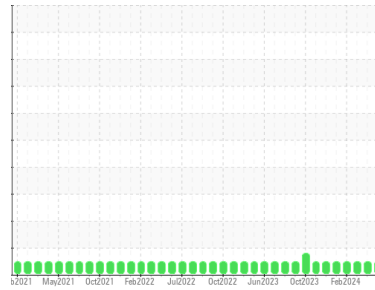




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Tri State

Machine Id

[Tri State] Oil - Port Reduction Gear

Component

Port Reduction Gear

Fluid

DIESEL ENGINE OIL SAE 40 (8 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. 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 INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	WC0874540	WC0874788	WC0874808	
Sample Date	Client Info	24 May 2024	23 Apr 2024	20 Mar 2024	
Machine Age	hrs	Client Info	23692	23077	22382
Oil Age	hrs	Client Info	590	1111	416
Oil Changed	Client Info	Not Changed	Changed	Not Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >150	2	2	2
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	0	1
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >50	3	<1	1
Tin	ppm	ASTM D5185m >10	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 250	0	<1	<1
Barium	ppm	ASTM D5185m 10	<1	0	0
Molybdenum	ppm	ASTM D5185m 100	40	40	41
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 450	627	623	655
Calcium	ppm	ASTM D5185m 3000	693	711	739
Phosphorus	ppm	ASTM D5185m 1150	759	821	826
Zinc	ppm	ASTM D5185m 1350	913	900	945
Sulfur	ppm	ASTM D5185m 4250	2364	2721	2447

CONTAMINANTS

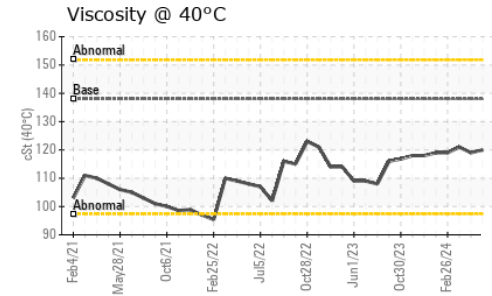
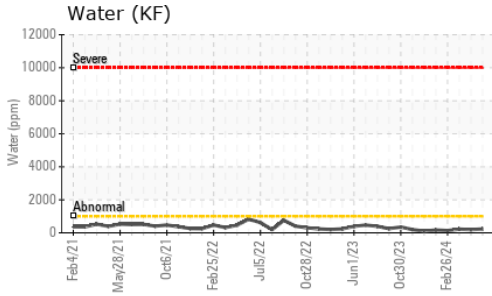
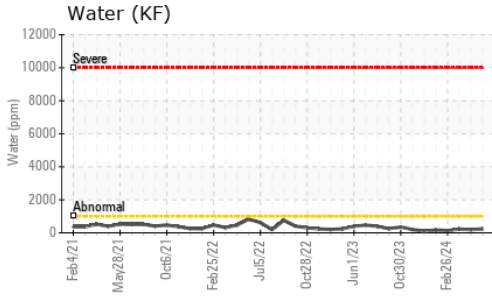
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	2	1	2
Sodium	ppm	ASTM D5185m >216	0	2	<1
Potassium	ppm	ASTM D5185m >20	2	1	2
Water	%	ASTM D6304 >0.1	0.023	0.019	0.022
ppm Water	ppm	ASTM D6304 >1000	234	194	223

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.96	0.960	1.06



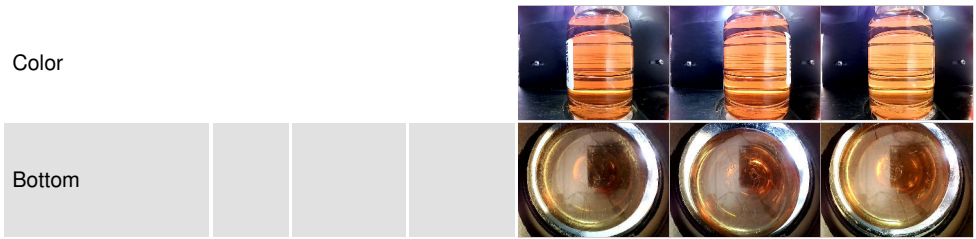
OIL ANALYSIS REPORT



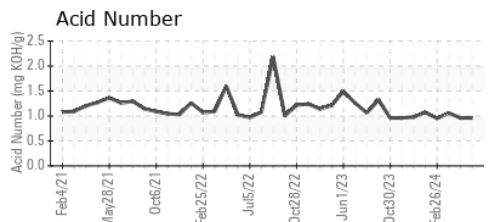
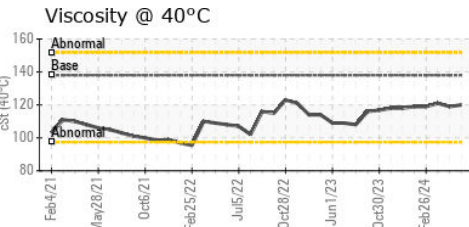
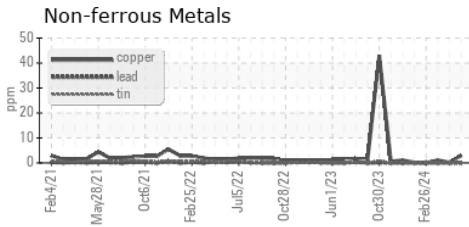
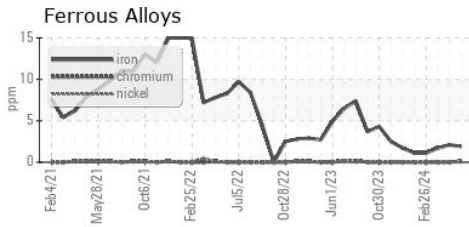
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	138	120	119	121

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874540 **Received** : 06 Jun 2024
Lab Number : 06201558 **Tested** : 10 Jun 2024
Unique Number : 11063681 **Diagnosed** : 10 Jun 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, PQ)

MARATHON PETROLEUM CO.
 101 12TH ST
 CATLETTSBURG, KY
 US 41169
 Contact: CORY GUMBERT
 cagumbert@marathonpetroleum.com

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)