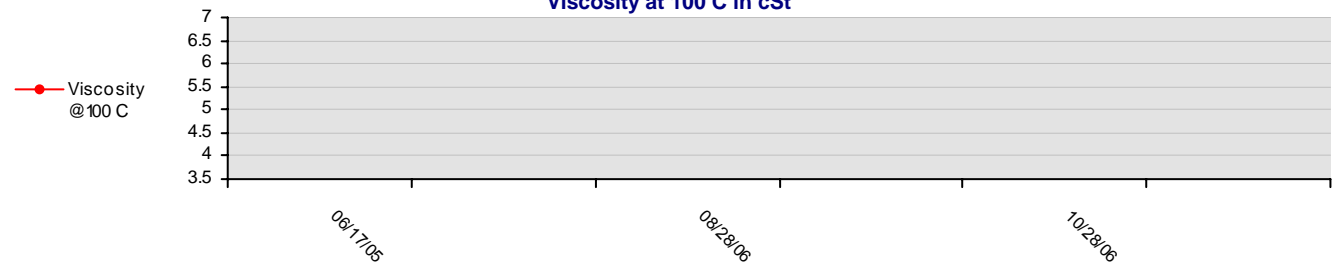


### Oil Condition

#### Viscosity at 40 C in cSt



#### Viscosity at 100 C in cSt

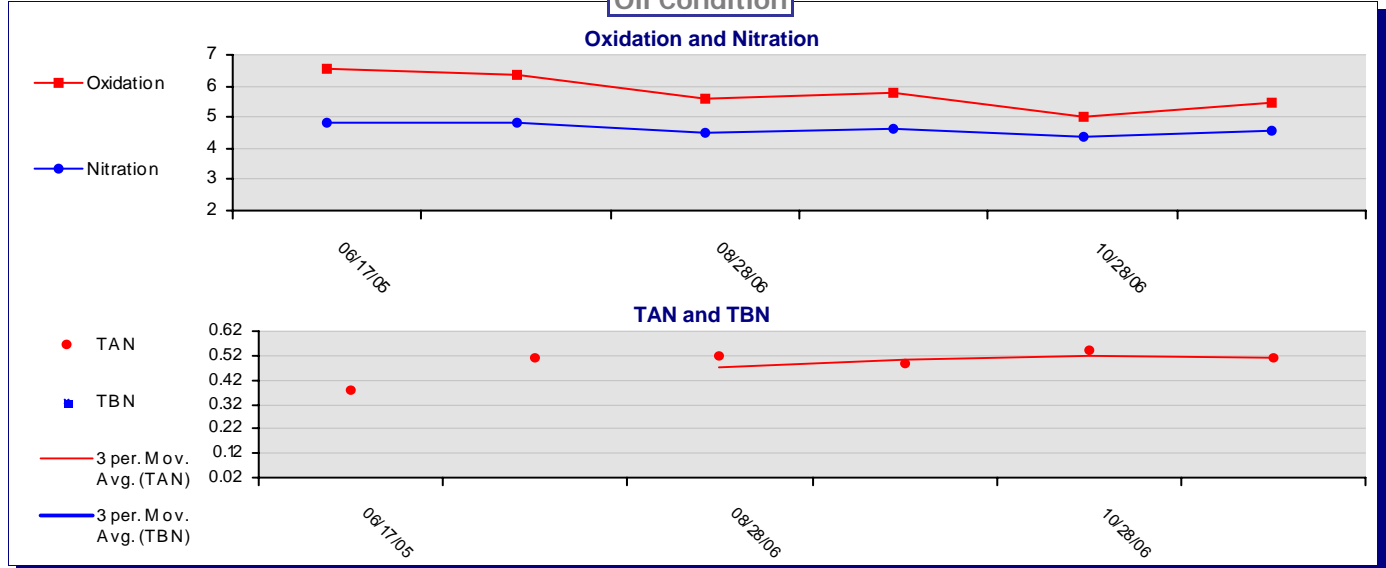


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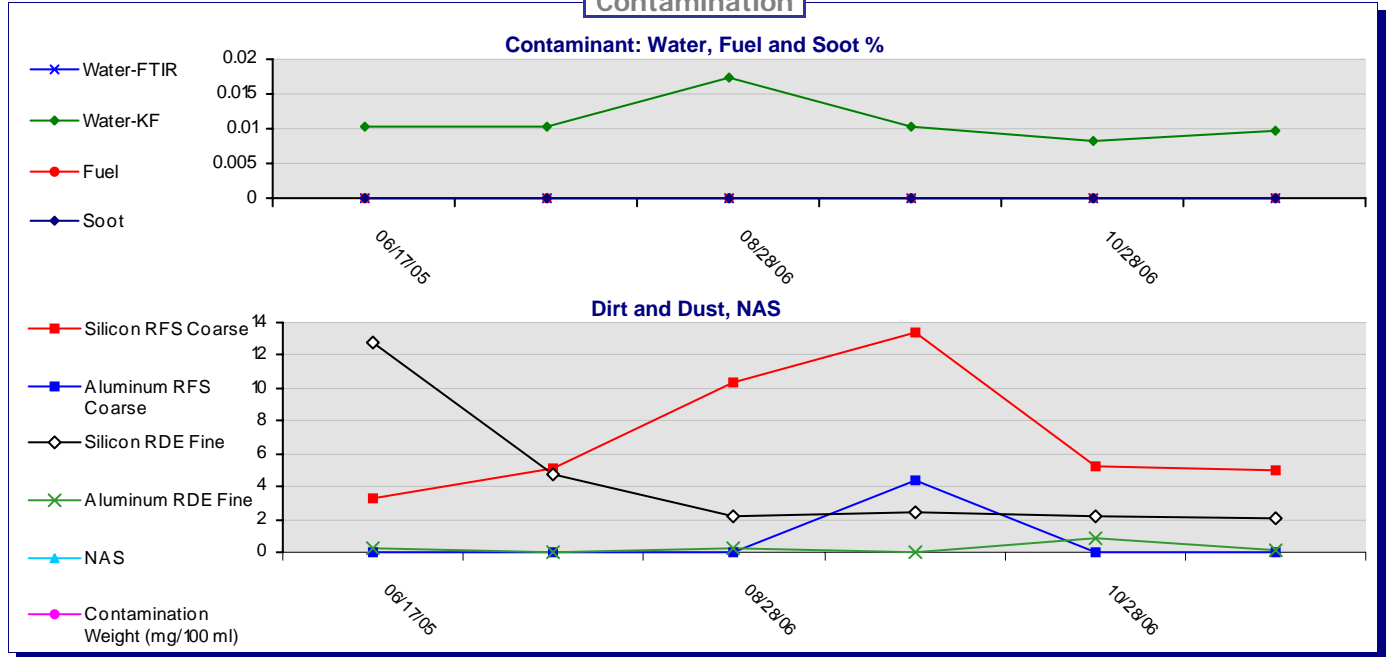
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 Unit Type : Gearbox Railcar  
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 Unit Model: MRB 355  
 Oil type / Viscosity : SHELL OMALA 320  
 Site Name: 012 1023  
 Location : Axle 4

**Lube System Capacity : 3.3 Liters**

### Oil Condition



### Contamination



### Others

