WEAR
CONTAMINATION
FLUID CONDITION

NORMAL NORMAL NORMAL

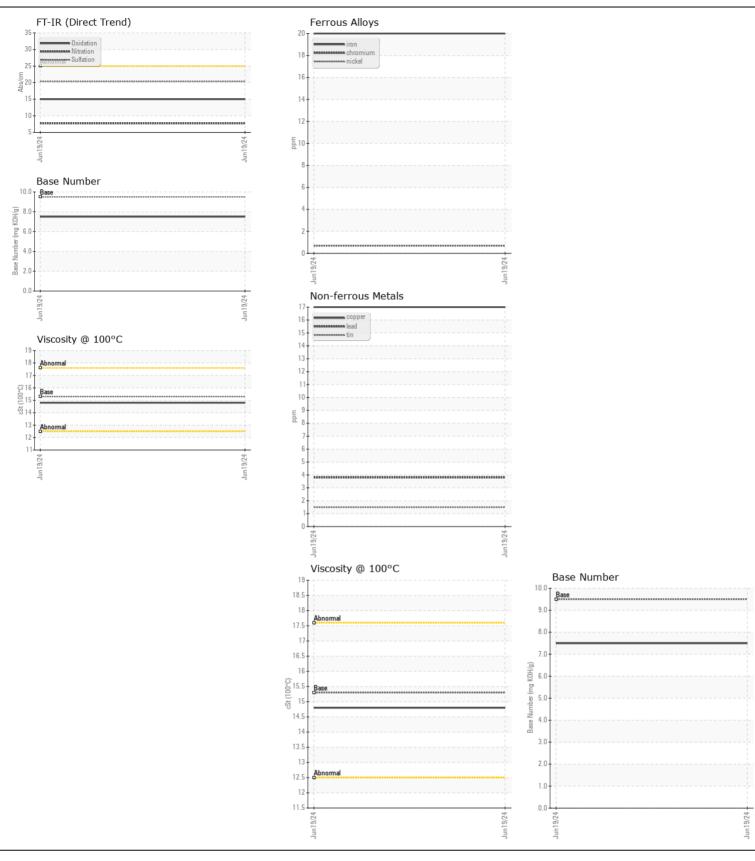
Machine Id

TWIN DISC MORGAN LEIGH

Port Genset

KENDALI SUPER-D XA 15W40 (--- GAL)

Machine Age hrs Client Info 10775 250 30 30 30 30 30 30 30	KENDALL SUPER-D XA 15W40 (GAL)							
Resample at the next service interval to monitor. Sample Number Client Info 10775	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	TESSIME INSTITUTE						,	
Machine Age https: Cilent Info 2250	Resample at the next service interval to monitor.	•						
Oil Age hrs Cilent Info 250			hrs					
Filter Age		•						
Oil Changed Client Info Not Changed Ch		•						
Filter Changed Sample Status			0					
Normal N		•						
Iron		_				-		
All component wear rates are normal. Chromium ppm ASTM 05185m 4. 4. 1. Nickel ppm ASTM 05185m 2. 2. 4. Titanium ppm ASTM 05185m 5. 4. All uninum ppm ASTM 05185m 5. 5. 2. All uninum ppm ASTM 05185m 5. 5. 5. All uninum ppm ASTM 05185m 5. 5. 5. All uninum ppm ASTM 05185m 5. 5. 5. 5. All uninum ppm ASTM 05185m 5.								
Nickel ppm ASTM D6185m >2 <1 .	WEAR	Iron	ppm	ASTM D5185m	>50	20		
Note	All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>4	<1		
Silver ppm ASTM D5185m >5		Nickel	ppm	ASTM D5185m	>2	<1		
Aluminum ppm ASTM D5185m >12 4		Titanium	ppm	ASTM D5185m		101		
Lead ppm ASTM DS185m 17 4		Silver	ppm	ASTM D5185m	>5	<1		
Copper		Aluminum	ppm	ASTM D5185m	>12	4		
Copper		Lead				4		
Tin		Copper		ASTM D5185m	>70	17		
Vanadium ppm ASTM D5185m 22				ASTM D5185m	>15	2		
White Metal Scalar *Visual NONE NO		Vanadium		ASTM D5185m		2		
Silicon ppm ASTM D5185m >25 13					NONE	NONE		
Silicon ppm ASTM D5185m >25 13		Yellow Metal	scalar	*Visual	NONE			
Potassium ppm ASTM 05185m >20 24								
There is no indication of any contamination in the oil. Fuel WC Method >4.0 <1.0 Water WC Method >0.1 NEG Glycol WC Method NEG Soot % % *ASTM D7844 0.1 Nitration Abs/mm *ASTM D7624 >20 7.7 Sulfation Abs/mm *ASTM D7624 >20 7.7 Sulfation Abs/mm *ASTM D7645 >30 20.4 Silt scalar *Visual NONE NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE NONE NONE NONE NONE Appearance scalar *Visual NORML	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	13		
Water WC Method So.1 NEG So.1 NE	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	24		
Glycol		Fuel		WC Method	>4.0	<1.0		
Soot %		Water		WC Method	>0.1	NEG		
Nitration		Glycol		WC Method		NEG		
Sulfation Abs/.1mm *ASTM D7415 >30 20.4		Soot %	%	*ASTM D7844		0.1		
Silt scalar *Visual NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORML NO			Abs/cm	*ASTM D7624	>20	7.7		
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NORML NORML Scalar *Visual Scalar *Visua		Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4		
Sand/Dirt Scalar *Visual NONE NONE Appearance Scalar *Visual NORML		Silt	scalar	*Visual	NONE	NONE		
Appearance		Debris	scalar	*Visual	NONE	NONE		
Codor Scalar Visual NORML NO		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >0.1 NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium ppm ASTM D5185m 20		Odor	scalar	*Visual	NORML	NORML		
Boron ppm ASTM D5185m 50 131 Barium ppm ASTM D5185m 50 131 Molybdenum ppm ASTM D5185m 9 Manganese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1000 2029 Phosphorus ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.tmm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5		Emulsified Water	scalar	*Visual	>0.1	NEG		
Boron ppm ASTM D5185m 50 131 Barium ppm ASTM D5185m 50 131 Molybdenum ppm ASTM D5185m 9 Manganese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1000 2029 Phosphorus ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.tmm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5	ELLUD COMPITION							
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. Barium ppm ASTM D5185m 9 Molybdenum ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 270 504 Calcium ppm ASTM D5185m 1900 2029 Phosphorus ppm ASTM D5185m 1000 1148 Zinc ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5	FLUID CONDITION				F-0			
Oil. The condition of the oil is suitable for further service. Molybdenum ppm ASTM D5185m 9 Manganese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1900 2029 Calcium ppm ASTM D5185m 1900 2029 Phosphorus ppm ASTM D5185m 1000 1148 Zinc ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.tmm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5	The BN result indicates that there is suitable alkalinity remaining in the				50			
Manganese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 270 504 Calcium ppm ASTM D5185m 1900 2029 Phosphorus ppm ASTM D5185m 1000 1148 Zinc ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5	oil. The condition of the oil is suitable for further service.							
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Calcium ppm ASTM D5185m 1900 2029 Phosphorus ppm ASTM D5185m 1000 1148 Zinc ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5					076			
Phosphorus ppm ASTM D5185m 1000 1148 Zinc ppm ASTM D5185m 1260 1420 Sulfur ppm ASTM D5185m 3400 4285 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5		•						
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Base Number (BN) mg KOH/g ASTM D2896 9.5 7.5								
Visc @ 100°C cSt ASTM D445 15.3 14.8								
		Visc @ 100°C	cSt	ASTM D445	15.3	14.8		







Certificate L2367

Report Id: SUPCHEOH [WUSCAR] 06217876 (Generated: 06/25/2024 12:20:06) Rev: 1

Laboratory Sample No.

: HRE0000286 Lab Number : 06217876 Unique Number : 11096073 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 24 Jun 2024 : 25 Jun 2024 Diagnosed

: 25 Jun 2024 - Don Baldridge

SUPERIOR MARINE 201 KELLY LANE CHESAPEAKE, OH US 45619

Contact: DARRELL KEARNS darrellkearns@superiormarineinc.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

T: F:

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)