

# (AP18JZ) Walgreens - Yard Horse [Walgreens - Yard Horse] 136A82253

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

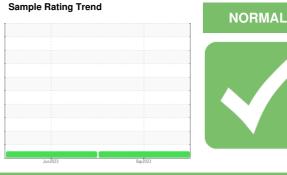
All component wear rates are normal.

#### Contamination

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 suitable for further service.

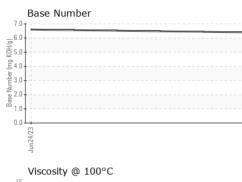


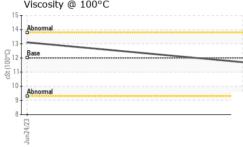


			Jun2023	Sep2023		
SAMPLE INFORM	<b>/IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0094378	PCA0094364	
Sample Date		Client Info		09 Sep 2023	24 Jun 2023	
Machine Age	mls	Client Info		0	2635	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	86	126	
Chromium	ppm	ASTM D5185m	>20	2	2	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	1	7	
Lead	ppm	ASTM D5185m	>40	<1	0	
Copper	ppm	ASTM D5185m	>330	11	93	
Tin	ppm	ASTM D5185m	>15	<1	1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	3	32	
Barium	ppm	ASTM D5185m	0	0	5	
Barium Molybdenum		ASTM D5185m ASTM D5185m	0 50	0 61	5 97	
	ppm			-		
Molybdenum	ppm ppm	ASTM D5185m	50	61	97	
Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0	61 2	97 8	
Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	61 2 834	97 8 158	
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	61 2 834 1136	97 8 158 2332	
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	61 2 834 1136 946	97 8 158 2332 1144	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180	61 2 834 1136 946 1176	97 8 158 2332 1144 1390	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600	61 2 834 1136 946 1176 3467	97 8 158 2332 1144 1390 4243	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600	61 2 834 1136 946 1176 3467 current	97 8 158 2332 1144 1390 4243 history1 31 7	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600	61 2 834 1136 946 1176 3467 current 10	97 8 158 2332 1144 1390 4243 history1 31	    history2 
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >25	61 2 834 1136 946 1176 3467 current 10 2	97 8 158 2332 1144 1390 4243 history1 31 7	    history2 
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	61 2 834 1136 946 1176 3467 current 10 2 1	97 8 158 2332 1144 1390 4243 history1 31 7 3	    history2  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b> >25	61 2 834 1136 946 1176 3467 current 10 2 1 1 current	97 8 158 2332 1144 1390 4243 history1 31 7 3 3 history1	    history2    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	61 2 834 1136 946 1176 3467 <u>current</u> 10 2 1 1 <u>current</u> 1.4	97 8 158 2332 1144 1390 4243 history1 31 7 3 3 history1 0.7	    history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm t spm ppm ppm ppm ppm spm ppm spm ppm spm ppm spm s	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20	61 2 834 1136 946 1176 3467 <i>current</i> 10 2 1 1 <i>current</i> 1.4 10.9	97 8 158 2332 1144 1390 4243 history1 31 7 3 3 history1 0.7 9.8	    history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm t spm ppm ppm ppm ppm spm ppm spm ppm spm ppm spm s	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	61 2 834 1136 946 1176 3467 <u>current</u> 10 2 1 1 <u>current</u> 1.4 1.4 10.9 23.4	97 8 158 2332 1144 1390 4243 history1 31 7 3 history1 0.7 9.8 22.5	    history2   history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	50 0 950 1050 995 1180 2600 imit/base >25 20 20 imit/base >3 >20 30 imit/base	61 2 834 1136 946 1176 3467 <i>current</i> 10 2 1 1 <i>current</i> 1.4 10.9 23.4 <i>current</i>	97 8 158 2332 1144 1390 4243 history1 31 7 3 3 history1 0.7 9.8 22.5 history1	    history2   history2  history2   history2



# **OIL ANALYSIS REPORT**





	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
	Precipitate	scalar	*Visual	NONE	NONE	NONE	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Sep9/23	Appearance	scalar	*Visual	NORML	NORML	NORML	
ŝ	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.7	13.1	
	GRAPHS						
	Ferrous Alloys						
	140 L						
	120 - iron						
	100 - nickel						
	e 80						
	40-						
	20						
				1/23			
	Jun 24/23			Sep9/23			
	Non-ferrous Meta	ls					
	100 T						
	80-						
	annanan tin						
	60-						
	шdd						
	40						
	20 -						
	0			Sep 9/23			
	4			6			
	un24/23			Sel			
				Ser			
	کاiscosity @ 100°0 <sup>15</sup>	2			Base Number		
	→ Viscosity @ 100°0	2		7.0	Base Number		
	Viscosity @ 100°C	:		7.0	Base Number		
	Viscosity @ 100°C			7.0	Base Number		
	Viscosity @ 100°C			7.0	Base Number		
	Viscosity @ 100°C			7.0 6.0 (0)HOX HOX W) 3.0	Base Number		
	Viscosity @ 100°C			7.0	Base Number		
	Viscosity @ 100°C			7.0 6.0 (0)HOX HOX W) 3.0	Base Number		
	Viscosity @ 100°C			7.0 6.0 (b) HOX Bul) Jag MINN 888 2.0 1.0 0.0			
	Viscosity @ 100°C			7.0 6.0 (b) HOX Bul) Jag MINN 888 2.0 1.0 0.0			
	Viscosity @ 100°C			7.0 6.0 (0)(4)(5.0 bu) Ja (0)(4.0 Ja (0)(4.0 Ja (0)(4.0 Ja (0)(4.0 Ja (0)(4.0 Ja (0)(4.0)(4.0)(4.0)(4.0)(4.0)(4.0)(4.0)(4	Base Number		
Laboratory	Viscosity @ 100°C	501 Madis		7.0 6.0 (0)(0)(1)(5.0 1)(0)(1)(5.0 1)(0)(1)(1)(5.0 1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1	Jun24/23	ice - Shop 1363 - I	
Sample No.	Viscosity @ 100°C	501 Madis Received	: 13 9	7.0 6.0 1000 1000 1000 1000 1000 1000 100	Jun24/23		5 Premier Ro
Sample No. Lab Number	Viscosity @ 100°C	501 Madis Received Diagnose	l : 13 9 ed : 15 9	7.0 6.0 1000 000 1000 000 10000 1000000	Jun24/23		5 Premier Ro Orlando, I
Sample No. Lab Number Unique Number	Viscosity @ 100°0 Viscosity @ 100°0 Abnormal Base : WearCheck USA - 4 : PCA0094378 : 05950674 r : 10646633	501 Madis Received	l : 13 9 ed : 15 9	7.0 6.0 1000 1000 1000 1000 1000 1000 100	Jun24/23	245	5 Premier Ro Orlando, I US 328
Sample No. Lab Number	Viscosity @ 100°C	501 Madis Received Diagnose Diagnost	l : 13 9 ed : 15 9 ician : We	7.0 6.0 900 900 900 900 900 900 900 900 900 90	Jun24/23	245 Contact:	5 Premier Ro