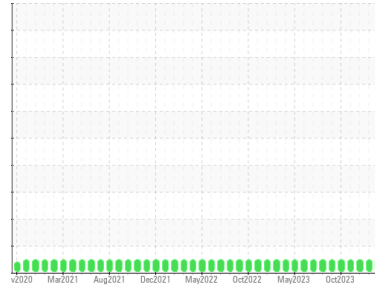




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Speedway

Machine Id

[Speedway] Oil - Starboard Reduction Gear

Component

Starboard Reduction Gear

Fluid

SAE 30W (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

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	WC0860048	WC0845772	WC0805526
Sample Date	Client Info	21 Feb 2024	23 Jan 2024	26 Dec 2023
Machine Age	hrs Client Info	39378	38838	38448
Oil Age	hrs Client Info	16826	16486	16096
Oil Changed	Client Info	Not Chngd	N/A	Not Chngd
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>150	32	15	16
Chromium ppm ASTM D5185m	>10	0	0	<1
Nickel ppm ASTM D5185m	>10	0	0	<1
Titanium ppm ASTM D5185m		0	0	<1
Silver ppm ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m	>25	0	<1	1
Lead ppm ASTM D5185m	>100	0	<1	<1
Copper ppm ASTM D5185m	>50	13	6	7
Tin ppm ASTM D5185m	>10	0	<1	<1
Vanadium ppm ASTM D5185m		0	0	0
Cadmium ppm ASTM D5185m		<1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m		38	23	21
Barium ppm ASTM D5185m		0	0	2
Molybdenum ppm ASTM D5185m		23	31	32
Manganese ppm ASTM D5185m		<1	<1	<1
Magnesium ppm ASTM D5185m		314	487	482
Calcium ppm ASTM D5185m		1954	1320	1303
Phosphorus ppm ASTM D5185m		801	812	795
Zinc ppm ASTM D5185m		872	884	881
Sulfur ppm ASTM D5185m		6286	4704	5259

CONTAMINANTS

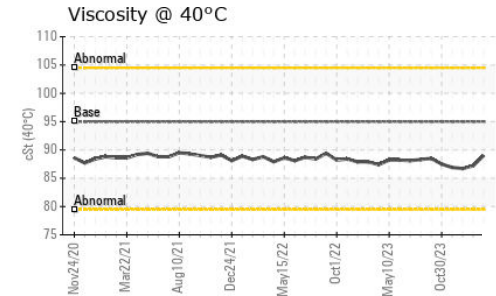
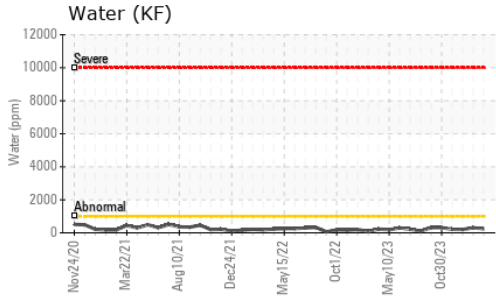
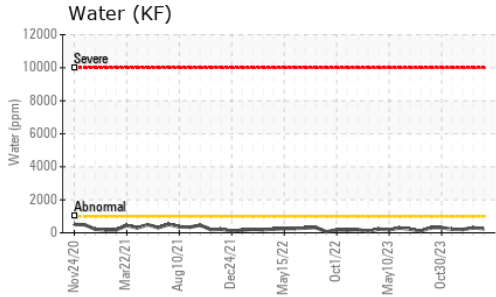
method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>50	5	4	4
Sodium ppm ASTM D5185m		2	1	0
Potassium ppm ASTM D5185m	>20	0	<1	<1
Water % ASTM D6304	>0.1	0.025	0.030	0.020
ppm Water ppm ASTM D6304	>1000	251	303	203

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045		0.95	0.99	1.15



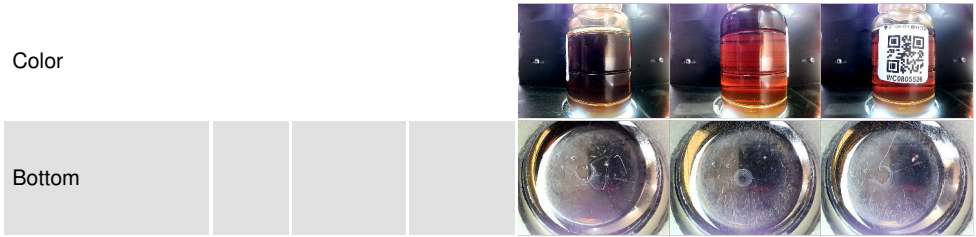
OIL ANALYSIS REPORT



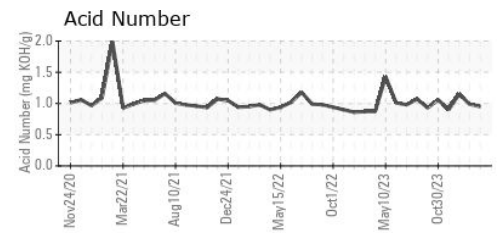
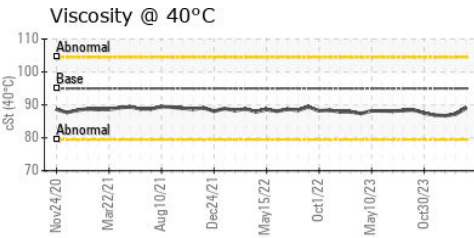
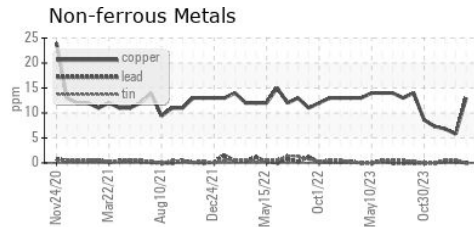
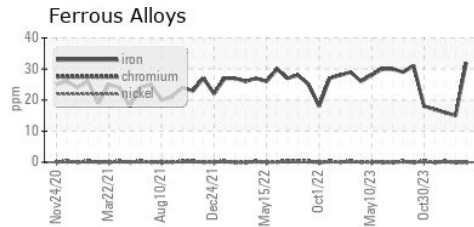
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	95.0	89.0	87.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0860048 **Received** : 27 Feb 2024
Lab Number : **06101736** **Tested** : 28 Feb 2024
Unique Number : 10899966 **Diagnosed** : 29 Feb 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF)

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 CATLETTSBURG, KY
 US 41169
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 cagumbert@marathonpetroleum.com
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 F: x:

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)