

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

(BB21233) Machine Id 7800M Component Diesel Engine

PETRO CANADA DURON SHP 15W40 (36 QTS)

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VEAR Iron ppm ASIV D518in >75 16 35 All component wear rates are normal. Citromium ppm ASIV D518in >2 0 0 Nickel ppm ASIV D518in >2 0 0 Nickel ppm ASIV D518in >2 0 0 Silver ppm ASIV D518in >2 0 0 All component wear rates are normal. Trainium ppm ASIV D518in >2 0 0 All component wear rates are normal. Train ppm ASIV D518in >2 0 0 All component MW Mathian ppm ASIV D518in >2 0 <1 Vanadium ppm ASIV D518in >2 5 6 Value word WC Method >0.0 2 Value NONE NONE NONE <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>								
All component wear rates are normal. Chromium point ASTM DSH8m >6 <1								
All component wear rates are normal. Nickel ppn ASTM 05156 >44 0 0 Titanium ppn ASTM 05156 >2 0 0 Aluminum ppn ASTM 05156 >2 0 0 Aluminum ppn ASTM 05156 >2 0 0 Copper ppn ASTM 05156 >2 0 0 Variantum ppn ASTM 05156 >4 0 Variantum ppn ASTM 05156 >4 0 Variantum ppn ASTM 05156 >4 0 Variantum ppn ASTM 05156 >4 0 Variantum ppn ASTM 05156 >25 6 Variantum ppr ASTM 05156 >20 2 Variantum ppr ASTM 05156 >25 5 6		Iron	ppm	ASTM D5185m	>75	16	35	
Nicket ppm ASTM (0368) S2 0 0		Chromium	ppm	ASTM D5185m	>5	<1	2	
Silver ppm ASTM D5185m >2 0 0		Nickel	ppm	ASTM D5185m	>4	0	0	
Aluminum ppm ASTM DSIGEn >15 1 2 Lead ppm ASTM DSIGEn >25 0 <1 Copper ppm ASTM DSIGEn >20 0 <1 Tin ppm ASTM DSIGEn >40 0 <1 White Metal scalar 'Visual NONE NONE NONE NONE White Metal scalar 'Visual NONE NONE NONE CONTAMINATION Silicon ppm ASTM DSIGN >25 5 6 Potassium ppm ASTM DSIGN >25 5 6 O Quarticitation ASTM DSIGN >20 Quarticitation Water WC Method >0.2 NEG NEG Sold % % MSTM DSIGN >0.5 0.5 Sold		Titanium	ppm	ASTM D5185m	>2	0	0	
Lead ppm ASTM D585m >25 0 <1		Silver	ppm	ASTM D5185m	>2	0	0	
Copper ppm ASTM D5185m >100 0 <1		Aluminum	ppm	ASTM D5185m	>15	1	2	
Tin ppm ASTM D5185m >4 0 <1		Lead	ppm	ASTM D5185m	>25	0	<1	
Vanadium ppm ASTM D5185m 0 0		Copper	ppm	ASTM D5185m	>100	0	<1	
White Metal scalar 'Visual NONE		Tin	ppm	ASTM D5185m	>4	0	<1	
Yellow Metal scalar *Visual NONE NONE		Vanadium	ppm	ASTM D5185m		0	0	
Silicon ppm ASTM D5185m >25 5 6 There is no indication of any contamination in the oil. Potassium ppm ASTM D5185m >20 0 2 Water WC Method >3.0 <1.0 <1.0 Water WC Method >3.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Silicon Abs/m 'ASTM D7644 >6 0.5 0.7 Sulfation Abs/m 'ASTM D7644 >6 0.5 0.7 Sulfation Abs/m 'NONE NONE NONE NONE Sulfation Abs/m <th></th> <th>White Metal</th> <th>scalar</th> <th>*Visual</th> <th>NONE</th> <th>NONE</th> <th>NONE</th> <th></th>		White Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium ppm ASTM 05185m >20 0 2		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium ppm ASTM 05185m >20 0 2						_		
There is no indication of any contamination in the oil. Fuel WC Method >3.0 <1.0 <0 Water W WC Method >0.2 NEG NEG <0 Glycol WC Method >0.2 NEG NEG <0 Soot % % *ASTM D7844 >6 0.5 0.7 <0 Nitration Abs/cm *ASTM D7845 >30 20.2 25.9 <0 Sulfation Abs/tm *ASTM D7845 >30 20.2 25.9 <0 Sulfation Abs/tm *ASTM D7845 >30 20.2 25.9 <0 Sulfation Abs/tm *ASTM D7845 >30 20.2 25.9 <0 Sada *Visual NONE NONE NONE NONE NONE <0 Sadd/Dirt scalar *Visual NONE NONE NORML NORML NORML <0 The Nesult indicates that there is suitable alkalinity remaining in the oil is suitable for further service. Sodium ppm ASTM D5185m 0 0 0 <	CONTAMINATION							
FLUID CONDITION Normalization Normal	There is no indication of any contamination in the oil.		ppm					
Glycol WC Method NEG NEG Soot % % 'ASTM D7844 >6 0.5 0.7 Nitration Abs/cm 'ASTM D7844 >20 7.8 13.9 Sulfation Abs/cm 'ASTM D7844 >20 7.8 13.9 Sulfation Abs/cm 'ASTM D7844 >00 20.2 25.9 Silt scalar 'Visual NONE NONE NONE Debris scalar 'Visual NONE NONE NONE Sand/Dirt scalar 'Visual NOR NORM NORM Appearance scalar 'Visual NOR NORM NORM Enuly fodor scalar 'Visual NOR NORM Sodium ppm ASTM D5165m 0 4 5 Boron ppm ASTM D5165m 0								
Soot % % *ASTM D7844 >6 0.5 0.7 Nitration Abs/cm *ASTM D7624 >20 7.8 13.9 Sulfation Abs/cm *ASTM D7455 >30 20.2 25.9 Sulfation Abs/cm *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORM NORML NORML Odor scalar *Visual NORM NORML NORML Odor scalar *Visual NORM NORML NORML The BN result indicates that there is suitable alkalinity remaining in the oil is suitable for further service. Sodium ppm ASTM D5185m 0 4 5 Barium ppm ASTM D5185m					>0.2			
Nitration Abs/cm *ASTM D7624 >20 7.8 13.9 Sulfation Abs/tm *ASTM D7151 >30 20.2 25.9 Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE Appearance scalar *Visual NORE NORML NORML Appearance scalar *Visual NORH NORML NORML Cdor scalar *Visual NORH NORML NORML FLUID CONDITION Sodium ppm ASTM D5185n 0 4 5 Boron ppm ASTM D5185n 0 0 0 Molybdenum ppm ASTM D5185n 0 4 5 Magnesium ppm ASTM D5185n 0 0			0/		0			
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BoronppmASTM D5185m045BariumppmASTM D5185m000BariumppmASTM D5185m000MolybdenumppmASTM D5185m05962ManganeseppmASTM D5185m010109291009CalciumppmASTM D5185m10109291009PhosphorusppmASTM D5185m107010241158ZincppmASTM D5185m127012491369SulfurppmASTM D5185m206028792609OxidationAbs/.tmm<*ASTM D7414>2515.524.7	The BN result indicates that there is suitable alkalinity remaining in the	Sodium	ppm	ASTM D5185m		3	2	
BariumppmASTM D5185m000MolybdenumppmASTM D5185m605962ManganeseppmASTM D5185m0<1<1MagnesiumppmASTM D5185m10109291009CalciumppmASTM D5185m107010241158PhosphorusppmASTM D5185m115010681104ZincppmASTM D5185m127012491369SulfurppmASTM D5185m206028792609OxidationAbs/.tmm*ASTM D7414>2515.524.7		Boron		ASTM D5185m	0	4	5	
Molybdenum ppm ASIM D518bm 60 59 62 Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 1010 929 1009 Calcium ppm ASTM D5185m 1070 1024 1158 Phosphorus ppm ASTM D5185m 1150 1068 1104 Zinc ppm ASTM D5185m 1270 1249 1369 Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7		Barium				0	0	
Manganese ppm ASTM D5185m 0 <1		Molybdenum		ASTM D5185m	60	59	62	
Magnesium ppm ASTM D5185m 1010 929 1009 Calcium ppm ASTM D5185m 1070 1024 1158 Phosphorus ppm ASTM D5185m 1150 1068 1104 Zinc ppm ASTM D5185m 1270 1249 1369 Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7						<1	<1	
Calcium ppm ASTM D5185m 1070 1024 1158 Phosphorus ppm ASTM D5185m 1150 1068 1104 Zinc ppm ASTM D5185m 1270 1249 1369 Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7		Magnesium		ASTM D5185m	1010	929	1009	
Zinc ppm ASTM D5185m 1270 1249 1369 Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7		Calcium		ASTM D5185m	1070	1024	1158	
Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7		Phosphorus	ppm	ASTM D5185m	1150	1068	1104	
Sulfur ppm ASTM D5185m 2060 2879 2609 Oxidation Abs/.1mm *ASTM D7414 >25 15.5 24.7		Zinc	ppm	ASTM D5185m	1270	1249	1369	
		Sulfur	ppm	ASTM D5185m	2060	2879	2609	
Base Number (BN) mg KOH/g ASTM D2896 9.8 7.7 6.7		Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	24.7	
		Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.7	6.7	

Visc @ 100°C cSt

ASTM D445 15.4

15.1

14.4



