

Area [Tampa] Oil - Port Reduction Gear

Port Reduction Gear

Fluid MOBIL DELVAC 1640 (28 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.

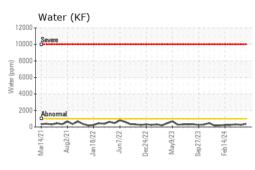


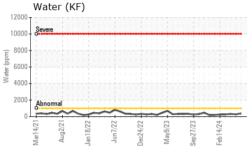
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0874666	WC0874678	WC0805298
Sample Date		Client Info		04 Jun 2024	09 May 2024	11 Apr 2024
Machine Age	hrs	Client Info		24342	23819	23200
Oil Age	hrs	Client Info		4143	3620	3000
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	11	8	6
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	1	2
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>50	12	10	8
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 15	history1 20	history2 13
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	15	20	13
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	15 0	20 0	13 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 38	20 0 35	13 0 34
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 38 <1	20 0 35 <1	13 0 34 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	15 0 38 <1 180	20 0 35 <1 173	13 0 34 <1 184
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	15 0 38 <1 180 3302	20 0 35 <1 173 3022	13 0 34 <1 184 2819
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	limit/base	15 0 38 <1 180 3302 680	20 0 35 <1 173 3022 644	13 0 34 <1 184 2819 623
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	15 0 38 <1 180 3302 680 791	20 0 35 <1 173 3022 644 694	13 0 34 <1 184 2819 623 694
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 ASTM D5185m		15 0 38 <1 180 3302 680 791 7870	20 0 35 <1 173 3022 644 694 7363	13 0 34 <1 184 2819 623 694 7100
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	15 0 38 <1 180 3302 680 791 7870 current	20 0 35 <1 173 3022 644 694 7363 history1	13 0 34 <1 184 2819 623 694 7100 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 method	limit/base	15 0 38 <1 180 3302 680 791 7870 current 6	20 0 35 <1 173 3022 644 694 7363 history1 0	13 0 34 <1 184 2819 623 694 7100 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 method ASTM D5185m	limit/base >50	15 0 38 <1 180 3302 680 791 7870 current 6 6	20 0 35 <1 173 3022 644 694 7363 history1 0 4	13 0 34 <1 184 2819 623 694 7100 history2 4 4
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	15 0 38 <1 180 3302 680 791 7870 <u>current</u> 6 6 5	20 0 35 <1 173 3022 644 694 7363 history1 0 4 0	13 0 34 <1 184 2819 623 694 7100 history2 4 4 4 2
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	15 0 38 <1 180 3302 680 791 7870 <u>current</u> 6 6 6 5 5 0.035	20 0 35 <1 173 3022 644 694 7363 history1 0 4 0 0 0.026	13 0 34 <1 184 2819 623 694 7100 history2 4 4 4 2 0.032

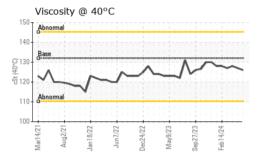
NORMAL



OIL ANALYSIS REPORT







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	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	132	126	127	128
SAMPLE IMAGES		method	limit/base	current	history1	history2

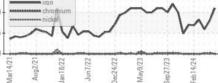
Color



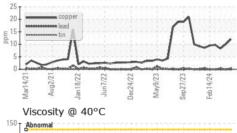
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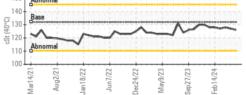
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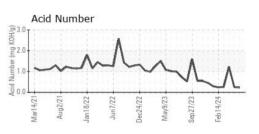




Non-ferrous Metals







Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MARATHON PETROLEUM CO. Sample No. : WC0874666 Received : 14 Jun 2024 101 12TH ST Lab Number : 06210210 Tested : 18 Jun 2024 CATLETTSBURG, KY Unique Number : 11083074 Diagnosed : 18 Jun 2024 - Sean Felton US 41169 Test Package : IND 2 (Additional Tests: KF) Contact: CORY GUMBERT Certificate 12367 cagumbert@marathonpetroleum.com To discuss this sample report, contact Customer Service at 1-800-237-1369. T: (606)585-3950 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. F: x:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: MARCAT [WUSCAR] 06210210 (Generated: 06/22/2024 04:15:31) Rev: 1

Submitted By: M/V TAMPA