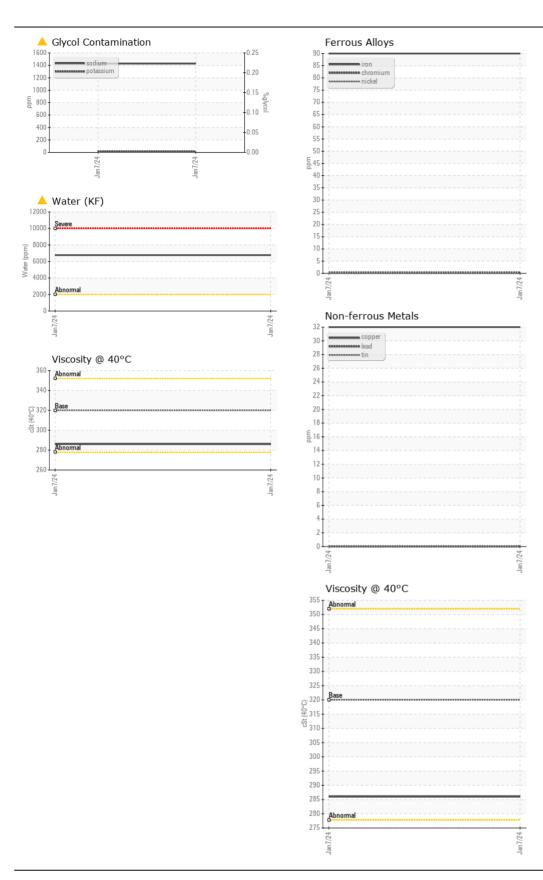
WEAR CONTAMINATION **FLUID CONDITION**

NORMAL ABNORMAL ABNORMAL

RIG 816 R816-MP-02-AFT2

Component Gearbox

GEAR OIL ISO 320 (GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.	Sample Number		Client Info		KL0011722		
	Sample Date		Client Info		07 Jan 2024		
	Machine Age	hrs	Client Info		0		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m	>200	90		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>10	<1		
	Nickel	ppm	ASTM D5185m	>10	0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>25	5		
	Lead	ppm	ASTM D5185m	>50	0		
	Copper	ppm	ASTM D5185m		32		
	Tin	ppm	ASTM D5185m	>10	0		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION Appearance is unacceptable. There is a moderate concentration of water present in the oil. The high sodium (Na) level indicates the possible presence of salt water.	Silicon	ppm	ASTM D5185m	>50	31		
	Potassium	ppm	ASTM D5185m	>20	11		
	Water	%	ASTM D6304	>0.2	△ 0.677		
	ppm Water	ppm	ASTM D6304	>2000	<u> </u>		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor Emulsified Water	scalar	*Visual	NORML	NORML		
<u></u>	Emuisineu water	Scalai	*Visual	>0.2	0.2% 		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		1428		
The oil is no longer serviceable due to the presence of contaminants.	Boron	ppm	ASTM D5185m	50	3		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m	15	0		
	Manganese	ppm	ASTM D5185m		0		
	Magnesium	ppm	ASTM D5185m		8		
	Calcium	ppm	ASTM D5185m		72		
	Phosphorus	ppm	ASTM D5185m		197		
	Zinc	ppm	ASTM D5185m		31		
	Sulfur	ppm	ASTM D5185m		9214		
	Visc @ 40°C	cSt	ASTM D445	320	286		







Certificate L2367

Laboratory Sample No. Lab Number

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KL0011722 : 06056983 : 10822932 Unique Number

Recieved Diagnosed

: 10 Jan 2024 : 11 Jan 2024 Diagnostician : Doug Bogart

Test Package : FLEET (Additional Tests: KF)

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

PATTERSON - UTI DRILLING

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