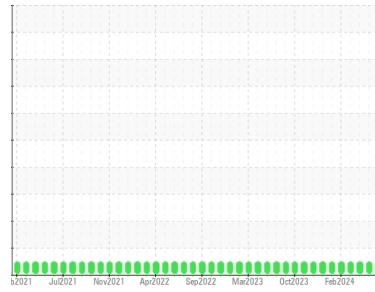




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Speedway

Machine Id

[Speedway] Oil - Starboard Reduction Gear

Component

Starboard Reduction Gear

Fluid

DIESEL ENGINE OIL SAE 30 (85 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Jd Ridout)

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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0845790	WC0845795	WC0860102
Sample Date	Client Info		11 Jun 2024	15 May 2024	10 Apr 2024
Machine Age	hrs	Client Info	40960	40588	40044
Oil Age	hrs	Client Info	18709	18338	17493
Oil Changed	Client Info		Filtered	Oil Added	N/A
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	41	17	14
Chromium	ppm	ASTM D5185m >10	<1	<1	<1
Nickel	ppm	ASTM D5185m >10	0	0	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m	0	<1	0
Aluminum	ppm	ASTM D5185m >25	<1	<1	<1
Lead	ppm	ASTM D5185m >100	0	<1	0
Copper	ppm	ASTM D5185m >50	13	7	4
Tin	ppm	ASTM D5185m >10	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	37	23	23
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	22	34	33
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 450	315	530	522
Calcium	ppm	ASTM D5185m 3000	2027	1442	1378
Phosphorus	ppm	ASTM D5185m 1150	810	849	824
Zinc	ppm	ASTM D5185m 1350	866	911	897
Sulfur	ppm	ASTM D5185m 4250	7346	5517	5373

CONTAMINANTS

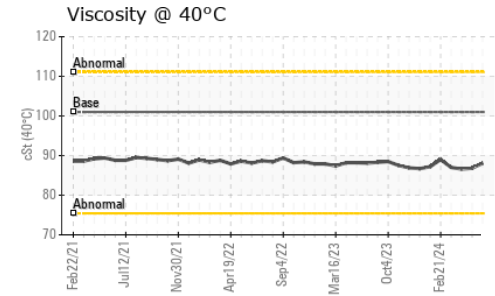
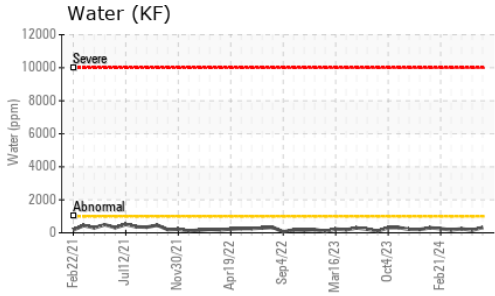
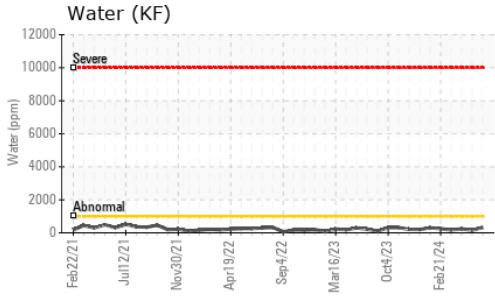
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	5	3	3
Sodium	ppm	ASTM D5185m >75	4	2	2
Potassium	ppm	ASTM D5185m >20	0	1	0
Water	%	ASTM D6304 >0.1	0.032	0.015	0.024
ppm Water	ppm	ASTM D6304 >1000	324	158	244

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.96	1.12	1.01



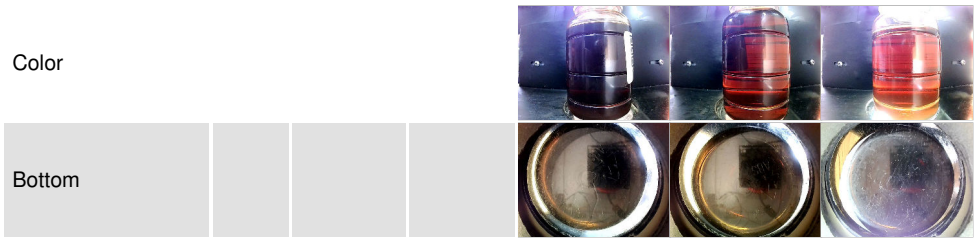
OIL ANALYSIS REPORT



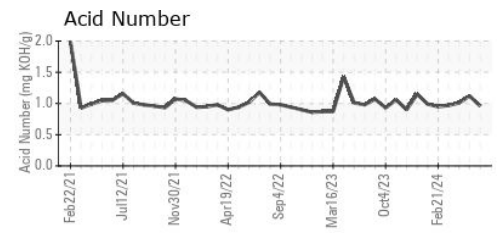
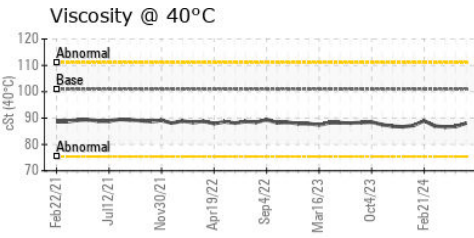
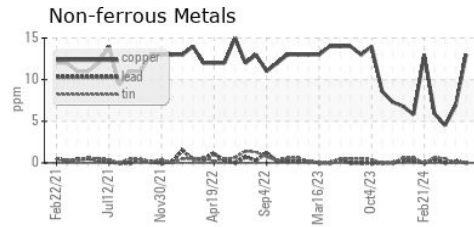
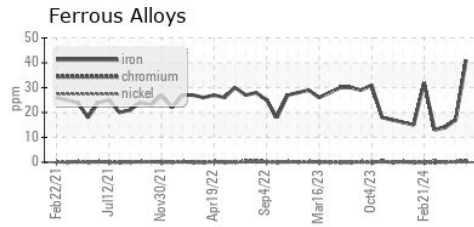
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 101	88.1	86.8	86.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0845790 **Received** : 17 Jun 2024
Lab Number : 06211764 **Tested** : 18 Jun 2024
Unique Number : 11084628 **Diagnosed** : 18 Jun 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF)

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)