

## **OIL ANALYSIS REPORT**

Sample Rating Trend



922016 Component Diesel Engine Fluid

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

SAMPLE INFORMATION method

## DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Machine Id

### 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 condition of the oil is acceptable for the time in service.

Sample Number		Client Info		GFL0116182	GFL0092549	GFL0077928
Sample Date	bro	Client Info		27777	27 FED 2024	14 Dec 2023
	hre	Client Info		516	127	602
Oil Changed	1115	Client Info		Changed	Changed	Not Change
Sample Status				NORMAL	NORMAL	NORMAI
				HOIMAE	NOT IN AL	NOTIVIZE
CONTAMINATI	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	7	6	12
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	2	2	3
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	9	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	58	62
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	1010	932	1115	1016
Calcium	ppm	ASTM D5185m	1070	1113	1173	1063
Phosphorus	ppm	ASTM D5185m	1150	1082	1180	1115
Zinc	ppm	ASTM D5185m	1270	1245	1347	1300
Sulfur	ppm	ASTM D5185m	2060	3306	3318	2839
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	3	4
Sodium	ppm	ASTM D5185m		4	3	4
Potassium	ppm	ASTM D5185m	>20	2	0	1
Fuel	%	ASTM D3524	>3.0	1.3	<1.0	<1.0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.3	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.7	9.6	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	20.1	22.9
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.3	17.7	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.5	6.3	5.1



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			memou	11111/0430	ounone	motory	motory
White	Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellov	w Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precip	oitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt		scalar	*Visual	NONE	NONE	NONE	NONE
Debri	s	scalar	*Visual	NONE	NONE	NONE	NONE
Sand	/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appea	arance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	10 1147 -	scalar	*Visual	NORML	NORML	NORML	NORML
Emule	Sified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
ELI			mothod	limit/baco	ourropt	history1	history?
Visc (	0 100°C	cSt	ASTM D445	15.4	12.4	13.4	13.0
GR		001	AGTIM B110	10.4	12.7	10.4	10.0
Ferr	ous Alloys						
12	iron		$\wedge$				
10-	chromium nickel	/	$\backslash$				
8-		$\checkmark$					
Ē 6			L-				
4							
2-							
0	ATTACA CONTRACTOR OF CONTRACTOR		and the state of the local division of the l				
10/22	29/22	20/23	14/23	11/24			
May	Sep Jan	Mar	Feb	Jun			
Non	-ferrous Me	tals					
	copper						
8-	mananan tin						
6							
dd 4							
4			<u> </u>				
4		$\checkmark$	$\sim$	-			
2 0 2	3	33	14	54			
4 2 0 27/01/ve	ep29/22 -	1ar20/23	ec14/23	un11/24			
ud 4 2 0 ZZ/01/REW Visc	-22(62/das cosity @ 100	Mar20/23	Dec14/23	Jun11/24			
udd 4 2 0 27/01/keW Visco	- 27062.das cosity @ 100	Mai20/23	Dec14/23	10.0	Base Numbe	ir	
udd 4 2 0 27001/eW Visco 19 18 Abno 17	+CZ/6Zdeg cosity @ 100 mal	0° C	Dec14/23	10.0	Base Numbe	er	
ud 4 2 0 27/01/2 W Visc 19 18 Abno 17	zosity @ 100	Vai20023	Dec14/23	KOH(0) 10.0 0.8	Base Numbe		
4 2 0 2 2 0 2 2 0 10 10 10 10 10 10 10 10 10	toosity @ 100	ئ Mai20/23	Dec14/23	10.0 (0,00,00) (0,00) (0,00,00) (0,00) (0,00) (0,00) (0,00) (0,00) (0,00) (0	Base Numbe		
udd 4 2 0 727/01/kew Visc 19 18 Abno 17 (0-001) 15 3 14	czuczuczen cosity @ 100 ma	0°C	Dec14/23	10.0 (0,8.0 (0,404) (0,404) (0,8.0 (0,8.0 (0,8.0 (0,9.0) (0,9.	Base Numbe		
Visc 19 18 4 2 0 2 2 0 2 2 0 2 2 0 2 2 0 19 18 Abno 17 17 16 Base 13 14 13 14 13 14 14 15 15 15 15 15 15 15 15 15 15	czugzdes cosity @ 100 mai	Q 20023 Var20123	Dec14/23	10.0 Base Number (mg KOH(d) 600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Base Numbe		<u> </u>
14 2 0 127010/kew Visc 19 18 27010/kew Visc 19 18 200115 16 8ase 14 13 14 13 14	zosity @ 100 mal	°C	Dec14/23	10.0 (0,000) 10.0	Base Numbe		
udd 4 2	- 27/62/das cosity @ 1000	23 O Mai2023	23 Deci4/23	10.0 Base Mumber (mg KOH(g) 0.0 1	Base Numbe	23	24



 Unique Number
 : 11085635
 Diagnosed
 : 20 Jun 2024 - Sean Felton

 Certificate L2367
 Test Package
 : FLEET (Additional Tests: FuelDilution, PercentFuel)

 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)

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