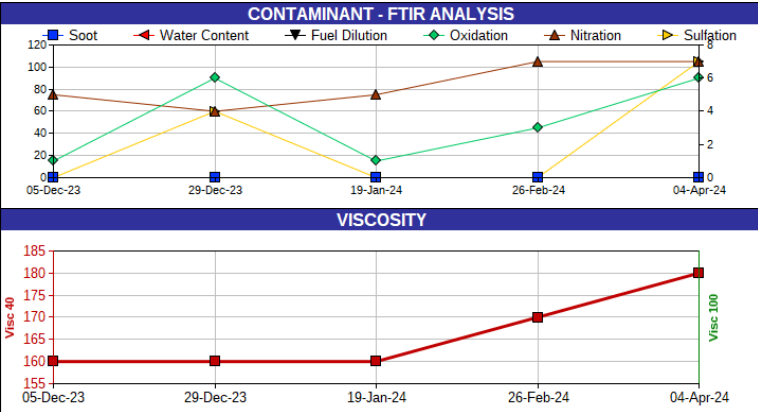
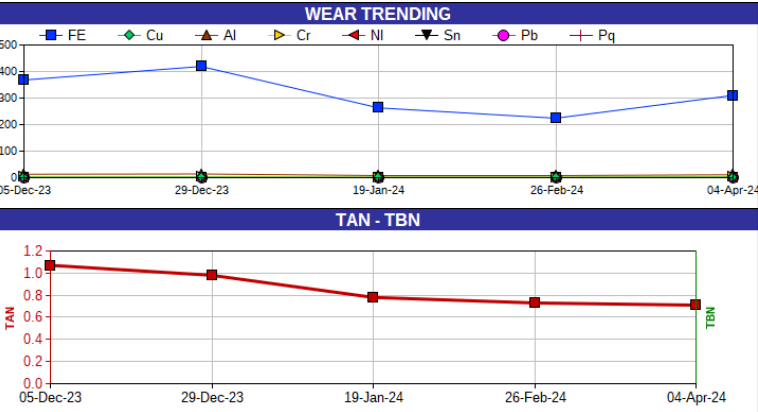


Customer Name	: PT. PUTRA PERKASA ABADI	Unit Number	: WT2530	Viscosity@100\B0C	:
Address	: BUKIT ASAM	Component	: TRANSMISSION	Viscosity@40\B0C	:
Unit Model	: 2528RMC-6X4	Component Matrix	: GET30	T A N	:
Serial Number	: WT2530	Oil Matrix	: SPIRAX_80W-90_TJE		

Test Detail								Overall Aanalysis Result	
Lab. Number	E23012097	E23013880	E24000999	E24003187	E24005672	 CRITICAL			
Sampling Date	2023-11-29	2023-12-22	2024-01-15	2024-02-22	2024-03-31				
Received Date	2023-12-04	2023-12-28	2024-01-18	2024-02-26	2024-04-04				
Report Date	2023-12-05	2023-12-29	2024-01-19	2024-02-26	2024-04-04				
Hours on Oil	247	500	232	262	241				
Hours on Unit	2718	2976	3208	3470	3711				
Lube Oil Name	MOBIL 1_75W 90 MIP_TJE	SPIRAX_80W-90_TJE	MOBIL 1_75W 90 MIP_TJE	MOBIL 1_75W-90 MIP_TJE	SPIRAX_80W-90_TJE				
Oil Change	No	Yes	Yes	Yes	Yes				
Status	CRITICAL	CRITICAL	CRITICAL	CRITICAL	CRITICAL				
Physical Test	Unit	Method						Caution	Critical
Visc@40C	cSt	VISGAGE	160	160	160	170	180	109.6 164.4	95.9 178.1
Visc@100C	cSt	VISGAGE							
T A N	mg KOH/g	In House Method	1.07	0.98	0.78	0.73	0.71	2.1	3.6
Metal Additive								Warning	Limit
Magnesium (Mg)	ppm	ASTM D5185-18	2	1	1	1	1		
Calcium (Ca)	ppm	ASTM D5185-18	141	124	68	114	88		
Zinc (Zn)	ppm	ASTM D5185-18	41	38	26	32	28		
Molybdenum (Mo)	ppm	ASTM D5185-18							
Boron (B)	ppm	ASTM D5185-18							
Phosphor (P)	ppm	ASTM D5185-18							
Contaminant								60 30	99 50
Natrium (Na)	ppm	ASTM D5185-18	0	1	0	0	1		
Silicon (Si)	ppm	ASTM D5185-18	14	10	8	6	8		
Fuel Dilution	%v	ASTM E2412-10	0	0	0	0	0		
Fame Dilution	%v	ASTM E2412-10							
Water Content	%v	ASTM E2412-10	0	0	0	0	0		
Glycol	%v	ASTM E2412-10	0	0	0	0	0	0.1 2	0.2 3
Wear Metal								120 100 10 6 6 5 100	200 200 15 10 10 10 180
Iron (Fe)	ppm	ASTM D5185-18	368	419	263	224	310		
Copper (Cu)	ppm	ASTM D5185-18	2	2	1	1	2		
Alumunium (Al)	ppm	ASTM D5185-18	13	14	8	8	11		
Chromium (Cr)	ppm	ASTM D5185-18	3	3	2	2	3		
Nickel (Ni)	ppm	ASTM D5185-18	0	0	0	0	0		
Tin (Sn)	ppm	ASTM D5185-18	1	1	1	1	2		
Lead (Pb)	ppm	ASTM D5185-18	0	0	0	0	0		
Pb 75th Percentile									
PQ Index	-	D8184-18							
Color		ASTM D1500-12							
FTIR								Warning	Limit
Soot	Abs/cm	ASTM E2412-10	0	0	0	0	0	20 20 20	40 40 40
Oxidation	Abs/cm	ASTM E2412-10	1	6	1	3	6		
Nitration	Abs/cm	ASTM E2412-10	5	4	5	7	7		
Sulfation	Abs/cm	ASTM E2412-10	0	4	0	0	7		
Cleanliness								/21/18	/24/21
4 um	Particles/ml								
6 um	Particles/ml								
15 um	Particles/ml								
ISO CODE		ISO 4406 : 2021							
Foaming Characteristic									
Seq I	ml/ml	ASTM D892-18							
Seq II	ml/ml	ASTM D892-18							
Seq III	ml/ml	ASTM D892-18							



Source of Abnormality

Viskositas pelumas cukup tinggi dari strandart typical. Al di atas normal, kemungkinan berasal dari debu. Ausan logam Fe cukup tinggi, kemungkinan berasal dari Gear, spline shaft, bearing, shifter fork, clutch dog. Pelumas telah diganti.

Action to be Taken

Cek kondisi input dan output oil seal. Cek breather. Cek oil filler cap packing/gasket. Cek transmission magnet strainer. open paper filter element. Cek opini operator hal kondisi unusual noise. Resampling 500 jam berikutnya untuk monitoring.