

Customer Code : **16005177**
Customer Name : **W002**
Address :

Unit ID Number : **No 89 Before Bypass Filter**

Unit Type : Hyd Syst Industrial

Unit Make : Haitian

Unit Model : HTF 300X

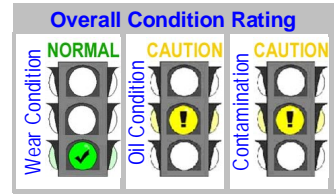
Oil type / Viscosity : PTT HYDRAULIC 68

Site Name :

Location :

Test code: 89308

Lube System Capacity : 500 Liters



Recommendations and Notes

All wear conditions and wear tests appear in normal working range.
Oil condition tests indicate that the oil is slightly degraded.
Particle count indicates that oil cleanliness level is near to unacceptable range.

Wasan C / Andy Sitton

Condition History			Current Sample			Previous Sample		Baseline	ALARM LIMIT				
Lab ID	Test Method	Result	Wear	Oil	Cont.	ALARM LIMIT MATRIX NAME (Equipment / Oil Type)							
Date sampled			N	C	C			Hyd Syst General PTT Hydraulic 68					
Hours on Oil													
Hours on Unit													
Bottle ID													
Wear Condition								Reference Oil	RDE fine		RFS coarse		
Wear Element	Method	Unit	RDE fine	RFS coarse				U-Caution	U-Warning	U-Caution	U-Warning		
Iron	D-6595	PPM	3.3				0	>10	>20	>10	>20		
Chromium	D-6595	PPM	0.2				0	>1	>2	>1	>2		
Lead	D-6595	PPM	0.0				0	>5	>9	>6	>10		
Copper	D-6595	PPM	8.1				0	>45	>75	>30	>55		
Tin	D-6595	PPM	0.5				0	>2	>3	>3	>6		
Aluminum	D-6595	PPM	0.0				0	>2	>3	>2	>4		
Nickel	D-6595	PPM	0.0				0	>1	>2	>2	>3		
Silver	D-6595	PPM	0.0				0						
Molybdenum	D-6595	PPM	0.0				0						
Titanium	D-6595	PPM	0.0				0						
Oil Condition							RO	L-Warning	L-Caution	U-Caution	U-Warning		
Viscosity @40°C	D-445	cSt	66.7				68.5	<61.7	<65.1	>71.9	>75.8		
Viscosity @100°C	D-445	cSt											
Oxidation	FTIR	Abs	5.2 W				2.3			>3.5	>4.6		
Nitration	FTIR	Abs	4.7 C				3.6			>4.5	>5.4		
TAN	D-974	mg KOH/g.	0.38				0.55			>1.05	>1.55		
TBN	D-4739	mg KOH/g.											
Contamination							RO			U-Caution	U-Warning		
Water	T-H2O Check TM	%(Wt.)	0.022				0.010			>0.03	>0.05		
Sodium	D-6595	PPM	0										
Silicon	D-6595	PPM	0.0				2	>15	>25	>10	>20		
Additive Element							RO						
Boron	D-6595	PPM	0				0						
Magnesium	D-6595	PPM	0				1						
Calcium	D-6595	PPM	0				32						
Barium	D-6595	PPM	0				0						
Phosphorus	D-6595	PPM	282				376						
Zinc	D-6595	PPM	154				450						
Additional Test							RO	L-Warning	L-Caution	U-Caution	U-Warning		
Flash Point	D-3828	°C											
Viscosity Index	D-2270												

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) , **W** or **W** : Warning (second level warning limit)
U-Caution : Upper CAUTION Level **L-Caution** : Lower CAUTION Level First Level Alarm Alert Limit in Upper Level and/or Lower Level
U-Warning : Upper WARNING Level **L-Warning** : Lower WARNING required Level Second Level Alarm Alert Limit in Upper Level and/or Lower Level
 Baseline will be data of either "The new oil" or "Reference oil" or "Oil specification". TNO = The new oil , RO = Reference oil , OS = Oil Specification
 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 Model : HTF 300X
Oil type / Viscosity : PTT HYDRAULIC 68
Site Name :
Location :

Test code: 89308

Lube System Capacity : 500 Liters

Overall Condition Rating

Wear Condition	NORMAL	Oil Condition	CAUTION	Contamination	CAUTION

Current Sample			Previous Sample			Baseline	ALARM LIMIT				
Lab ID	128526						ALARM LIMIT MATRIX NAME (Equipment / Oil Type)				
Date sampled	30-Jan-10					Reference Oil	Hyd Syst General PTT Hydraulic 68				
Hours on Oil	6 months						U-Caution		U-Warning		
Hours on Unit	6 years						Class	No. of Particles	Class	No. of Particles	Class
Bottle ID	906238										
Particle Count NAS 1638: Number of Particles Per 100 Milliliter (Counts/100ml)											
Size Range	No. of Particles	Class									
5-15 microns	31,800	7									
15-25 microns	2,800	7 C						>7		>8	
25-50 microns	900	7									
50-100 microns	<100	6									
>100 microns	<100	5									
Particle Count ISO 4406:1999: Number of Particles Per Milliliter (Counts/ml)											
Size Range	No. of Particles	Class									
>4 microns	951	17									
>6 microns	266	15									
>14 microns	36	12									
ISO 4406 Result	17/15/12										

Recommendations and Notes

Particle count indicates that oil cleanliness level is near to unacceptable range.

Option Test: Varnish and Sludge Potential Index™ (VsPI™) Testing for Predicting Varnish and Sludge Buildup				Baseline	VsPI Severity Limit Range Guideline	
					ALARM LIMIT (Equipment / Oil Type)	
VPI Value				RO	U-Caution	
SPI Value					U-Warning	
VsPI Value						
Sludge Weight	mg/100 ml	mg/100 ml	mg/100 ml			
Condition Rating						
				Abbreviation :		
				VPI™ : Varnish Potential Index		
				SPI™ : Sludge Potential Index		
				VsPI™ : Varnish and Sludge Potential Index		

Option Test: RULER™ (Remaining Useful Life Evaluation Routine) or Linear Sweep Voltammetry				Baseline	Test Method : ASTM D-6810-02 and D-6971-04	
Test Method for determining and monitoring Percent Remaining Antioxidant Additives (Oxidation Inhibitor) in Lubricants.					RULER™ Alarm Limit:	
% Remaining Antioxidant Additives (Oxidation Inhibitor)				RO	L-Caution	L-Warning
				100%	<50 of new oil	<25 % of new oil
Note: "Testing and monitoring antioxidant additives (oxidation inhibitors) level is important for controlling the degradation of industrial lubricants and their remaining useful life" refer to ASTM D-4378-03 and D-6224-02.						
Baseline will be data of either "The new oil" or "Reference oil" or "Oil specification".				TNO = The new oil , RO = Reference oil , OS = Oil Specification		

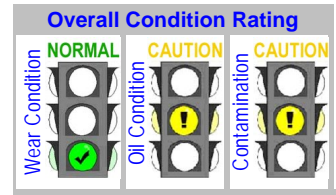
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Oil type / Viscosity : PTT HYDRAULIC 68
Site Name :
Location :

Test code: 89308

Lube System Capacity : 500 Liters



Lab ID : 128526 Date sampled : 30-Jan-10 Hours on Oil : 6 months Hours on Unit : 6 years Bottle ID : 906238

ส่วนที่ 1 : หน้าหลัก

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สภาพการสึกหรอและผลทดสอบการสึกหรอทั้งหมด พบว่าอยู่ในช่วงปกติ
ผลทดสอบคุณสมบัติน้ำมัน ชีว้ำมันเสื่อมสภาพไปเล็กน้อย
ผลการตรวจนับอนุภาคสิ่งสกปรกชี้ว่าระดับความสะอาดของน้ำมันใกล้เคียงยอมรับไม่ได้แล้ว

ส่วนที่ 2 : หน้าที่สอง

[Section 2 : Second Page](#)

ผลการตรวจนับอนุภาคสิ่งสกปรกชี้ว่าระดับความสะอาดของน้ำมันใกล้เคียงยอมรับไม่ได้แล้ว

ส่วนที่ 3 : หน้าของ Analytical Ferrography

[Section 3 : Analytical Ferrography Page](#)

ส่วนที่ 4 : หน้าของ Gravimetric Page

[Section 4 : Gravimetric Page](#)