

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area **EAST CRANE [M-9132A]** Machine Id **170831 DG #2**

2 Distribution Gear Fluid GEAR OIL LS 80W90 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

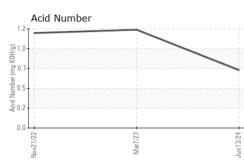
Fluid Condition

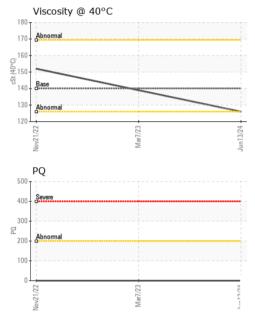
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		No	/2022	Mar2023 Jun20	24	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PP	PP	PP
Sample Date		Client Info		13 Jun 2024	07 Mar 2023	21 Nov 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>200	0	0	0
Iron	ppm	ASTM D5185(m)	>185	15	32	27
Chromium	ppm	ASTM D5185(m)	>5	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>35	0	<1	1
Copper	ppm	ASTM D5185(m)	>35	22	36	28
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Antimony	ppm	ASTM D5185(m)	>5	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 1	history1 1	history2 1
	ppm ppm					
Boron		ASTM D5185(m)		1	1	1
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)		1 1	1 5	1 5
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		1 1 0	1 5 0	1 5 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	150	1 1 0 <1	1 5 0 2	1 5 0 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	150	1 1 0 <1 2	1 5 0 2 2	1 5 0 2 1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	150 10 70 2000	1 1 0 <1 2 13	1 5 0 2 2 33	1 5 0 2 1 33
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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)	150 10 70 2000	1 1 0 <1 2 13 483	1 5 0 2 2 33 973	1 5 0 2 1 33 1018
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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)	150 10 70 2000 50	1 1 0 <1 2 13 483 150	1 5 0 2 2 33 973 200	1 5 0 2 1 33 1018 182
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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)	150 10 70 2000 50	1 1 0 <1 2 13 483 150 6426	1 5 0 2 2 33 973 200 18599	1 5 0 2 1 33 1018 182 19717
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm 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)	150 10 70 2000 50 20000	1 1 0 <1 2 13 483 150 6426 1	1 5 0 2 2 33 973 200 18599 2	1 5 0 2 1 33 1018 182 19717 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm 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)	150 10 70 2000 50 20000 limit/base	1 1 0 <1 2 13 483 150 6426 1 current	1 5 0 2 2 33 973 200 18599 2 2 history1	1 5 0 2 1 33 1018 182 19717 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm 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) method ASTM D5185(m)	150 10 70 2000 50 20000 limit/base	1 1 0 <1 2 13 483 150 6426 1 current 6	1 5 0 2 2 33 973 200 18599 2 history1 1	1 5 0 2 1 33 1018 182 19717 2 <u>history2</u> 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	150 10 70 2000 50 20000 bimit/base >150	1 1 0 <1 2 13 483 150 6426 1 <u>current</u> 6 1	1 5 0 2 2 33 973 200 18599 2 2 <u>history1</u> 1 3	1 5 0 2 1 33 1018 182 19717 2 history2 1 4



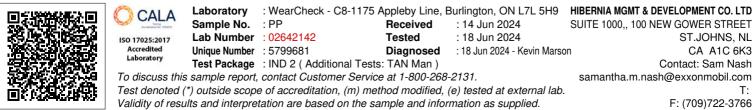
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	140	126	139	152
Visc @ 40°C SAMPLE IMAGES		ASTM D7279(m) method	140 limit/base	126 current	139 history1	152 history2
-			-			-

PQ Ferrous Alloys 40 450 30 400 튭.20 icke 350 10 300 0 Mar7/23 250 Vov21 B 200 Non-ferrous Metals 40 150 30 100 la 20 10 50 C lun13/24 CC/1000 Mar7/23 Mar7/23 Viscosity @ 40°C Acid Number 180 (B/1.2 HOX 1.0 Abno 40°C) Ē 0.7 폩 0.5 Base -弦140-LIN 0.2 Abnorma 0.0 QC 120 Jun13/24 Mar7/23 Mar7/23 3/24 Vov71



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Contact/Location: Sam Nash - HIBSTJ Page 2 of 2