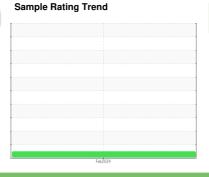


## **OIL ANALYSIS REPORT**

# (5689MZ) Dixon Transport-Yard Horse [Dixon Transport-Yard Horse] 325A93

**Diesel Engine** 

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





### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

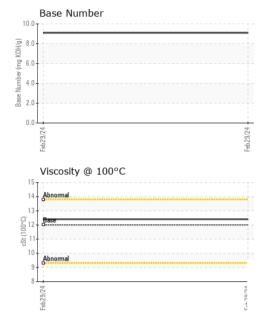
### **Fluid Condition**

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.

Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	hrs hrs	method Client Info Client Info Client Info Client Info Client Info Client Info WC Method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >5 >0.2 limit/base >100 >20 >4	current PCA0114361 29 Feb 2024 12954 539 Changed NORMAL current <1.0 NEG NEG current 22 1	history1 history1 history1 history1	history2 history2 history2 history2
Sample Date Machine Age Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info Mc Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	29 Feb 2024 12954 539 Changed NORMAL current <1.0 NEG NEG current	history1 history1	history2 history2 history2
Machine Age Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	Client Info Client Info Client Info Client Info  Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	12954 539 Changed NORMAL current <1.0 NEG NEG Current	history1 history1 history1	history2 history2 history2
Oil Age Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	Client Info Client Info  Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	539 Changed NORMAL current <1.0 NEG NEG current	history1 history1 history1	history2 history2 history2
Oil Changed Sample Status  CONTAMINATIO Fuel Water Glycol WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	method WC Method WC Method WC Method WC Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	Changed NORMAL  current  <1.0 NEG NEG current  22	history1 history1 history1	history2 history2 history2
Sample Status  CONTAMINATIO Fuel Water Glycol WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	method WC Method WC Method WC Method Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	current <1.0 NEG NEG current	history1 history1 history1	history2 history2
CONTAMINATION Fuel Water Glycol WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	current <1.0 NEG NEG current	history1	history2
Fuel Water Glycol WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	WC Method WC Method WC Method Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>5 >0.2 limit/base >100 >20	<1.0 NEG NEG current	  history1	history2
Water Glycol  WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	WC Method WC Method method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>0.2 limit/base >100 >20	NEG NEG current	history1	history2
Glycol  WEAR METALS  Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	WC Method  method  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	limit/base >100 >20	NEG current 22	history1	history2
WEAR METALS Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	method  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	>100 >20	current 22	history1	history2
Iron Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20	22		
Chromium Nickel Titanium Silver Aluminum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>20			
Nickel Titanium Silver Aluminum	ppm ppm	ASTM D5185m ASTM D5185m		1		
Titanium Silver Aluminum	ppm ppm	ASTM D5185m	>4			
Silver Aluminum	ppm			<1		
Aluminum		ASTM D5185m		<1		
	ppm		>3	0		
		ASTM D5185m	>20	4		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	10		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	68		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	950	1318		
Calcium	ppm	ASTM D5185m	1050	1393		
Phosphorus	ppm	ASTM D5185m	995	1305		
Zinc	ppm	ASTM D5185m	1180	1688		
Sulfur	ppm	ASTM D5185m	2600	3694		
CONTAMINANT	ΓS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5		
Sodium	ppm	ASTM D5185m		<1		
Potassium	ppm	ASTM D5185m	>20	2		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2		
Nitration	Abs/cm	*ASTM D7624	>20	9.5		
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0		
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4		
Base Number (BN)	mg KOH/g	ASTM D2896		9.1		



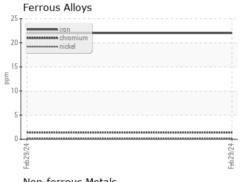
# **OIL ANALYSIS REPORT**



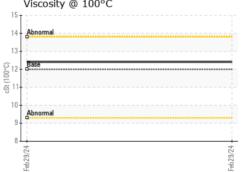
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
ELLIID DRODE	DTIES	method	limit/hase	current	history1	history?

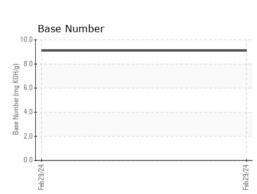
I LOID I HOI	LITTIEO				
Visc @ 100°C	cSt	ASTM D445	12.00	12.4	 

### **GRAPHS**



10 T	copper i	
8.1	nessesses tin	
6-		
4		
2-		
0		
Feb29/24		-PD/3//
V	iscosity @ 100°C	







Laboratory Sample No.

Lab Number : 06112428

: PCA0114361 Unique Number : 10915925

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 08 Mar 2024 **Tested** : 08 Mar 2024 Diagnosed

: 11 Mar 2024 - Don Baldridge

Transervice - Shop 3250 - Dixon Transport

1124 E. River Road Dixon, IL US 61021 Contact: Mike Shoemaker

Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

Shop3250@transervice.com T:

\* - 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)

F: