

# **OIL ANALYSIS REPORT**

## Area Findlay [Findlay] Oil - Port Reduction Gear Component

**Port Reduction Gear** 

MARATHON SAE 40 (35 GAL)

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

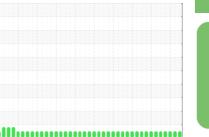
All component wear rates are normal.

#### 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.





NORMAL

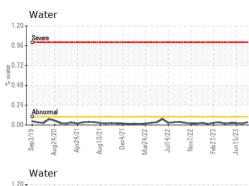
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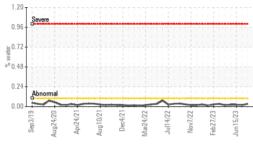
Sample Rating Trend

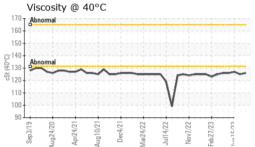
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0769024	WC0769470	WC0769535
Sample Date		Client Info		09 Aug 2023	15 Jul 2023	15 Jun 2023
Machine Age	hrs	Client Info		22128	21655	21382
Oil Age	hrs	Client Info		19901	19428	18786
Oil Changed		Client Info		Filtered	Not Changd	Filtered
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	14	21	20
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>25	<1	<1	<1
Lead	ppm	ASTM D5185m	>100	<1	<1	0
Copper	ppm	ASTM D5185m	>50	3	2	2
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 20	history1 20	history2 21
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	20	20	21
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	20 0	20 1	21 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48	20 1 52	21 0 48 <1 755
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1	20 1 52 <1	21 0 48 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1 709 863 789	20 1 52 <1 693	21 0 48 <1 755
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1 709 863	20 1 52 <1 693 920	21 0 48 <1 755 874
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1 709 863 789	20 1 52 <1 693 920 828	21 0 48 <1 755 874 849
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1 709 863 789 913	20 1 52 <1 693 920 828 958	21 0 48 <1 755 874 849 1016
Boron Barium 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 ASTM D5185m		20 0 48 <1 709 863 789 913 2834	20 1 52 <1 693 920 828 958 2611	21 0 48 <1 755 874 849 1016 3259
Boron Barium 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 ASTM D5185m	limit/base	20 0 48 <1 709 863 789 913 2834 current	20 1 52 <1 693 920 828 958 2611 history1	21 0 48 <1 755 874 849 1016 3259 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base	20 0 48 <1 709 863 789 913 2834 2834 <u>current</u> 2	20 1 52 <1 693 920 828 958 2611 history1 3	21 0 48 <1 755 874 849 1016 3259 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	limit/base	20 0 48 <1 709 863 789 913 2834 2834 current 2 5	20 1 52 <1 693 920 828 958 2611 history1 3 0	21 0 48 <1 755 874 849 1016 3259 history2 4 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20	20 0 48 <1 709 863 789 913 2834 <u>current</u> 2 5 5 2	20 1 52 <1 693 920 828 958 2611 history1 3 0 2	21 0 48 <1 755 874 849 1016 3259 history2 4 3 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >50 >20 >0.1	20 0 48 <1 709 863 789 913 2834 <u>current</u> 2 5 2 2 0.034	20 1 52 <1 693 920 828 958 2611 history1 3 0 2 0.016	21 0 48 <1 755 874 849 1016 3259 history2 4 3 3 0.022



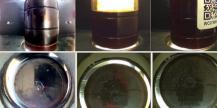
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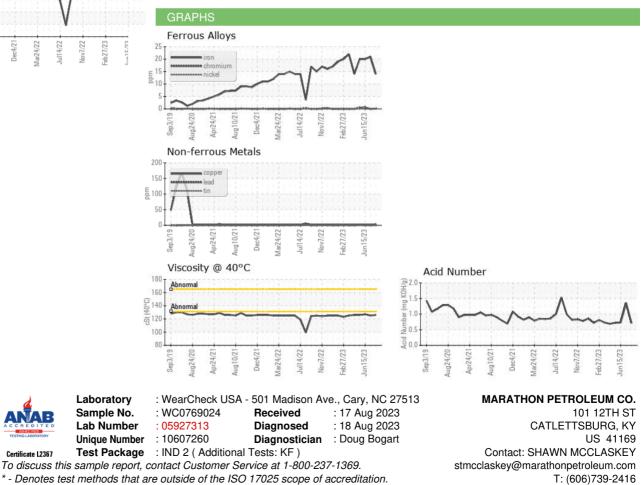




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		126	125	127
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						



Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

F: x: