

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

927054

Component Diesel Engine Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

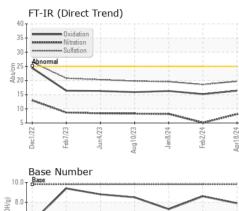
Fluid Condition

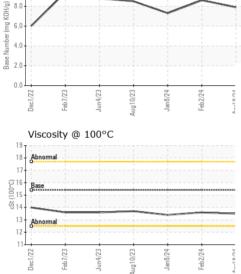
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112993	GFL0108422	GFL0108406
Sample Date		Client Info		18 Apr 2024	02 Feb 2024	08 Jan 2024
Machine Age	hrs	Client Info		15809	15251	15101
Oil Age	hrs	Client Info		15809	15251	15101
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	13	7	17
Chromium	ppm	ASTM D5185m	>4	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>25	2	<1	2
Lead	ppm	ASTM D5185m	>45	3	<1	<1
Copper	ppm	ASTM D5185m	>85	2	<1	2
Tin	ppm	ASTM D5185m	>4	2	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
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Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES	ppm	ASTM D5185m method	limit/base	<1 current	<1 history1	0 history2
	ppm ppm		limit/base			-
ADDITIVES		method	0	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 2	history1 5	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0 0 60	current 2 <1	history1 5 0	history2 1 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 2 <1 62	history1 5 0 62	history2 1 0 62
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	current 2 <1 62 1	history1 5 0 62 <1	history2 1 0 62 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	current 2 <1 62 1 980	history1 5 0 62 <1 1000	history2 1 0 62 0 989
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	current 2 <1 62 1 980 1075	history1 5 0 62 <1 1000 1040	history2 1 0 62 0 989 1046
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	Current 2 <1 62 1 980 1075 1030	history1 5 0 62 <1 1000 1040 1003	history2 1 0 62 0 989 1046 1073
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270	current 2 <1 62 1 980 1075 1030 1271	history1 5 0 62 <1 1000 1040 1003 1271	history2 1 0 62 0 989 1046 1073 1280
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 00 00 1010 1070 1150 1270 2060	Current 2 <1 62 1 980 1075 1030 1271 3422	history1 5 0 62 <1 1000 1040 1003 1271 3068	history2 1 0 62 0 989 1046 1073 1280 2923
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 00 00 1010 1070 1150 1270 2060	2 <1 62 1 980 1075 1030 1271 3422 current	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1	history2 1 0 62 0 989 1046 1073 1280 2923 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Limit/base >30	current 2 <1 62 1 980 1075 1030 1271 3422 current 5	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 Limit/base >30	current 2 <1 62 1 980 1075 1030 1271 3422 current 5 2	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >30	2 <1 62 1 980 1075 1030 1271 3422 current 5 2 3	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0 2 history1 0.1	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Imit/base >30 >20 Imit/base >33	current 2 <1 62 1 980 1075 1030 1271 3422 current 5 2 3 current	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0 2 history1	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5 4 5 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Imit/base >30 >20 Imit/base >33	current 2 <1 62 1 980 1075 1030 1271 3422 current 5 2 3 current 0.4	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0 2 history1 0.1	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5 4 5 4 5. 4. 5. 4. 5. 4. 0.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >30 200 <i>limit/base</i> >3 >20	current 2 <1 62 1 980 1075 1030 1271 3422 current 5 2 3 current 0.4 8.1	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0 2 history1 0.1 5.1	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5 4 5 4 5. 4. 5. 4. 5. 4. 5. 4. 5.2 0.4 8.2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >30 imit/base >3 20	current 2 <1 62 1 980 1075 1030 1271 3422 current 5 2 3 current 0.4 8.1 19.7	history1 5 0 62 <1 1000 1040 1003 1271 3068 history1 4 0 2 history1 0.1 5.1 18.6	history2 1 0 62 0 989 1046 1073 1280 2923 history2 4 5 4 bistory2 0.4 8.2 19.6



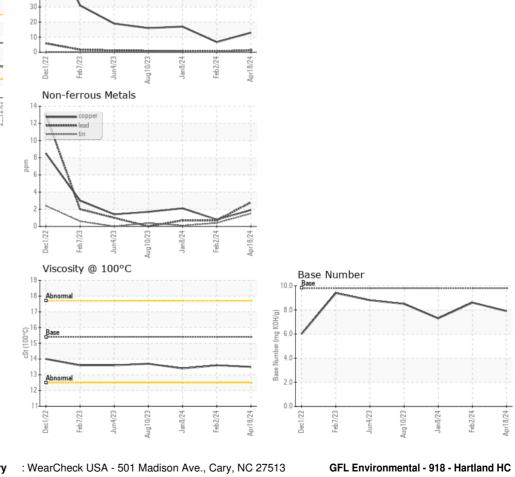
OIL ANALYSIS REPORT





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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.6	13.4
GRAPHS						
Ferrous Alloys						
iron						
/0						
50 - Constant Nickel						



Laboratory Sample No. : GFL0112993 Received : 25 Apr 2024 630 E Industrial Drive Lab Number : 06160210 Tested : 26 Apr 2024 Hartland, WI US 53029 Unique Number : 10995633 Diagnosed : 26 Apr 2024 - Wes Davis Test Package : FLEET Contact: David McCall Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. david.mccall@gflenv.com T: (262)369-3069 * - 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) F:

Report Id: GFL918 [WUSCAR] 06160210 (Generated: 04/26/2024 10:34:58) Rev: 1

Submitted By: David McCall

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