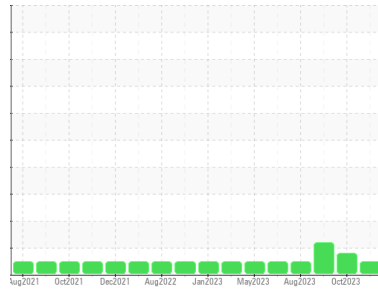


OIL ANALYSIS REPORT

Area
DRUMRIGHT
 Machine Id
Unit 01 DB120101E
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON MONOGRADE HD 40W (250 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 Fuel content negligible. 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 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	PCA0052188	PCA0052187	PCA0052186
Sample Date	Client Info	02 Jul 2024	29 Oct 2023	08 Oct 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	MARGINAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	1	<1	0
Chromium	ppm ASTM D5185m >20	0	0	<1
Nickel	ppm ASTM D5185m >4	0	0	<1
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	<1	0	0
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	0	1	<1
Tin	ppm ASTM D5185m >15	<1	<1	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	1	0	<1
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	0	1	<1
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	965	876	889
Calcium	ppm ASTM D5185m	1079	950	967
Phosphorus	ppm ASTM D5185m	1230	965	1119
Zinc	ppm ASTM D5185m	1393	1225	1307
Sulfur	ppm ASTM D5185m	3828	2997	3274

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	3	5
Sodium	ppm ASTM D5185m	1	<1	0
Potassium	ppm ASTM D5185m >20	0	<1	2
Fuel	% ASTM D3524 >5	1.4	▲ 2.6	▲ 6.3

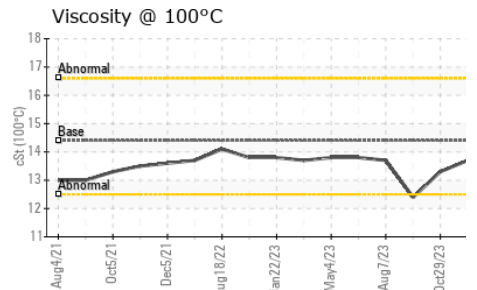
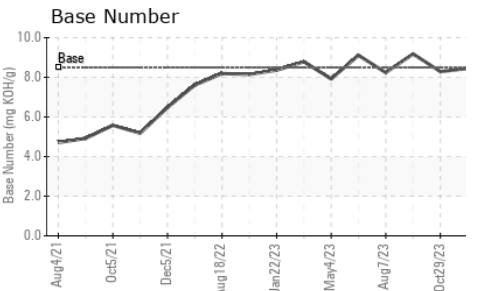
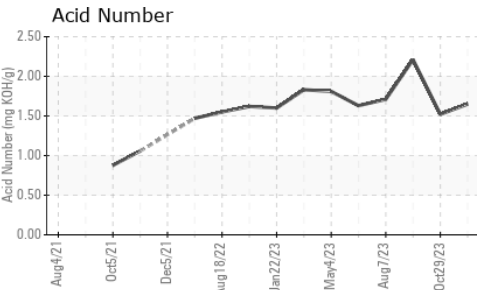
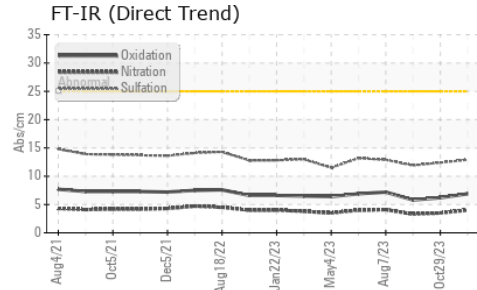
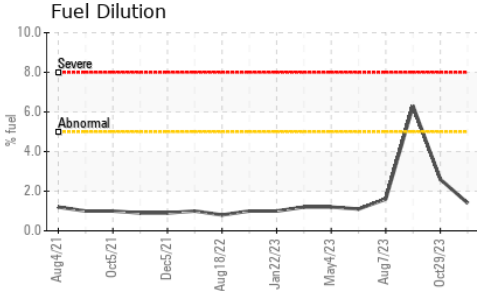
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >2	0.1	0	0
Nitration	Abs/cm *ASTM D7624 >20	4.0	3.5	3.3
Sulfation	Abs/.1mm *ASTM D7415 >30	12.9	12.4	11.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	6.9	6.2	5.8
Acid Number (AN)	mg KOH/g ASTM D8045	1.65	1.52	2.21
Base Number (BN)	mg KOH/g ASTM D2896 8.5	8.45	8.29	9.18

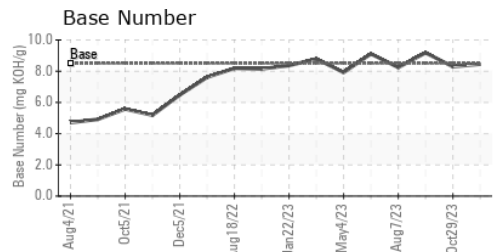
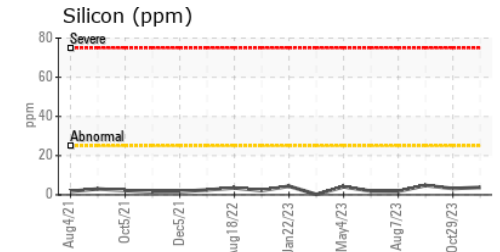
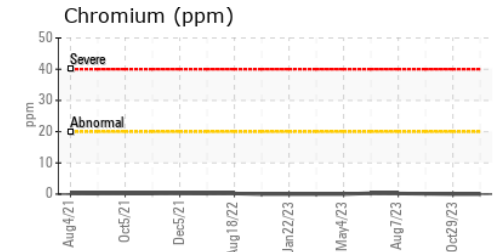
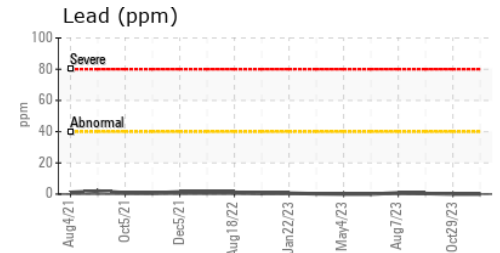
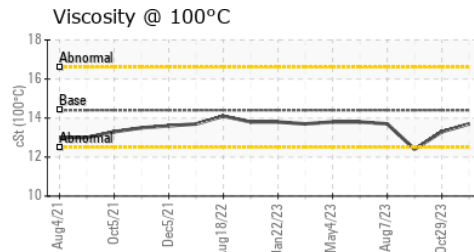
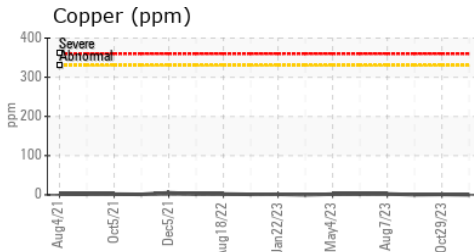
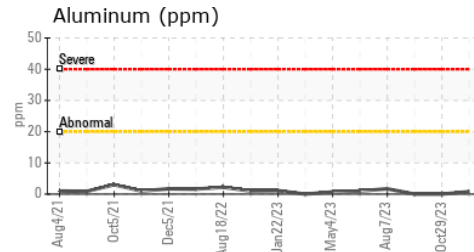
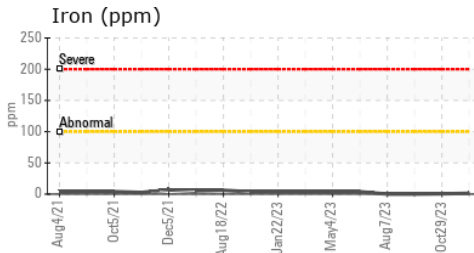
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0052188
Lab Number : 06227679
Unique Number : 11111172
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Magellan Midstream LP - Drumright
 55200 South Hwy 16
 Drumright, OK
 US 74030

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)

Contact: Todd Clark
 Todd.Clark@magellanlp.com
 T: (918)619-3013

F: