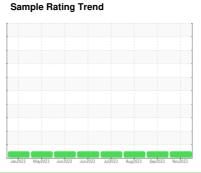


OIL ANALYSIS REPORT

(TEMP) Walgreens - Yard Horse Walgreens - Yard Horse] 136A81259

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 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

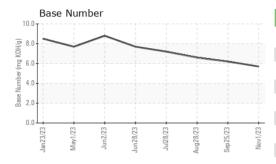
Fluid Condition

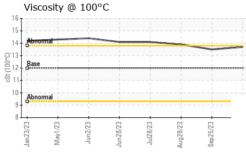
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Sample Date | SAMPLE INFORI | MATION | method | limit/base | current | history1 | history2 |
|--|---|--|--|--|---|---|--|
| Machine Age hrs Client Info 5033 4844 4738 Oil Age hrs Client Info 200 200 4315 Oil Changed Client Info Oil Added NIA NVA Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method Iminit/base current history1 history2 Fuel WC Method S <1.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 32 28 22 Chromium ppm ASTM D5185m >20 2 2 1 1 Nistory2 Iron ppm ASTM D5185m >3 0 0 0 0 1 1 1 1 1 1 1 1 1 | Sample Number | | Client Info | | PCA0105906 | PCA0105854 | PCA0091536 |
| Oil Age | Sample Date | | Client Info | | 01 Nov 2023 | 25 Sep 2023 | 28 Aug 2023 |
| Oil Changed Client Info NoRMAL NORMAL NORMAL NORMAL | Machine Age | hrs | Client Info | | 5033 | 4844 | 4738 |
| Oil Changed Client Info NoRMAL NORMAL NORMAL NORMAL | Oil Age | hrs | Client Info | | 200 | 200 | 4315 |
| CONTAMINATION | - | | Client Info | | Oil Added | Oil Added | N/A |
| CONTAMINATION | | | | | NORMAL | NORMAL | NORMAL |
| WEAR METALS | • | ION | method | limit/base | current | history1 | history2 |
| WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 32 28 22 Chromium ppm ASTM D5185m >20 2 2 1 Nickel ppm ASTM D5185m >4 <1 <1 0 Silver ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m 3 0 0 0 Aluminum ppm ASTM D5185m >20 3 4 2 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 2 1 3 Tin ppm ASTM D5185m >15 0 <1 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 <th>Fuel</th> <th></th> <th>WC Method</th> <th>>5</th> <th><1.0</th> <th><1.0</th> <th><1.0</th> | Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Pron | Glycol | | | | | | |
| Pron | WEAR METAL | S | method | limit/base | current | history1 | history2 |
| Chromium | | | ASTM D5185m | >100 | 32 | | |
| Nickel | | | | | | | |
| Titanium | | | | | | | |
| Silver | | | | 27 | | | |
| Aluminum | | | | >3 | | | |
| Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 2 1 3 Tin ppm ASTM D5185m >15 0 <1 | | • | | | | | |
| Copper ppm ASTM D5185m >330 2 1 3 Tin ppm ASTM D5185m >15 0 <1 0 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 0 2 0 Molybdenum ppm ASTM D5185m 0 0 2 0 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 950 908 941 915 Calcium ppm ASTM D5185m 905 861 980 962 Zinc ppm ASTM D5185m 905 861 980 962 | | | | | - | | |
| Tin | | | | | | | |
| Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 0 2 0 Molybdenum ppm ASTM D5185m 50 58 61 57 Manganese ppm ASTM D5185m 0 0 <1 | | | | | _ | | |
| Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 0 2 0 Molybdenum ppm ASTM D5185m 50 58 61 57 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 950 908 941 915 Calcium ppm ASTM D5185m 995 861 980 962 Zinc ppm ASTM D5185m 995 861 980 962 Zinc ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1 </th <th></th> <th></th> <th></th> <th>>15</th> <th></th> <th></th> <th></th> | | | | >15 | | | |
| ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 2 0 0 0 Barium ppm ASTM D5185m 0 0 2 0 Molybdenum ppm ASTM D5185m 50 58 61 57 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 950 908 941 915 Calcium ppm ASTM D5185m 950 908 941 915 Calcium ppm ASTM D5185m 905 361 980 962 Zinc ppm ASTM D5185m 995 361 980 962 Zinc ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 </th <th></th> <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th> | | | | | - | | |
| Boron | | ppm | MSTINI DST8STI | | U | 0 | |
| Barium ppm ASTM D5185m 0 0 2 0 Molybdenum ppm ASTM D5185m 50 58 61 57 Manganese ppm ASTM D5185m 0 0 <1 | ADDITIVES | | method | limit/base | current | history1 | |
| Molybdenum ppm ASTM D5185m 50 58 61 57 Manganese ppm ASTM D5185m 0 0 <1 | Boron | ppm | ASTM D5185m | 2 | 0 | 0 | 0 |
| Manganese ppm ASTM D5185m 0 0 <1 | Barium | ppm | ASTM D5185m | 0 | 0 | 2 | 0 |
| Magnesium ppm ASTM D5185m 950 908 941 915 Calcium ppm ASTM D5185m 1050 1004 1048 1021 Phosphorus ppm ASTM D5185m 995 861 980 962 Zinc ppm ASTM D5185m 1180 1207 1257 1222 Sulfur ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7845 >3 | Molybdenum | ppm | | | 58 | 61 | 57 |
| Calcium ppm ASTM D5185m 1050 1004 1048 1021 Phosphorus ppm ASTM D5185m 995 861 980 962 Zinc ppm ASTM D5185m 1180 1207 1257 1222 Sulfur ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/.1mm *ASTM D7415 >30 24.0 | Manganese | ppm | ASTM D5185m | 0 | 0 | <1 | <1 |
| Phosphorus ppm ASTM D5185m 995 861 980 962 Zinc ppm ASTM D5185m 1180 1207 1257 1222 Sulfur ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m >20 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION *ASTM D7414 | Magnesium | ppm | ASTM D5185m | 950 | 908 | 941 | 915 |
| Zinc ppm ASTM D5185m 1180 1207 1257 1222 Sulfur ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m 0 2 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm | Calcium | ppm | ASTM D5185m | 1050 | 1004 | 1048 | 1021 |
| Sulfur ppm ASTM D5185m 2600 3001 3038 3401 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Phosphorus | ppm | ASTM D5185m | 995 | 861 | 980 | 962 |
| CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Zinc | ppm | ASTM D5185m | 1180 | 1207 | 1257 | 1222 |
| Silicon ppm ASTM D5185m >25 8 7 5 Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m >20 2 <1 | Sulfur | | ASTM D5185m | 2600 | 3001 | 3038 | 3401 |
| Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m >20 2 <1 | CONTAMINAN | TS . | method | | | | history2 |
| Potassium ppm ASTM D5185m >20 2 <1 | | | | | | riistory i | • |
| INFRA-RED | | | ASTM D5185m | | 8 | 7 | 5 |
| Soot % % *ASTM D7844 >3 1.2 0.9 0.9 Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Silicon Sodium | ppm | ASTM D5185m ASTM D5185m | >25 | 8 | 7 | 5 |
| Nitration Abs/cm *ASTM D7624 >20 11.9 10.4 10.5 Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Silicon | ppm | ASTM D5185m ASTM D5185m | >25 | 8 0 | 7 | 5 2 |
| Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Silicon Sodium Potassium | ppm | ASTM D5185m ASTM D5185m ASTM D5185m | >25 >20 | 8 0 2 | 7 2 <1 | 5 2 0 |
| Sulfation Abs/.1mm *ASTM D7415 >30 24.0 21.0 21.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Silicon Sodium Potassium | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m method | >25 >20 limit/base | 8 0 2 current | 7 2 <1 history1 | 5 2 0 history2 |
| Oxidation Abs/.1mm *ASTM D7414 >25 21.0 18.2 18.5 | Silicon Sodium Potassium INFRA-RED | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 | >25 >20 limit/base >3 | 8 0 2 current | 7 2 <1 history1 0.9 | 5 2 0 history2 0.9 |
| | Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 | >25 >20 limit/base >3 >20 | 8 0 2 current 1.2 11.9 | 7 2 <1 history1 0.9 10.4 | 5 2 0 history2 0.9 10.5 |
| | Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm % Abs/cm Abs/.1mm | ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 | >25 >20 limit/base >3 >20 >30 | 8 0 2 current 1.2 11.9 24.0 | 7 2 <1 history1 0.9 10.4 21.0 | 5 2 0 history2 0.9 10.5 21.7 |
| | Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm % Abs/cm Abs/.1mm | ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method | >25 >20 limit/base >3 >20 >30 limit/base | 8 0 2 current 1.2 11.9 24.0 | 7 2 <1 history1 0.9 10.4 21.0 history1 | 5 2 0 history2 0.9 10.5 21.7 history2 |



OIL ANALYSIS REPORT

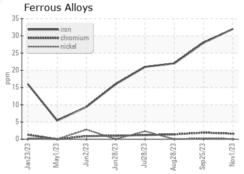


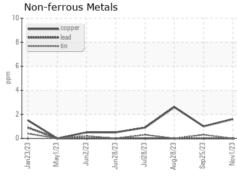


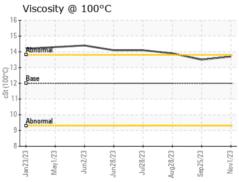
| VISUAL | | method | limit/base | current | history1 | history2 |
|-------------------------|--------|---------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

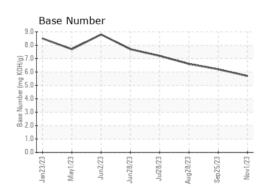
| FLUID PROPERTIES | | method | | | | history2 | |
|------------------|-----|-----------|-------|------|------|----------|--|
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | 13.7 | 13.5 | 13.9 | |

GRAPHS











Certificate L2367

Laboratory

Sample No. Lab Number

: PCA0105906 : 06002166 Unique Number : 10735928 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 08 Nov 2023

Diagnosed : 09 Nov 2023 Diagnostician : Wes Davis

Transervice - Shop 1361 - Berkeley-Windsor

4400 State Road 19 Windsor, WI US 53598 Contact: Mike Hurda

mhurda@transervice.com T: (608)846-2726 F: (608)846-0389

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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)