FLEET WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PACIFIC CHALLENGER
Component
Starboard Main Engine
Fluid
MOBIL 15W40 (60 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment:
Top Up Amount: 1 GAL)

WEAR

All component wear rates are normal.

CONTAMINATION

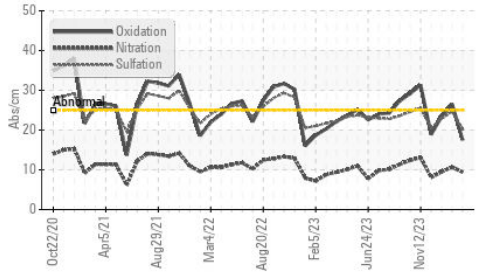
There is no indication of any contamination in the oil.

FLUID CONDITION

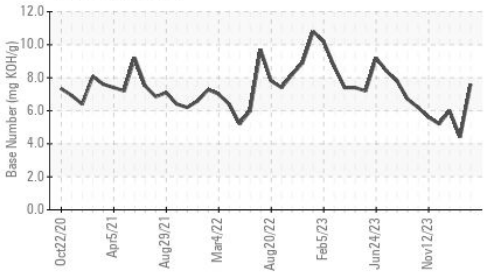
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013531	KL0011597	KL0011797
Sample Date		Client Info		01 Jul 2024	26 May 2024	19 Mar 2024
Machine Age	hrs	Client Info		41990	41485	40450
Oil Age	hrs	Client Info		500	2000	1000
Filter Age	hrs	Client Info		250	500	500
Oil Changed		Client Info		Oil Added	Changed	Oil Added
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	5	18	7
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	1
Lead	ppm	ASTM D5185m	>18	2	2	2
Copper	ppm	ASTM D5185m	>80	5	15	9
Tin	ppm	ASTM D5185m	>14	<1	<1	2
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	3	3	2
Potassium	ppm	ASTM D5185m	>20	3	3	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.4	10.7	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	24.6	22.9
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
Sodium	ppm	ASTM D5185m	>118	1	4	3
Boron	ppm	ASTM D5185m		92	53	76
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		8	13	17
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		681	427	372
Calcium	ppm	ASTM D5185m		1986	1816	1942
Phosphorus	ppm	ASTM D5185m		955	778	774
Zinc	ppm	ASTM D5185m		1082	948	942
Sulfur	ppm	ASTM D5185m		3464	3715	4240
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	26.5	23.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.6	4.4	6.0
Visc @ 100°C	cSt	ASTM D445		13.8	14.1	13.8

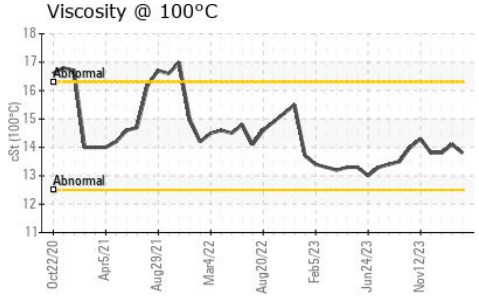
FT-IR (Direct Trend)



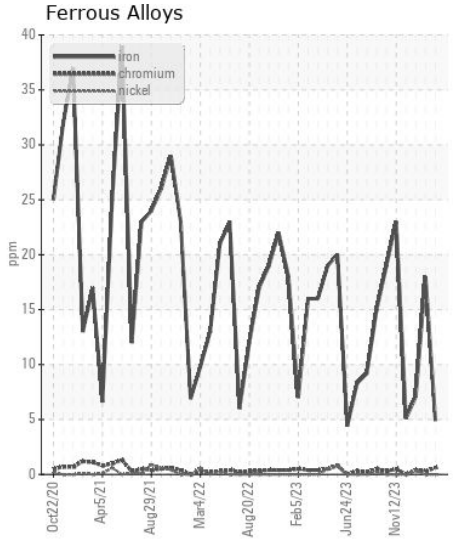
Base Number



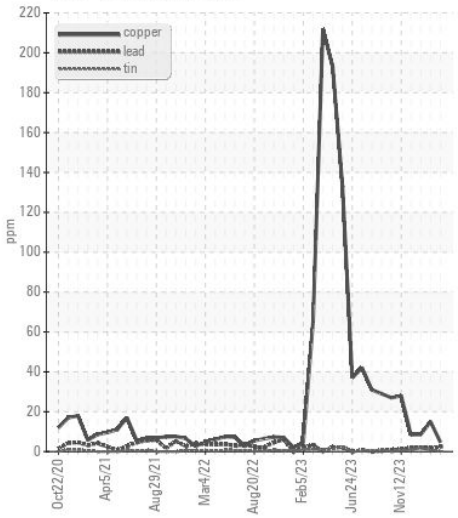
Viscosity @ 100°C



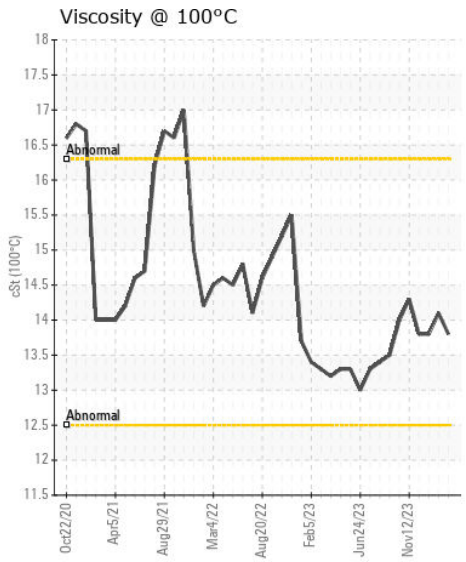
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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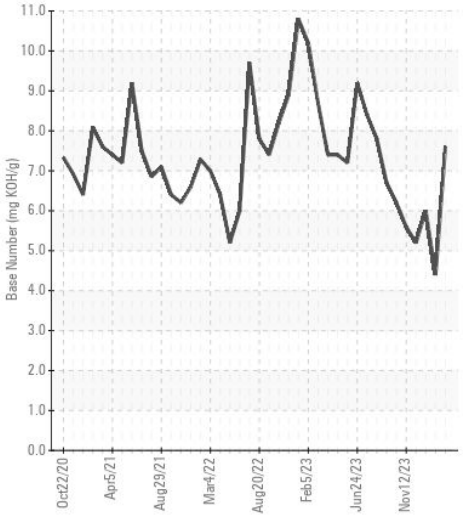

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013531
Lab Number : 06234698
Unique Number : 11123532
Test Package : FLEET

Received : 12 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - Don Baldridge

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)

PACIFIC DAWN LLC
2324 NW 90TH ST
SEATTLE, WA
US 98117
Contact: BURT PARKER
icfish@teleport.com
T: (206)297-2737
F: (206)297-2949