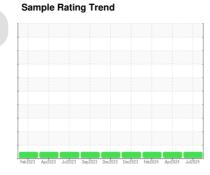


OIL ANALYSIS REPORT



PETRO CANADA DURON SHP 15W40 (8 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

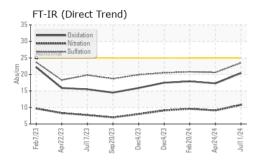
Fluid Condition

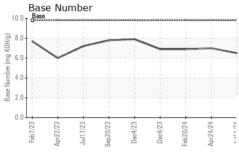
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

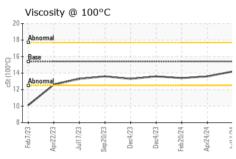
Sample Date Client Info 11 Jul 2024 24 Apr 2024 20 Feb 2024 20 Feb 2024 3729 3729 3205	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 600	Sample Number		Client Info		GFL0106164	GFL0106211	GFL0106131
Oil Age hrs Client Info 600 600 600 600 Oil Changed Sample Status Client Info Changed Chang	Sample Date		Client Info		11 Jul 2024	24 Apr 2024	20 Feb 2024
Client Info	Machine Age	hrs	Client Info		3729	3729	3205
Client Info	Oil Age	hrs	Client Info		600	600	600
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	•						
Fuel			001.10				
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit Mosse NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 12 7 13 Chromium ppm ASTM D5185m >20 <1	CONTAMINA	TION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Irron	Glycol		WC Method		NEG	NEG	
Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >5 <1	WEAR META	LS	method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >5 <1 <1 6 Tittanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 3 3 3 3 Lead ppm ASTM D5185m >40 <1 0 <1 Copper ppm ASTM D5185m >330 2 <1 4 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Iron	ppm	ASTM D5185m	>120	12	7	13
Nickel	Chromium		ASTM D5185m	>20	<1	0	<1
Description							
Silver							
Aluminum ppm ASTM D5185m >20 3 3 3 Lead ppm ASTM D5185m >40 <1					-		
Lead		- ' '					
Copper ppm ASTM D5185m >330 2 <1 4 Tin ppm ASTM D5185m >15 <1					-		
Tin		- ' '					
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 0 0 9 6 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 60 64 63 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base curre					_		
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 9 6 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 0 <1 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Solium ppm ASTM D5185m >225 <td></td> <td>- ' '</td> <td></td> <td>>15</td> <th></th> <td></td> <td></td>		- ' '		>15			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 9 6 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 64 63 58 Manganese ppm ASTM D5185m 0 <1							
Boron		ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 64 63 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 64 63 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m >20 2 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base	Boron	ppm					
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 928 957 1005 Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m >20 2 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/:mm *ASTM D7415	Molybdenum	ppm			64	63	58
Calcium ppm ASTM D5185m 1070 1189 1108 1136 Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m >25 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION *ASTM D7	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 1150 1115 1056 991 Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION *ASTM D7414	Magnesium	ppm	ASTM D5185m	1010	928	957	1005
Zinc ppm ASTM D5185m 1270 1331 1276 1256 Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Calcium	ppm	ASTM D5185m	1070	1189	1108	1136
Sulfur ppm ASTM D5185m 2060 3594 3476 3097 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Phosphorus	ppm	ASTM D5185m	1150	1115	1056	991
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Zinc	ppm	ASTM D5185m	1270	1331	1276	1256
Silicon ppm ASTM D5185m >25 5 4 6 Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Sulfur	ppm	ASTM D5185m	2060	3594	3476	3097
Sodium ppm ASTM D5185m 5 3 5 Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	CONTAMINAL	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Silicon	ppm	ASTM D5185m	>25	5	4	6
Potassium ppm ASTM D5185m >20 2 3 7 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Sodium	ppm	ASTM D5185m		5	3	5
Soot % % *ASTM D7844 >4 0.4 0.3 0.4 Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Potassium	ppm	ASTM D5185m	>20	2	3	7
Nitration Abs/cm *ASTM D7624 >20 10.8 9.1 9.6 Sulfation Abs/.1mm *ASTM D7615 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Soot %	%	*ASTM D7844	>4	0.4	0.3	0.4
Sulfation Abs/.1mm *ASTM D7415 >30 23.5 20.6 20.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9	Nitration	Abs/cm	*ASTM D7624	>20	10.8	9.1	9.6
Oxidation Abs/.1mm *ASTM D7414 >25 20.4 17.3 17.9							
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
			*AOTM D7444	-		47.0	17.0
	Oxidation	Abs/.1mm	"ASTM D/414	>25	20.4	17.3	17.9



OIL ANALYSIS REPORT



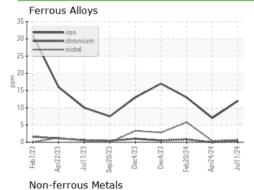


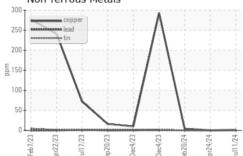


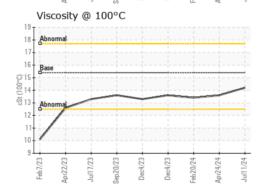
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

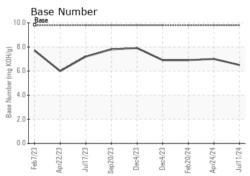
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.6	13.4

GRAPHS













Certificate 12367

Laboratory Sample No. Lab Number : 06237347 Unique Number : 11126181

: GFL0106164

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested**

: 15 Jul 2024 : 17 Jul 2024 Diagnosed : 17 Jul 2024 - Wes Davis

GFL Environmental - 152 - Jacksonville

7580 PHILIPS HWY Jacksonville, FL US 32256

T: 1(904)252-6815

Contact: GRANVILLE CARROLL gcarroll@gflenv.com

Test Package : FLEET 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)

Report Id: GFL152 [WUSCAR] 06237347 (Generated: 07/17/2024 07:50:48) Rev: 1

Submitted By: JOEL MEZA