

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Duron SHP 10W-30 (80 Lt line push)

Component 2 New (Unused) Oil

PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

This is the baseline readout on this new (unused) oil. The fluid is suitable for service. Resample at the next service interval to monitor.

Wear

{not applicable}

Contamination

There is no indication of any contamination in the new (unused) oil.

Fluid Condition

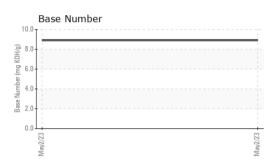
The AN level is acceptable for this fluid. The condition of the oil is suitable for service.

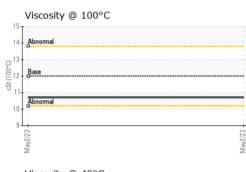
SAMPLE INFORM		method	limit/base	ourront	history1	history2
			- mm/base	current	history1	
Sample Number		Client Info		PC0078669		
Sample Date		Client Info		02 May 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A NORMAL		
Sample Status				NORMAL		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>5	<1		
Chromium	ppm	ASTM D5185(m)	>5	0		
Nickel	ppm	ASTM D5185(m)	>5	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>5	0		
Aluminum	ppm	ASTM D5185(m)	>5	<1		
Lead	ppm	ASTM D5185(m)	>5	0		
Copper	ppm	ASTM D5185(m)	>5	0		
Tin	ppm	ASTM D5185(m)	>5	0		
Antimony	ppm	ASTM D5185(m)		<1		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	nnm	ACTM DE10E(m)		^		
Oddinium	ppm	ASTM D5185(m)		0		
ADDITIVES	ppin	method	limit/base	current	history1	history2
ADDITIVES	ppm	()	limit/base			
ADDITIVES Boron		method	2	current	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50	current 48	history1	history2
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185(m) ASTM D5185(m)	2 0 50	current 48 0	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50	current 48 0 62	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0	current 48 0 62 0	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0 950 1050 995	current 48 0 62 0 870 1130 990	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 0 950 1050 995 1180	current 48 0 62 0 870 1130 990 1070	history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0 950 1050 995	current 48 0 62 0 870 1130 990 1070 2950	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 0 950 1050 995 1180	current 48 0 62 0 870 1130 990 1070	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	2 0 50 0 950 1050 995 1180	current 48 0 62 0 870 1130 990 1070 2950	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 950 1050 995 1180 2600	Current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600 limit/base	current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm	method ASTM D5185(m)	2 0 50 0 950 1050 995 1180 2600 limit/base	current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 limit/base >15	current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 imit/base >15 >20	current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i	method ASTM D5185(m) ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 imit/base >15 >20	current 48 0 62 0 870 1130 990 1070 2950 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185(m)	2 0 50 950 1050 995 1180 2600 imit/base >15 >20	current 48 0 62 0 870 1130 990 1070 2950 <1	history1 history1 history1 history1	history2 history2 history2 history2

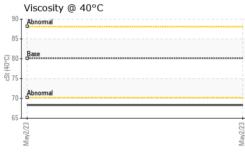


OIL ANALYSIS REPORT

Acid Number







FLUID CLEANL	INESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		36227		
Particles >6µm		ASTM D7647		9422		
Particles >14µm		ASTM D7647		243		
Particles >21µm		ASTM D7647	>0	27		
Particles >38µm		ASTM D7647	>0	0		
Particles >71µm		ASTM D7647	>0	0		
Oil Cleanliness		ISO 4406 (c)		22/20/15		
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		12.3		
Acid Number (AN)	mg KOH/g	ASTM D974*		1.52		
Base Number (BN)	mg KOH/g	ASTM D2896*		8.90		
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*		NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	80.1	68.3		
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	10.7		
Viscosity Index (VI)	Scale	ASTM D2270*	144	145		
SAMPLE IMAG	ies	method	limit/base	current	history1	history2
Color					no image	no image

 Color
 no image
 no image

 Bottom
 Image
 no image
 no image

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Petro-Canada Technical/Yen Garcia Laboratory CALA Sample No. : PC0078669 Received : 03 May 2023 Lab Number : 02555028 Diagnosed : 05 May 2023 Mississauga, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5568043 Diagnostician : Kevin Marson CA L5J 1K2 Test Package : IND 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, VI) Contact: Yen Garcia To discuss this sample report, contact Customer Service at 1-800-268-2131. yen.garcia@hfsinclair.com Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: Validity of results and interpretation are based on the sample and information as supplied. F: (905)403-6740

Contact/Location: Yen Garcia - PCA_165033

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