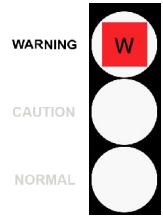


C Code : 25060
 U Name :
 S
 T
 O
 M
 E
 R
 Address : Suntowers Building B, 27th Floor,
 123 Vibhavadi-Rangsit Road, Jompol,
 Chatuchak, Bangkok 10900
 Site : Platong
 Location : NST
 Test code : E804

Unit ID : PTI Gen 100 011 Engine
 Unit Type : Engine Diesel
 Unit Make : CUMMINS
 Unit Model : 613T5.9-G2
 Oil type / Viscosity : CALTEX DELO SILVER SAE 15W40
 Oil System Capacity : 15 Liters



Notes (Finding, Evaluation, Interpretation, Suggestion and Recommendation)

Abnormal wear metals may indicate cylinder, piston and ring wear.
 Oil condition tests indicate that the oil is slightly degraded.
 Recommend change oil and flush system with clean oil to remove contamination, if the oil from this sample is still in use in this component.

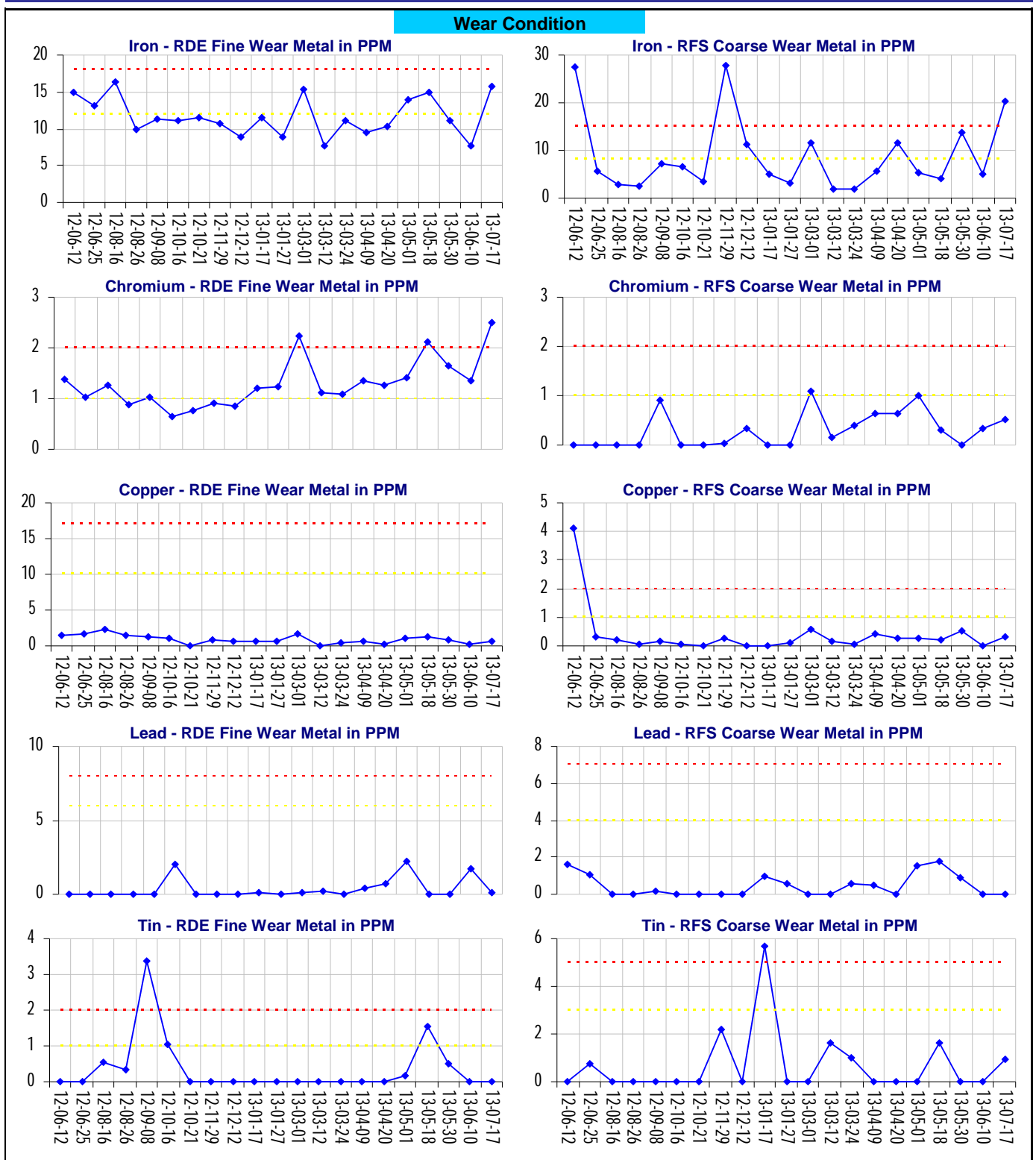
Somchai J.

			Current Sample			Previous Sample			Baseline and Alarm Limit							
Condition History			Wear	Oil	Cont.	Wear	Oil	Cont.	Wear	Oil	Cont.	Alarm Limit				
			W	C	N	N	C	N	C	C	N	Alarm Limit Matrix -Set Name (Equipment type / oil type)				
			223716			219841			218040			Engine Diesel Cummins CTX Delo Silver SAE 15W40(Expro Overseas)				
Lab ID			1013596			1015460			1013190			The New Oil (TNO)				
Bottle ID			17-Jul-13			10-Jun-13			30-May-13			RDE fine		RFS coarse		
Date Sampled			250			250			250			U-Caution	U-Warning	U-Caution	U-Warning	
Oil Hours (Kms)			Not Given			Not Given			Not Given							
Unit Hours (Kms)			250			250			250							
Oil Added (Liters)			250			250			250							
Filters Hours (Kms)																
Wear Condition																
Wear Element	Method	Unit	RDE fine	RFS coarse	RDE fine	RFS coarse	RDE fine	RFS coarse	RDE fine	RFS coarse	The New Oil (TNO)	U-Caution	U-Warning	U-Caution	U-Warning	
Iron	D-6595	PPM	15.7 C	20.2 W	7.7	5.1	11.2	13.8 C	0	0	0	>12	>18	>8	>15	
Chromium	D-6595	PPM	2.5 W	0.5	1.3 C	0.3	1.7 C	0.0	0	0	0	>1	>2	>1	>2	
Lead	D-6595	PPM	0.1	0.0	1.7	0.0	0.0	0.8	0	0	0	>6	>8	>4	>7	
Copper	D-6595	PPM	0.7	0.3	0.2	0.0	0.9	0.5	0	0	0	>10	>17	>1	>2	
Tin	D-6595	PPM	0.0	0.9	0.0	0.0	0.5	0.0	0	0	0	>1	>2	>3	>5	
Aluminum	D-6595	PPM	1.3	2.6 W	0.8	0.0	0.5	1.4 C	0	0	0	>2	>3	>1	>2	
Nickel	D-6595	PPM	0.3	0.2	0.0	0.6	0.0	0.0	0	0	0	>1	>2	>1	>2	
Silver	D-6595	PPM	0.0	0.0	0.0	0.0	0.0	0.1	0	0	0					
Molybdenum	D-6595	PPM	2.6	0.0	2.9	1.3	0.6	0.0	0	0	0					
Titanium	D-6595	PPM	0.0	6.7	0.0	1.0	0.0	2.4	0	0	0					
Oil Condition												TNO	L-Warning	L-Caution	U-Caution	U-Warning
Viscosity @ 40°C	D-445	cSt									14.4	<11.41	<12.91	>15.91	>17.41	
Viscosity @ 100°C	D-445	cSt	12.1 C		12.7 C		12.3 C		5.1		5.1			>8.9	>10.2	
Oxidation	FTIR	Abs	10.7 W		7.8		8.7		4.0		4.0			>8	>10	
Nitration	FTIR	Abs	9.6 C		7.8		8.4 C		8.9		8.9			<2	<4.43	
TAN	D-974	mg KOH/g														
TBN	D-4739	mg KOH/g	9.4		7.8		8.6									
Contamination												TNO			U-Caution	U-Warning
Water	FTIR	%(Wt.)	0.079		0.066		0.067		0.043		0.043			>0.15	>0.2	
Fuel	SAW	%(Wt.)	0.10		0.10		0.10							>3	>5	
Glycol	FTIR	Abs	0		0		0									
Soot	FTIR	%(Wt.)	0.65		0.49		0.48							>0.75	>1.5	
												RDE fine		RFS coarse		
												U-Caution	U-Warning	U-Caution	U-Warning	
Vanadium	D-6595	PPM	0		0		0		0		0					
Sodium	D-6595	PPM	1		1		1		1		1					
Silicon	D-6595	PPM	4.9	6.7	4.9	0.9	4.0	8.1	11		11			>25	>30	
Additive Element												TNO				
Boron	D-6595	PPM	2		1		1		2		2					
Magnesium	D-6595	PPM	1298		1333		1561		1365		1365					
Calcium	D-6595	PPM	335		319		383		322		322					
Barium	D-6595	PPM	0		0		0		0		0					
Phosphorus	D-6595	PPM	1213		1168		1345		1347		1347					
Zinc	D-6595	PPM	1598	228	1527	188	1583	393	1537		1537					
Additional Test												TNO	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.

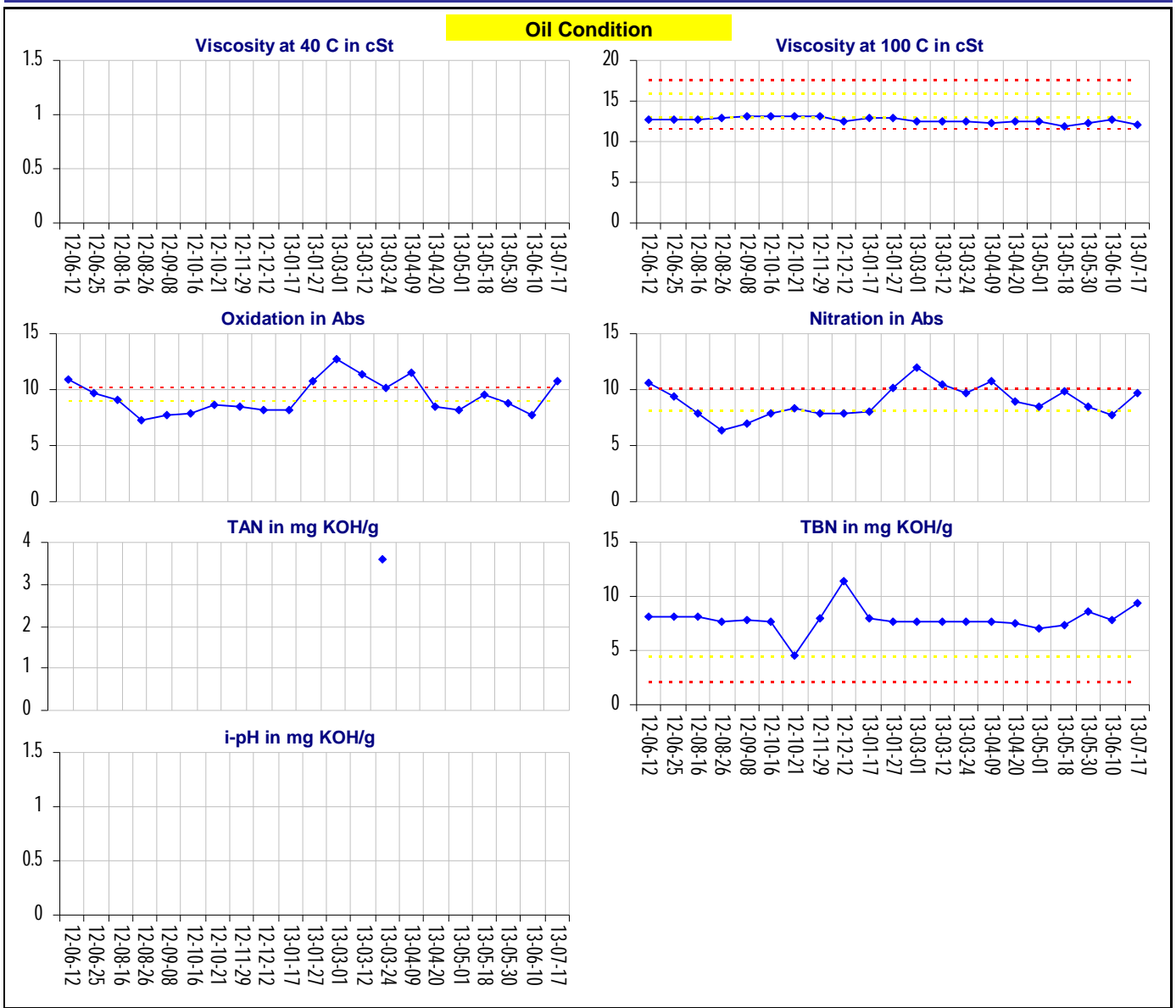
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