

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id 630M Component Diesel Fluid

630M Component Diesel Engine

PETRO CANADA DURON SHP 15W40 (9 GAL)

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. (Customer Sample Comment: Resample)	Sample Number		Client Info		GFL0115050	GFL0106703	GFL0087280
	Sample Date		Client Info		25 Feb 2024	11 Feb 2024	27 Jul 2023
	Machine Age	hrs	Client Info		12872	12854	12328
	Oil Age	hrs	Client Info		18	526	700
	Filter Age	hrs	Client Info		18	526	700
	Oil Changed		Client Info		Not Changd	Changed	Changed
	Filter Changed		Client Info		Not Changd	Changed	Changed
	Sample Status				NORMAL	SEVERE	NORMAL
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>120	21	3	43
	Chromium	ppm	ASTM D5185m	>20	<1	0	2
	Nickel	ppm	ASTM D5185m	>5	4	0	7
	Titanium	ppm	ASTM D5185m	>2	0	<1	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m	>20	<1	2	0
	Lead	ppm	ASTM D5185m	>40	<1	<1	2
	Copper	ppm	ASTM D5185m	>330	8	2	6
	Tin	ppm	ASTM D5185m	>15	<1	0	1
	Vanadium	ppm	ASTM D5185m		<1	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	4	22	6
	Potassium	ppm	ASTM D5185m	>20	<1	6	2
Fuel content negligible. There is no indication of any contamination in the oil.	Fuel	%	ASTM D3524	>3.0	0.3	9 .9	0.3
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>4	0.6	0	1.1
	Nitration	Abs/cm	*ASTM D7624	>20	8.4	5.5	12.5
	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	18.7	28.4
	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
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	1	8
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m	0	2	163	3
	Barium	ppm	ASTM D5185m	0	0	0	0
	Molybdenum	ppm	ASTM D5185m	60	62	6	61
	Manganese	ppm	ASTM D5185m	0	<1	0	2
	Magnesium	ppm	ASTM D5185m	1010	1157	79	974
	Calcium	ppm	ASTM D5185m		1260	1899	1179
	Phosphorus	ppm	ASTM D5185m	1150	1151	971	1042
	Zinc	ppm	ASTM D5185m	1270	1510	1126	1309
	Sulfur	ppm	ASTM D5185m	2060	3401	3394	3076
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	14.4	21.7
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.9	7.9	5.4
	Vice @ 100%C	oC+		15 4	10.0	A 0.4	- 4 -

Visc @ 100°C cSt ASTM D445 15.4

14.1

9.4

13.6

