

# **TEST REPORT**

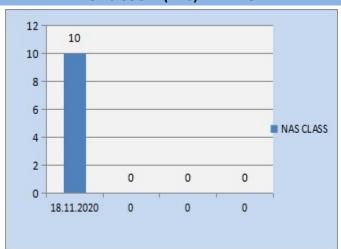
EQUIPMEMT DET	SAMPLE DETAILS			
EQUIPMEMT NAME:		REPORT NO:	7	
COMPONENT:		SAMPLE DATE:	11.11.2020	
MFR:		RECIEVED DATE:	14.11.2020	
AREA:		REPORT DATE:	18.11.2020	
LUBRICANT NAME:	AGIP ACER 150	LAB SAMPLE ID:	1	

OIL ANALYSIS TEST REPORT							
	иом	LIMITS		RESULTS			
TEST PARAMETERS(Physio-Chemica I Properties)			CURREN T SAMPLE	PREVIOUS THREE SAMPLES	TEST METHOD		
			18.11.20 20				
Kinematic Viscosity @40 deg.C	cSt	126.9-155 .1	132.4		ASTM D445		
Kinematic Viscosity @100 deg.C	cSt	12.0-16.0	13.2		ASTM D445		
Viscosity Index	MIN	90	92		ASTM D2270		
Moisture Content	PPM	500	328.6		ASTM D6304		
Total Acid Number (TAN)	mgKOH/g m	<1	0.54		ASTM D 664		

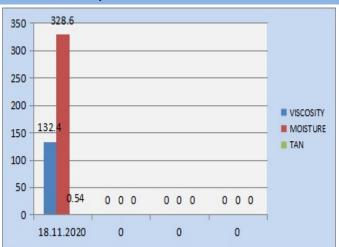
PARTICLE CONTAMINATION(NAS)							
		LIMITS	RESULTS				
Particle Size Range	No. of Particles / 100ml		CURREN T SAMPLE	PRE	PREVIOUS THREE SAMPLES		TEST METHOD
			18.11.20 20	0	0	0	
Particle Size 5-15 microns	185753						
Particle Size 15-25 microns	7613						
Particle Size 25-50 microns	2320	9	10				NAS 1638
Particle Size 50-100 microns	240						
Particle Size >100 microns	40						



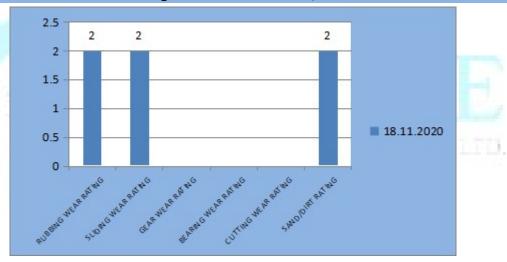
## PARTICLES COUNT(NAS) TREND GRAPH



### **VISCOSITY, TAN & MOISTURE TREND GRAPH**



## **Concentration Histogram of Wear Particles/Contaminants**





#### **FERROGRAPHY ANALYSIS**

#### ANALYTICAL FERROGRAPHY ANALYSIS TEST REPORT AS PER ASTM D 7690

TYPE OF WEAR PARTICLES	WEAR SEVERITY RATING IN 0-10 SCALE PART			N 0-10	PARTICLE	IMAGE MACHIFICATION FOOY	
FERROUS WEAR OBSERVATIONS	NON E	FEW	MODERTA E	HEAV Y	S SIZE IN MICRONS	IMAGE MAGNIFICATION:500X	
Rubbing Wear particles < 15 μm size		٧	••		••	17 18 18 18 18 18 18 18 18 18 18 18 18 18	
Sliding Wear particles >20 μm size		2/5 6			••		
Cutting Wear	••	••	••	••	••	The state of the s	
Chunks-Gear Wear	••		••	••	••		
Bearing wear particles	••	••	••	••	••		
Mettalic Spheres	••	••	••	••	••		
Dark Metallo-Oxides(Black Oxides)							
Red Oxides(Rust/ Ferrous oxides)		٧				A PROPERTY AND A STORY	
Corrosive Wear Debris	••	••	••	••	••	CONTROL PRODUCTION APPLICATION OF	
Others(Specify)	••	••	••	••	••		
NON FERROUS WEAR OBSERVATION	ONS					The said of the	
Sliding Wear(Copper alloy)	••		•	••	•		
Bearing Wear(Babbit)	••	••	••	••	••	Details:Sand/dirt &	
White non Ferrous Particles	••		••	••	••	Contaminant sphere	
CONTAMINANTS						Severity Ratings are based on the	
Friction Polymers			••	••	••	Microscopic evaluation of Wear Particles Size, Shape, Surface texture & Concentration over the Ferrogram	
Non-Metallic Crystalline (Sand/Dirt)		٧		••		FEW 01-04	
Fibers- Glass/cellulose/paper				••	••	MODERATE 05-07	
Other(Specify)		٧		••	••	<b>HEAVY</b> 08-10	

#### **RECOMMENDATIONS:**

**FERROGRAPHY**: Continue to Normal operation.

OIL ANALYSIS: Oil analysis result show normal condition of oil.

NAS: Higher contamination is an indication of entry of foreign particle such as dust/dirt, water, seal material, entrained air or filter debris. This may be due to defective breather, seals, blown head gaskets, oil cooler leaks or from new oil delivery/storage. We recommend thorough filtration or system flush. Resample after corrective actions.

# **DISCUSSION OF RESULTS(Ferrography):**

Normal rubbing wear particles <15 microns are observed in small quantities. Sand/dirt&Contaminant Sphere particles are observed in small quantities. Low alloy steel Severe siding wear particles are observed in small quantities upto 56 microns. Red oxides particles are observed in small quantities.