

OIL ANALYSIS REPORT

Sample Rating Trend





Hydraulic System SHELL TELLUS 32 (500 GAL)

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

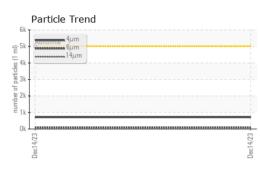
Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

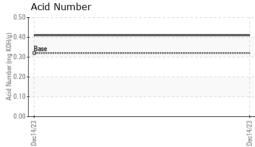
				Dec2023		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PP0782182		
Sample Date		Client Info		14 Dec 2023		
	hrs	Client Info		0		
	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>20	<1		
	ppm	ASTM D5185(m)	>20	0		
	ppm	ASTM D5185(m)	>20	0		
	ppm	ASTM D5185(m)		0		
	ppm	ASTM D5185(m)		د <1		
	ppm	ASTM D5185(m)	>20	0		
	ppm	ASTM D5185(m)	>20	۰ <1		
-	ppm	ASTM D5185(m)	>20	5		
	ppm	ASTM D5185(m)	>20	0		
		ASTM D5185(m)	>20	0		
,	ppm	ASTM D5185(m)		0		
	ppm					
	ppm	ASTM D5185(m)		0		
	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1		
Barium	ppm	ASTM D5185(m)		<1		
Volybdenum	ppm	ASTM D5185(m)		0		
Vanganese	ppm	ASTM D5185(m)		0		
0						
	ppm	ASTM D5185(m)	11	53		
Magnesium		ASTM D5185(m) ASTM D5185(m)	11 35	53 18		
Magnesium Calcium	ppm	. ,				
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185(m)	35	18		
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	35 259	18 284		
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277	18 284 336		
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277	18 284 336 1011		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277 1865	18 284 336 1011 <1	 	
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Method ASTM D5185(m)	35 259 277 1865 limit/base	18 284 336 1011 <1 current	 history1	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	35 259 277 1865 limit/base	18 284 336 1011 <1 current <1	 history1 	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277 1865 Iimit/base >15	18 284 336 1011 <1 current <1 0	 history1 	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277 1865 limit/base >15 >20	18 284 336 1011 <1 current <1 0 0	 history1 	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277 1865 imit/base >15 >20 imit/base	18 284 336 1011 <1 current <1 0 0 0 current 709	 history1 history1	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	35 259 277 1865 imit/base >15 >20 imit/base >5000 >1300	18 284 336 1011 <1 current <1 0 0 0 current	 history1 history1 	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	35 259 277 1865 imit/base >15 >20 imit/base >20 20 20 20 20 20 20 20 20 20 20 20 20 2	18 284 336 1011 <1 current <1 0 0 0 current 709 87 7	 history1 history1 history1	 history2 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	35 259 277 1865 imit/base >15 >20 imit/base >5000 >1300 >80 >20	18 284 336 1011 <1 current <1 0 0 0 current 709 87 7 2	 history1 history1 history1	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLINE Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	35 259 277 1865 imit/base >15 >20 imit/base >5000 >1300 >80 >20 >20	18 284 336 1011 <1 current <1 0 0 0 current 709 87 7 2 2 0	 history1 history1 history1 	 history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	35 259 277 1865 imit/base >15 >20 imit/base >5000 >1300 >80 >20	18 284 336 1011 <1 current <1 0 0 0 current 709 87 7 2	 history1 history1 	 history2 history2

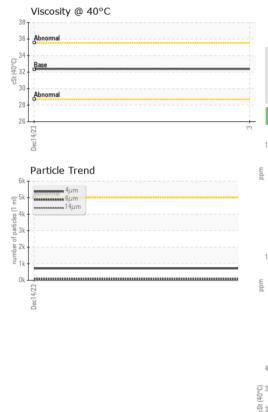


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FLUID DEGRADATION method







Acid Number (AN)						
	mg KOH/g	ASTM D974*	0.32	0.41		
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.05	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32.32	32.4		
SAMPLE IMAGES	6	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image
Bottom					no image	no image
					no image	no image
Bottom GRAPHS Ferrous Alloys				Particle Count		no image
GRAPHS Ferrous Alloys			491,520-	Particle Count		
GRAPHS Ferrous Alloys			491,520- 122,880-			T ²⁶
GRAPHS Ferrous Alloys				Particle Count		no image -24 -22
GRAPHS Ferrous Alloys			122,880 30,720	Severe		-24 -24 -22
GRAPHS Ferrous Alloys			122,880 30,720			-24 -22 -70
GRAPHS Ferrous Alloys			122,880 30,720	Severe		-24 -22 -70
GRAPHS Ferrous Alloys	s		122,880 30,720	Severe		-24 -24 -20
GRAPHS Ferrous Alloys	5		122,880 30,720	Severe		-24 -22 -70
GRAPHS Ferrous Alloys	s		122,880 30,720 EC 7,680 EC 1,920 EC 1,9	Severe		-24 -22 -70
GRAPHS Ferrous Alloys	S		122,880 30,720 قور 7,680 درم المعالي معالي معالمعالم معالم معالمعالم معالم معالمعالم معالم معالمعالم معالم معالم معالم معالم معالم معالم معالمعالم معالم معالم معالم معالم معالم مع معالم معالمعالم معالمعالم معالم معالمعالم معالم معالم معالمعالم معالم معالمعالم معالم معالمعالم معالم معالم معالم معالم معالم مع معالم مع مع مع معالم مع مع مع مع معالم مع مع م	Severe		-24 -22 -20 -18 -16 -14 -14 -12
GRAPHS Ferrous Alloys	s		122,880 30,720 EC 7,680 EC 1,920 EC 1,9	Severe		-24 -22 -70
GRAPHS Ferrous Alloys	S		122,880 30,720 E 7,680 50 1,920 480 50 1,920 480 50 1,920 480 50 1,920 50 1,920 50 1,920 50 1,920 50 50 50 50 50 50 50 50 50 50 50 50 50	Severe		-24 -22 -20 -18 -16 -14 -14 -12
GRAPHS Ferrous Alloys	s		122,880 30,720 2	Şevere Abnormal		-24 -24 -22 -20 -18 -16 -14 -12 -10 -8 -6
GRAPHS Ferrous Alloys	5		122,880 30,720 2	Şevere Abnormal		-24 -22 -20 -18 -16 -14 -12 -10 -8
GRAPHS Ferrous Alloys	S		122,880 30,720 2	Severe Abnormal		-24 -24 -22 -20 -18 -16 -14 -14 -12 -10 -8 -6
GRAPHS Ferrous Alloys	S		122,880 30,720 2	Severe Abnormal		-24 -24 -22 -20 -18 -16 -14 -14 -12 -10 -8 -6
GRAPHS Ferrous Alloys	S		122,880 30,720 2	Severe Abnormal		-24 -24 -22 -20 -18 -16 -14 -14 -12 -10 -8 -6
GRAPHS Ferrous Alloys	S		122,880 30,720 2	Severe Abnormal		-24 -24 -22 -20 -18 -16 -14 -14 -12 -10 -8 -6
GRAPHS Ferrous Alloys	S		122,880 30,720 2	Severe Abnormal		-24 -24 -22 -20 -18 -16 -14 -14 -12 -10 -8 -6

Accredited Laboratory Test Package : IND 2 (Additional Tests: TAN Man) To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

Diagnostician : Kevin Marson

Report Id: CLESPR [WCAMIS] 02603788 (Generated: 12/19/2023 11:35:08) Rev: 1

CALA

ISO 17025:2017

Laboratory

Sample No. Lab Number

Unique Number : 5696873

Contact/Location: Nigel Layton - CLESPR

F:

CA L9X 0G1

Contact: Nigel Layton nigel@clevelandhydraulics.ca

T: (647)332-7867