

Customer Code : 8888

Unit ID Number : CRM14 Auxiliary Hyd Tank

Customer Name : ABC Manufacturing Co.,Ltd

Unit Type : Hyd Syst Industrial

Address : 123 Sukhumvit Road , Map Ta Phut Rayong 21150

Unit Make : TOKIMEC

Unit Model : AB02080F4-1

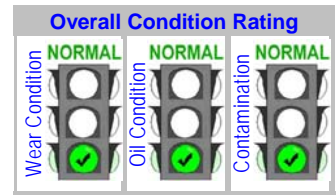
Test code : 894

Oil type / Viscosity : CASTROL HYSPIIN AWS46

Site Name : Cold Roll Mill

Lube System Capacity : 3800 Liters

Location : Cellar



Recommendations and Notes

Note some test values are near to the Alarm Limits, or slightly over the Alarm Limits, but are not considered serious at this time.

All other wear tests and oil condition tests appear satisfactory, and the oil was still serviceable at the time of sampling.

All contaminant conditions and contaminant levels appear in normal ranges.

* Please submit sample of this type of new oil, on next sampling. This will assist in developing Alarm Limits Range for this equipment and oil combination.

WC / Andy Sitton

			Current Sample			Previous Sample			Alarm Limit Range					
Condition History			Wear	Oil	Cont.	Wear	Oil	Cont.	Limit Name (Equipment / Oil) :					
			N	N	N	N	N	N	Hydraulic System General ISO 46					
FocusLab ID	Test Method	Result												
Date sampled			67029	62687										
Hours on Oil			23-Nov-06	22-Aug-06										
Hours on Unit			Not Given	Not Available										
Bottle ID			Not Given	Not Available										
			855001	851599										
Wear Condition										New Oil	RDE fine		RFS coarse	
Wear Element	Method	Unit	RDE fine	RFS coarse	RDE fine	RFS coarse	U-Caution		U-Action					
Iron	D-6595	PPM	0.5	0.0	0.4	1.2	>10	>20	>10	>20				
Chromium	D-6595	PPM	0.1	0.6	0.4	0.0	>1	>2	>1	>2				
Lead	D-6595	PPM	0.6	0.4	1.1	0.2	>5	>9	>6	>10				
Copper	D-6595	PPM	1.1	0.1	1.1	0.0	>45	>75	>30	>55				
Tin	D-6595	PPM	0.0	4.7 C	0.9	1.4	>2	>3	>3	>6				
Aluminum	D-6595	PPM	0.0	0.0	0.3	0.0	>2	>3	>2	>4				
Nickel	D-6595	PPM	0.0	0.9	0.0	0.1	>1	>2	>2	>3				
Silver	D-6595	PPM	0.0	0.0	0.0	0.0								
Molybdenum	D-6595	PPM	0.4	0.0	0.6	0.0								
Titanium	D-6595	PPM	0.0	0.5	0.0	0.0								
Oil Condition										New Oil	L-Action	L-Caution	U-Caution	U-Action
Viscosity @40°C	D-445	cSt	45.8 *		45.4		46.0	<41.1	<43.7	>48.3	>50.6			
Viscosity @100°C	D-445	cSt												
Oxidation	FTIR	Abs	5.6 *		4.8									
Nitration	FTIR	Abs	4.5 *		4.1									
TAN	D-974	mg KOH/g.	0.50							>1.31	>2.11			
TBN	D-4739	mg KOH/g.												
Contamination										New Oil			U-Caution	U-Action
Water	T-H2O Check™	% (Wt.)	0.013		0.014							>0.05	>0.08	
Sodium	D-6595	PPM	0		0									
Silicon	D-6595	PPM	1.6	0.0	0.9	0.7	>15	>25	>10	>20				
Additive Element										New Oil				
Boron	D-6595	PPM	0		0									
Magnesium	D-6595	PPM	0		0									
Calcium	D-6595	PPM	29		32									
Barium	D-6595	PPM	0		0									
Phosphorus	D-6595	PPM	307		301									
Zinc	D-6595	PPM	441	34	468	28								
Additional Test										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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Location : Cellar

Overall Condition Rating

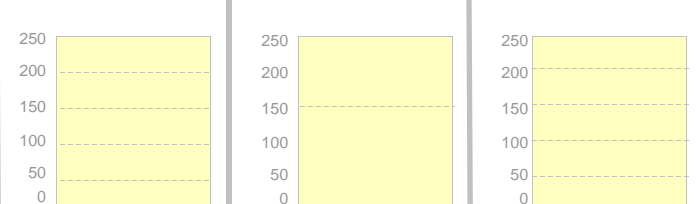
Wear Condition	Oil Condition	Contamination
NORMAL	NORMAL	NORMAL

		Current Sample		Previous Sample		Alarm Limit Range				
FocusLab ID		67029		62687		Limit Name (Equipment / Oil) :				
Date sampled		23-Nov-06		22-Aug-06		Hydraulic System General ISO 46				
Hours on Oil		Not Given		Not Available						
Hours on Unit		Not Given		Not Available						
Bottle ID		855001		851599						
Particle Count		NAS 1638: Number of Particles Per 100 Milliliter (Counts/100ml)				New Oil	U-Caution	U-Action		
Size Range	No. of Particles	Class	No. of Particles	Class	Class	No. of Particles	Class	No. of Particles	Class	Class
5-15 microns	23,100	7	24,100	7						
15-25 microns	2,100	6	2,200	6	<7		<8		<9	
25-50 microns	600	7	600	7						
50-100 microns	<100	6	<100	6						
>100 microns	<100	4	<100	4						
Particle Count		ISO 4406:1999: Number of Particles Per Milliliter (Counts/ml)								
Size Range	No. of Particles	Class	No. of Particles	Class						
>4 microns	688	17	717	17						
>6 microns	194	15	202	15						
>14 microns	27	12	28	12						
ISO 4406 Result	17/15/12		17/15/12							

Recommendations and Notes

Particle count shows oil cleanliness level acceptable.

Option Test: Varnish Potential Index™ (VPI™), Testing for Predicting Varnish and Varnish build up

VPI™ Value Condition	VPI™ Severity Limit Range Guideline		
	New Oil	U-Caution	U-Action
			

Option Test: RUL (Remain Useful Life), Testing for monitoring Percent Remaining Anti-Oxidant (AO) by ASTM D-6971

% Remaining Antioxidant Additive	New Oil		
	New Oil	U-Caution	U-Action
	100	<50	<25

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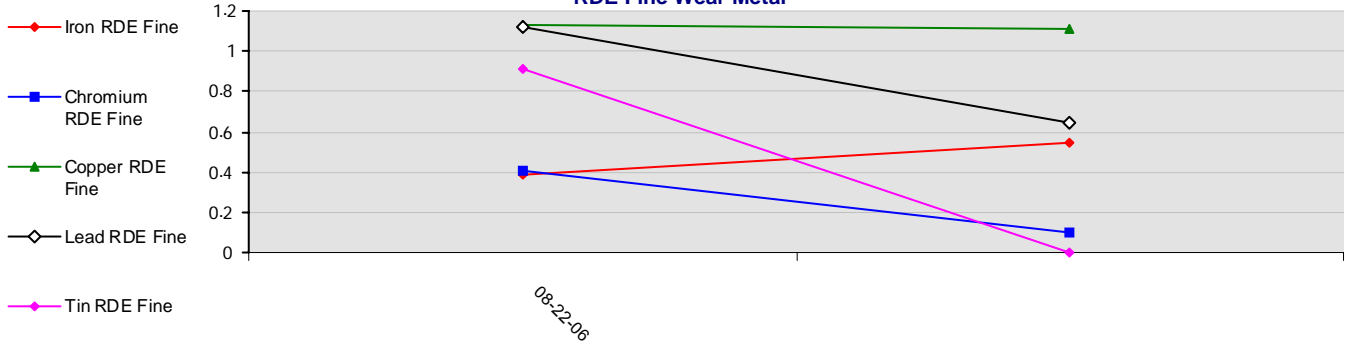
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Location : Cellar

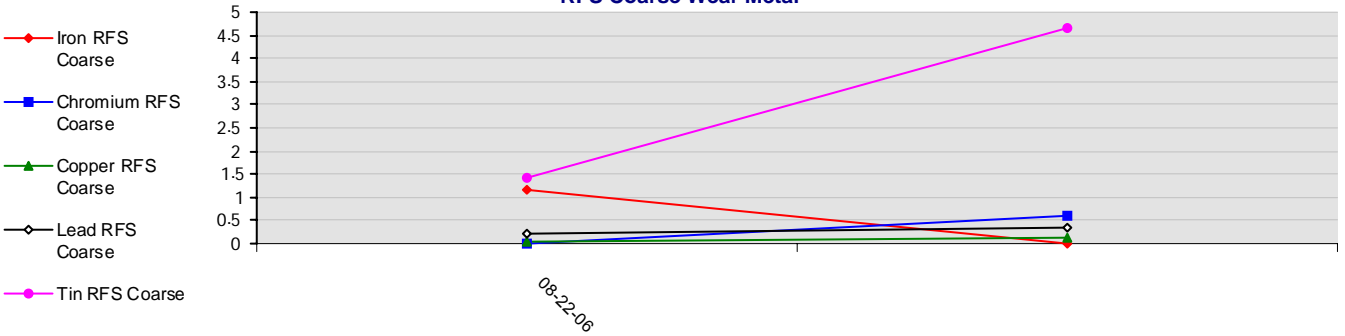
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Wear Condition

RDE Fine Wear Metal

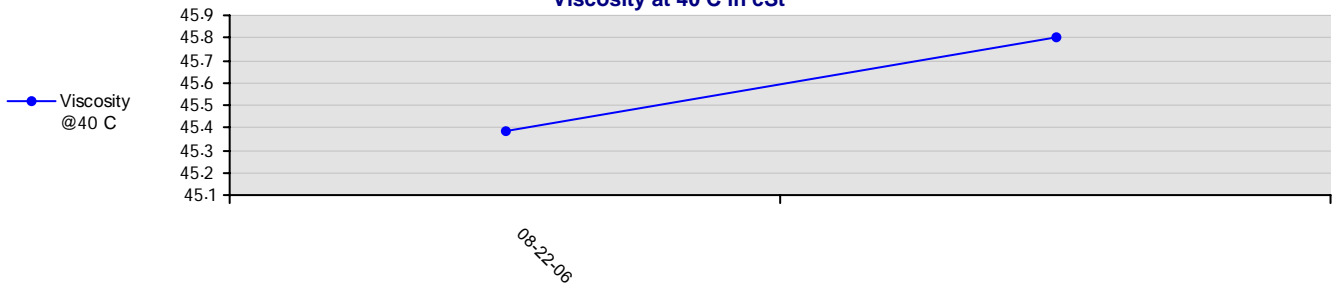


RFS Coarse Wear Metal

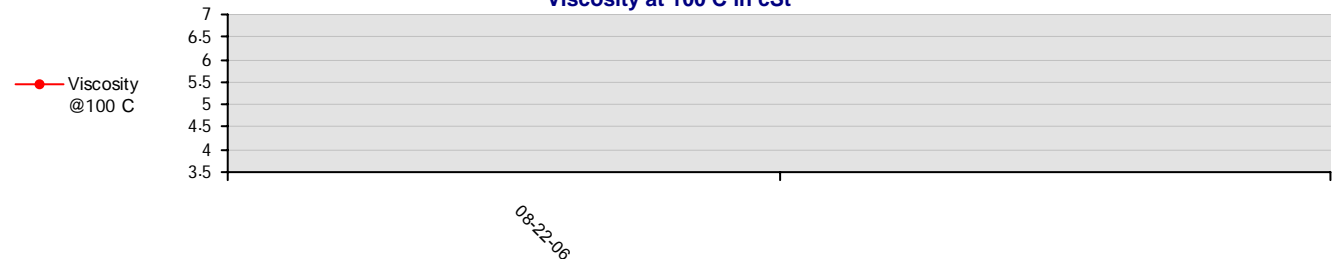


Oil Condition

Viscosity at 40 C in cSt



Viscosity at 100 C in cSt



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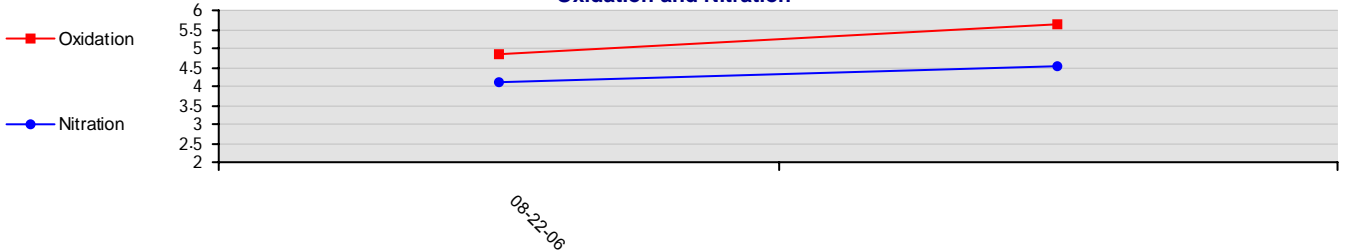
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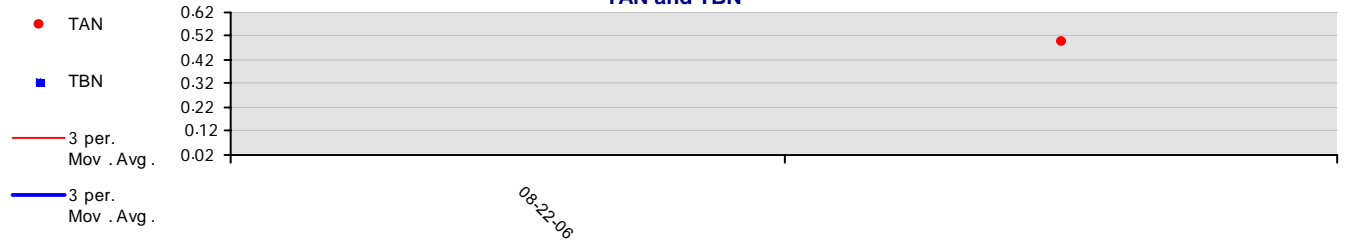
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Oil Condition

Oxidation and Nitration

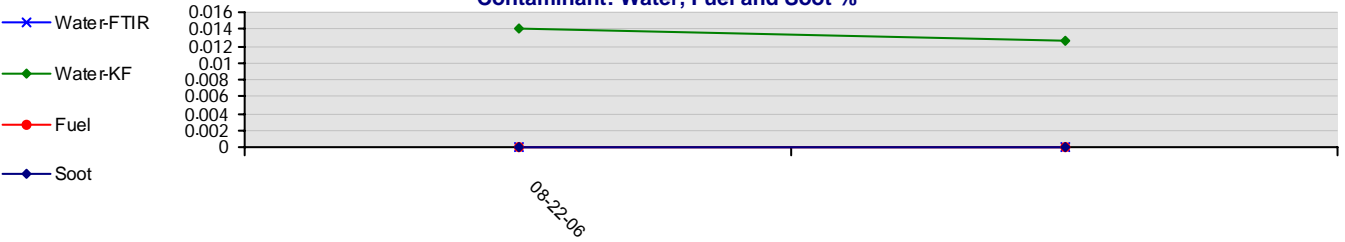


TAN and TBN

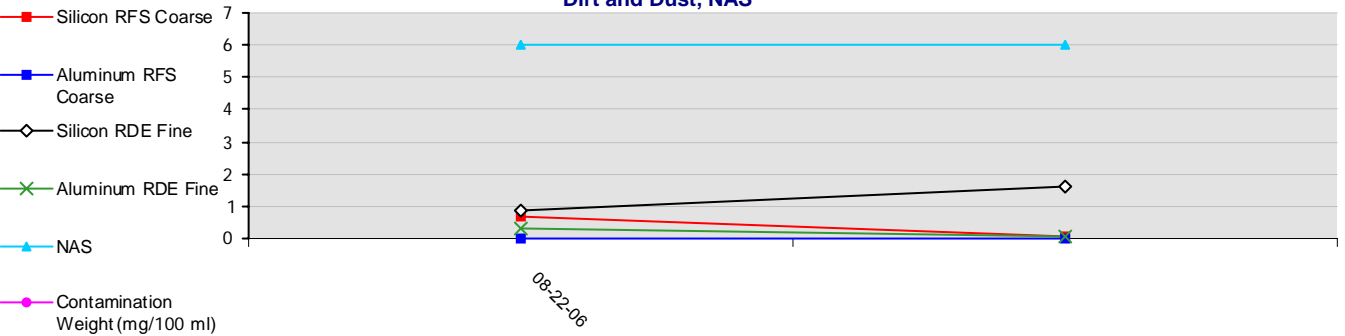


Contamination

Contaminant: Water, Fuel and Soot %



Dirt and Dust, NAS



Others

VPI and AO Additives

