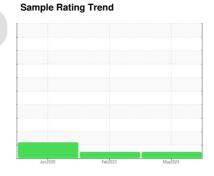


OIL ANALYSIS REPORT

[618586] MARION 8050 DL3124 (S/N 23187)

Right Propel Gearbox

{not provided} (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORM	//ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		BRI006992	BRM001759	BRM000797
Sample Date		Client Info		15 May 2024	14 Feb 2023	03 Jun 2020
Machine Age	hrs	Client Info		126810	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINATIO	V	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	83	41	146
Chromium	ppm	ASTM D5185m	>10	1	<1	1
Nickel	ppm	ASTM D5185m	>10	1	<1	3
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		8	2	8
Lead	ppm	ASTM D5185m		4	0	<1
Copper	ppm	ASTM D5185m		4	<1	<1
Tin	ppm	ASTM D5185m		2	0	0
Antimony	ppm	ASTM D5185m	>5			1373
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	4
Barium		ASTM D5185m		0	0	<1
	ppm					
Molybdenum	ppm	ASTM D5185m		53	45	47
Molybdenum Manganese		ASTM D5185m ASTM D5185m		53 2	45 <1	47 1
Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		53 2 3	45 <1 0	47 1 4
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		53 2 3 7	45 <1 0 3	47 1 4 12
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		53 2 3 7 243	45 <1 0 3 201	47 1 4 12 217
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		53 2 3 7 243 0	45 <1 0 3 201 0	47 1 4 12 217 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		53 2 3 7 243	45 <1 0 3 201 0 5488	47 1 4 12 217 5 5129
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	53 2 3 7 243 0 6708	45 <1 0 3 201 0 5488 history1	47 1 4 12 217 5 5129 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	limit/base	53 2 3 7 243 0 6708 current	45 <1 0 3 201 0 5488	47 1 4 12 217 5 5129 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		53 2 3 7 243 0 6708 current 46 3	45 <1 0 3 201 0 5488 history1 27	47 1 4 12 217 5 5129 history2 53 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m		53 2 3 7 243 0 6708 current	45 <1 0 3 201 0 5488 history1	47 1 4 12 217 5 5129 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>20 limit/base	53 2 3 7 243 0 6708 current 46 3 6	45 <1 0 3 201 0 5488 history1 27 1 0 history1	47 1 4 12 217 5 5129 history2 53 2 8 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m Method	>20 limit/base NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER	47 1 4 12 217 5 5129 history2 53 2 8 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *Visual *Visual	>20 limit/base NONE NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER NONE	47 1 4 12 217 5 5129 history2 53 2 8 history2 MEAVY NONE
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m Method *Visual *Visual *Visual	>20 limit/base NONE NONE NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER NONE NONE	47 1 4 12 217 5 5129 history2 53 2 8 history2 ▲ HEAVY NONE NONE
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE NONE NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER NONE NONE NONE	47 1 4 12 217 5 5129 history2 53 2 8 history2 NONE NONE NONE
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m *Visual *Visual *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE NONE NONE NONE NONE NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER NONE NONE NONE NONE	47 1 4 12 217 5 5129 history2 53 2 8 history2 MEAVY NONE NONE NONE LIGHT
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m *Visual *Visual *Visual *Visual	>20 limit/base NONE NONE NONE NONE	53 2 3 7 243 0 6708 current 46 3 6 current NONE NONE NONE	45 <1 0 3 201 0 5488 history1 27 1 0 history1 MODER NONE NONE NONE	47 1 4 12 217 5 5129 history2 53 2 8 history2 NONE NONE NONE

NORML

>0.2

NORML

NEG

NEG

NORML

NEG

scalar

scalar *Visual

scalar *Visual

*Visual

Odor

Emulsified Water

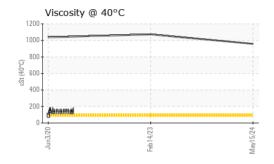
NORML

NEG

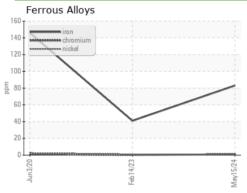
In: WALT SHAW - WESCOLMT

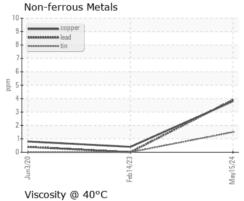


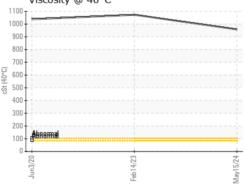
OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		958.3	1073	1038
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image
CDADUC						









Laboratory Sample No. : BRI006992 Lab Number : 06207007 Unique Number : 11074468

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

Received : 11 Jun 2024 Diagnosed

: 17 Jun 2024 : 18 Jun 2024 - Angela Borella

WESTMORELAND ROSEBUD MINING PO BOX 99 COLSTRIP, MT US 59323

Contact: WALT SHAW

WSHAW@WESTMORELAND.COM T: (406)748-5155

Test Package : IND 1 Certificate 12367 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)

F: x: