

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id **797M** Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 15W40 (36 QTS)

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

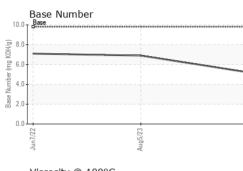
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

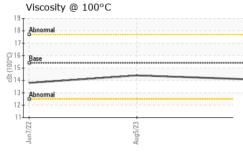
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0110053	GFL0085054	GFL0052153
Sample Date		Client Info		25 Jan 2024	05 Aug 2023	07 Jun 2022
Machine Age	hrs	Client Info		6287	5367	4767
Oil Age	hrs	Client Info		600	5367	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	>90	29	26	30
Chromium	ppm	ASTM D5185m	>20	1	1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	2	2	1
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	nom	AOTH DEADE		-	0	0
Oddinidini	ppm	ASTM D5185m		0	0	0
ADDITIVES	ppm	method	limit/base	0 current	0 history1	0 history2
	ppm	method	limit/base			-
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	0	current 0	history1 1	history2 4
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	0	current 0 0	history1 1 0	history2 4 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	current 0 0 52	history1 1 0 61	history2 4 0 57
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	Current 0 0 52 <1	history1 1 0 61 <1	history2 4 0 57 <1
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 0 0 52 <1 885	history1 1 0 61 <1 1027	history2 4 0 57 <1 859
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 0 0 52 <1 885 950	history1 1 0 61 <1 1027 1157	history2 4 0 57 <1 859 1014
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 0 52 <1 885 950 965	history1 1 0 61 <1 1027 1157 1052	history2 4 0 57 <1 859 1014 941
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	Current 0 52 <1 885 950 965 1177	history1 1 0 61 <1 1027 1157 1052 1361	history2 4 0 57 <1 859 1014 941 1183
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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	Current 0 52 <1 885 950 965 1177 2404	history1 1 0 61 <1 1027 1157 1052 1361 3495	history2 4 0 57 <1 859 1014 941 1183 2592
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 0 60 1010 1070 1150 1270 2060	Current 0 52 <1 885 950 965 1177 2404 Current	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1	history2 4 0 57 <1 859 1014 941 1183 2592 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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 method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	current 0 0 52 <1 885 950 965 1177 2404 4	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 Limit/base >25	Current 0 0 52 <1 885 950 965 1177 2404 Current 4 7	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 3 3	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	Current 0 52 <1 885 950 965 1177 2404 Current 4 7 <1	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 3 1	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3 0
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 ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 >25	Current 0 0 52 <1 885 950 965 1177 2404 Current 4 7 <1 Current	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 1 1 1 1 1 1 1 3 1 history1	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3 0 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 ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >20	Current 0 0 52 <1 885 950 965 1177 2404 current 4 7 <1 current 0.7	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 1 0 1 0.6	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3 0 history2 0 0.7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >20	Current 0 0 52 <1 885 950 965 1177 2404 current 4 7 <1 current 0.7 13.1	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 1 0 1 0.6 11.0	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3 0 history2 0 11.83
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 ppm	method ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 225 20 220 imit/base >6 >20 20	Current 0 0 52 <1 885 950 965 1177 2404 current 4 7 <1 current 0.7 13.1 25.3	history1 1 0 61 <1 1027 1157 1052 1361 3495 history1 3 1 0.6 11.0 22.1	history2 4 0 57 <1 859 1014 941 1183 2592 history2 4 3 0 history2 0.7 11.8 23.4



OIL ANALYSIS REPORT

VISUAL





	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
Aug5/23 Jan 25/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Aug Jan2	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		14.1	14.4	13.8
	GRAPHS						
	Ferrous Alloys						
	³⁰						
Aug5/23	25 - chromium						
Aug	20						
	20-						
	틆 15 -						
	10-						
	5						
	22	23		24			
	Jun7/22	Aug5/23		Jan 25/24			
	Non-ferrous Meta	le					
1							
	2 -						
	0						
	Jun7/22	Aug5/23		Jan 25/24			
				Jai			
	Viscosity @ 100°C			10.0	Base Number		
	18 - Abnormal						
	17-			چ 8.0			
Ş	P ¹⁶ Base			(0,) HO X (0), (0,) U U U U U U U U U U U U U U U U U U U			
00	Base 15			E 0.0			
¢.	3 14			4.0-	1		
	13 Abnormal			2.0·			
	12 -			2.0			
	11	~			5		
	Jun7/22	Aug5/23		Jan 25/24	Jun7/22	Aug5/23	
	-					ronmental - 410	
Laboratory Sample No. Lab Number Unique Number Test Package discuss this sample report, c	: 06076548 : 10858639 : FLEET	Recievec Diagnose Diagnost	l : 01 ed : 02 ician : Dor	Feb 2024 Feb 2024 n Baldridge	-	3900 Contact	00 Van Born F Wayne, I US 4818 : Belal Dgheis sh@gflenv.co

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Ś

F: