

# **OIL ANALYSIS REPORT**

Sample Rating Trend



### Area (C0852977) Machine Id 934032 Component Natural Gas Engin Fluid PETRO CANADA D

Component Natural Gas Engine Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

| SAMPLE INFORMATION         method         limitbase         current         history1         history2           Sample Number         Client Info         05 Mar 2024             Sample Number         Client Info         05 Mar 2024             Oil Age         hrs         Client Info         1130             Oil Age         hrs         Client Info         NA             Oil Age         hrs         Client Info         NA             Sample Status         Client Info         NA              Sample Status         CONTAMINATION         method         limitbase         current         history1         history2           table         fron         ppm         ASTM 05185         -50         A 63             titable         fron         ppm         ASTM 05185         >20         1             titable         fron         ppm         ASTM 05185         >30         2             Titatinium         ppm         ASTM 05185         >30         2   |               | -             | -              |             |            | Mar2024     |          |          |
|--|---------------|---------------|----------------|-------------|------------|-------------|----------|----------|
| this time.<br>or monitor.         Sample Date         IClient Info         05 Mar 2024             Machine Age         hrs         Client Info         1130             oli Age         hrs         Client Info         1130             Sample Status         Client Info         NKA              atton in the         CONTAMINATION         method         limit/base         current         history1         history2           tition of the         CONTAMINATION         method         limit/base         current         history1         history2           tition of the         Iron         ppm         ASTM 05185m         >50         63             Kited         ppm         ASTM 05185m         >50         63              Nickel         ppm         ASTM 05185m         >30         0              Silver         ppm         ASTM 05185m         >30         2             Copper         ppm         ASTM 05185m         >30         2   |               | SAMPLE INFORM | <b>/IATION</b> | method      | limit/base | current     | history1 | history2 |
| nominitor.         Machine Age         hrs         Client Info         1130             All other         Oil Qae         hrs         Client Info         N/A             Sample Status         Imit/base         current         history1         history2            All other         CONTAMINATION         method         limit/base         current         history1         history2           Attain in the         CONTAMINATION         method         limit/base         current         history1         history2           Attain in the         CONTAMINATION         method         limit/base         current         history1         history2           Attain in the         VEAR METALS         method         limit/base         current         history1         history2           Attain in the         ppm         ASTM D6186n         >20         1             Nickel         ppm         ASTM D6186n         >30         0             Attainium         ppm         ASTM D6186n         >30         2             Aduminum         ppm         ASTM D6186n         >30         2 |               | Sample Number |                | Client Info |            | GFL0103425  |          |          |
| Markanine Age         Ins         Client info         1130         Ins         Ins           Oil Age         hrs         Client info         N/A             Sample Status         Client info         N/A             ation in the         CONTAMINATION         method         imit/base         current         history1         history2           tition in the         CONTAMINATION         method         imit/base         current         history1         history2           tition of the         Iron         ppm         ASTM DSI85m         >50         63             Titanium         ppm         ASTM DSI85m         >50         63             Nickel         ppm         ASTM DSI85m         >30         2             Titanium         ppm         ASTM DSI85m         >30         2             Lead         ppm         ASTM DSI85m         >30         2             Tin         ppm         ASTM DSI85m         >4         2             Auminum         ppm         ASTM DSI85m  | t this time.  | Sample Date   |                | Client Info |            | 05 Mar 2024 |          |          |
| ed. All other       Oil Changed       Client Info       N/A           Sample Status       Imather       Imather       ABNORMAL        Imather         tion in the       CONTAMINATION       method       Imit/base       current       History1       Mistory2         table       Iron       ppm       ASTM DS185m       >50       63           table       ppm       ASTM DS185m       >24       1           Nickel       ppm       ASTM DS185m       >30       0           Nickel       ppm       ASTM DS185m       >30       0           Silver       ppm       ASTM DS185m       >30       2           Auminum       ppm       ASTM DS185m       >30       2           Copper       ppm       ASTM DS185m       >30       2           Audinum       ppm       ASTM DS185m       >30       2           Copper       ppm       ASTM DS185m       >30       0  | o monitor.    | Machine Age   | hrs            | Client Info |            | 1130        |          |          |
| Sample Status         method         Imit/base         current         history1         history2           tion in the         CONTAMINATION         method         limit/base         current         history1         history2           table         method         limit/base         current         history1         history2           table         iron         ppm         ASTM 05185n         >50         63             Nickel         ppm         ASTM 05185n         >4         1              Nickel         ppm         ASTM 05185n         >3         0  |               | Oil Age       | hrs            | Client Info |            | 1130        |          |          |
| tion in the Vater VC Method Jo.1 NEG current history1 history2 Water VC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 table fron ppm ASTM 05185n >50 ▲ 63 Nickel ppm ASTM 05185n >24 1 Nickel ppm ASTM 05185n >22 1 0 Nickel ppm ASTM 05185n >20 0 Aluminum ppm ASTM 05185n >30 0 Aluminum ppm ASTM 05185n >30 2 Aluminum ppm ASTM 05185n >30 2 Namadium ppm ASTM 05185n >30 2 Namadium ppm ASTM 05185n >44 2 Vanadium ppm ASTM 05185n >44 2 Vanadium ppm ASTM 05185n >44 2 Vanadium ppm ASTM 05185n >44 2 Copper ppm ASTM 05185n >44 2 Namadium ppm ASTM 05185n >44 2 Cadmium ppm ASTM 05185n >44 2 Namadium ppm ASTM 05185n > 0 Cadmium ppm ASTM 05185n > 0 Barium ppm ASTM 05185n 0 7 Barium ppm ASTM 05185n 1010 850 Nolybdenum ppm ASTM 05185n 1010 850 Namaganese ppm ASTM 05185n 100 850   | ed. All other | Oil Changed   |                | Client Info |            | N/A         |          |          |
| Water     WC Method     >0.1     NEG        WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >50     63         Nickel     ppm     ASTM D5185n     >24     1         Nickel     ppm     ASTM D5185n     >22     1         Silver     ppm     ASTM D5185n     >30     0         Aluminum     ppm     ASTM D5185n     >30     2         Lead     ppm     ASTM D5185n     >30     2         Copper     ppm     ASTM D5185n     >30     2         Cadmium     ppm     ASTM D5185n     >44     2         ADDITIVES     method     Imit/base     current     history2        Boron     ppm     ASTM D5185n     0     7         Boron     ppm     ASTM D5185n     100     80         Molybdenum     ppm     ASTM D5185n     100     80         Magnesion     ppm     ASTM D5185n <td></td> <td>Sample Status</td> <td></td> <td></td> <td></td> <td>ABNORMAL</td> <td></td> <td></td>   |               | Sample Status |                |             |            | ABNORMAL    |          |          |
| Water         WC Method         >0.1         NEG             Itable<br>Ition of the<br>ition of the<br>ition of the<br>ition of the<br>ition of the         Innot         ppm         ASTM 05185n         >50         A         633              Iton on ppm         ASTM 05185n         >4         1  | tion in the   | CONTAMINATI   | ON             | method      | limit/base | current     | history1 | history2 |
| table         Iron         ppm         ASTM D5185n         >550         ▲ 63             Chromium         ppm         ASTM D5185n         >2         1             Nickel         ppm         ASTM D5185n         >2         1             Silver         ppm         ASTM D5185n         >3         0             Aluminum         ppm         ASTM D5185n         >30         2             Lead         ppm         ASTM D5185n         >30         2   |               | Water         |                | WC Method   | >0.1       | NEG         |          |          |
| Iron         ppm         ASTM D5185m         >50         ▲ 63             Chromium         ppm         ASTM D5185m         >4         1             Nickel         ppm         ASTM D5185m         >2         1             Silver         ppm         ASTM D5185m         >3         0  | abla          | WEAR METALS   | S              | method      | limit/base | current     | history1 | history2 |
| Nickel       ppm       ASTM D5185m       >2       1           Titanium       ppm       ASTM D5185m       3       0           Silver       ppm       ASTM D5185m       >3       0           Aluminum       ppm       ASTM D5185m       >30       2           Lead       ppm       ASTM D5185m       >30       2           Copper       ppm       ASTM D5185m       >35       15           Tin       ppm       ASTM D5185m       >4       2           ADDITIVES       method       Imit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       2           Molybdenum       ppm       ASTM D5185m       0       8           Magnesium       ppm       ASTM D5185m       0       8           Magnesium       ppm       ASTM D5185m       1010       850           Sulfur       ppm       ASTM D5185m       1070   |               | Iron          | ppm            | ASTM D5185m | >50        | <b>6</b> 3  |          |          |
| Nickel       ppm       ASTM D5185m       >2       1           Titanium       ppm       ASTM D5185m       >3       0           Silver       ppm       ASTM D5185m       >3       0           Aluminum       ppm       ASTM D5185m       >3       15           Lead       ppm       ASTM D5185m       >3       15           Copper       ppm       ASTM D5185m       >3       15           Yanadium       ppm       ASTM D5185m       >4       2           ADDITIVES       method       Imit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       7           Molybdenum       ppm       ASTM D5185m       0       60       67           Magnesium       ppm       ASTM D5185m       1010       850            Magnesium       ppm       ASTM D5185m       1070       1114            Sulfarp  |               | Chromium      |                | ASTM D5185m | >4         | 1           |          |          |
| Titanium       ppm       ASTM D5185m       >3       0          Aluminum       ppm       ASTM D5185m       >3       0           Aluminum       ppm       ASTM D5185m       >90       ▲       15           Lead       ppm       ASTM D5185m       >35       15           Copper       ppm       ASTM D5185m       >4       2           Vanadium       ppm       ASTM D5185m       >4       2           Vanadium       ppm       ASTM D5185m       >4       2           Cadmium       ppm       ASTM D5185m       0       7           ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       8           Molybdenum       ppm       ASTM D5185m       1010       850           Magnesium       ppm       ASTM D5185m       1070       1114           Suifur       ppm       ASTM   |               | Nickel        |                | ASTM D5185m | >2         | 1           |          |          |
| Silver       ppm       ASTM D5185m       >3       0           Aluminum       ppm       ASTM D5185m       >30       2           Lead       ppm       ASTM D5185m       >30       2           Copper       ppm       ASTM D5185m       >35       15           Vanadium       ppm       ASTM D5185m       >4       2           Cadmium       ppm       ASTM D5185m       0            ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       7           Magnaese       ppm       ASTM D5185m       0       8           Magnesium       ppm       ASTM D5185m       0       8           Sulfur       ppm       ASTM D5185m       1010       850  |               | Titanium      |                | ASTM D5185m |            | 0           |          |          |
| Aluminum         ppm         ASTM D5185m         >9         ▲ 15             Lead         ppm         ASTM D5185m         >30         2             Copper         ppm         ASTM D5185m         >35         15             Tin         ppm         ASTM D5185m         >4         2             Vanadium         ppm         ASTM D5185m         >4         2             Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         7             Magnesee         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Zalcium         ppm         ASTM D5185m         1070         1114             Zalcium         ppm         ASTM D5185m  |               | Silver        |                |             | >3         | 0           |          |          |
| Lead         ppm         ASTM D5185m         >30         2             Copper         ppm         ASTM D5185m         >35         15             Tin         ppm         ASTM D5185m         >4         2             Vanadium         ppm         ASTM D5185m         >4         2             Cadmium         ppm         ASTM D5185m         >4         2             ADDITIVES         method         limit/base         current         history1            ADDITIVES         method         0         7             ADDITIVES         method         0         7             ADDITIVES         method         0         2  |               |               |                |             | >9         | <u> </u>    |          |          |
| Copper         ppm         ASTM D5185m         >35         15             Tin         ppm         ASTM D5185m         >4         2             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         7             Barium         ppm         ASTM D5185m         0         67             Magnesium         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Jinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m   |               | Lead          |                | ASTM D5185m | >30        | 2           |          |          |
| Tin         ppm         ASTM D5185m         >4         2             Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         7             Barium         ppm         ASTM D5185m         0         60         67             Manganese         ppm         ASTM D5185m         0         8             Mangenesium         ppm         ASTM D5185m         1010         850             Magnesium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         1270         1021   |               | Copper        |                | ASTM D5185m | >35        | 15          |          |          |
| Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         7             Barium         ppm         ASTM D5185m         0         67             Molybdenum         ppm         ASTM D5185m         0         67             Magnese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             Sodium         ppm         ASTM D5185m         >+100         20 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td></td>  |               |               |                |             |            | 2           |          |          |
| Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         7             Barium         ppm         ASTM D5185m         0         60         67             Molybdenum         ppm         ASTM D5185m         0         67              Magnesium         ppm         ASTM D5185m         0         67              Calcium         ppm         ASTM D5185m         0         850              Magnesium         ppm         ASTM D5185m         1070         1114              Calcium         ppm         ASTM D5185m         1270         1021              Sulfur         ppm         ASTM D5185m         2060         2110             Sodium         ppm         ASTM D5185m         >-100         20  |               | Vanadium      |                | ASTM D5185m |            | 0           |          |          |
| Boron         ppm         ASTM D5185m         0         7             Barium         ppm         ASTM D5185m         0         2             Molybdenum         ppm         ASTM D5185m         60         67             Manganese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Calcium         ppm         ASTM D5185m         150         800             Sulfur         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             INFRA-RED         method         lim  |               | Cadmium       |                |             |            | 0           |          |          |
| Barium         ppm         ASTM D5185m         0         2             Molybdenum         ppm         ASTM D5185m         60         67             Manganese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         1070         1021             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             Sulfur         ppm         ASTM D5185m         2060         20             Solicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m <td></td> <td>ADDITIVES</td> <td></td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>  |               | ADDITIVES     |                | method      | limit/base | current     | history1 | history2 |
| Barium         ppm         ASTM D5185m         0         2             Molybdenum         ppm         ASTM D5185m         60         67             Manganese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         1070         1021             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             Solicon         ppm         ASTM D5185m         2060         20             Solicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             Notasium         ppm         ASTM D5185m <td></td> <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td>7</td> <td></td> <td></td>   |               | Boron         | ppm            | ASTM D5185m | 0          | 7           |          |          |
| Molybdenum         ppm         ASTM D5185m         60         67             Manganese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         150         800             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             Solicon         ppm         ASTM D5185m         2060         210             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         4             Sodium         ppm         ASTM D5185m         >20         31             INFRA-RED         method  |               | Barium        |                | ASTM D5185m | 0          | 2           |          |          |
| Manganese         ppm         ASTM D5185m         0         8             Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         1700         1021             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             Potassium         ppm         ASTM D5185m         >20         31             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *A   |               | Molybdenum    |                | ASTM D5185m | 60         | 67          |          |          |
| Magnesium         ppm         ASTM D5185m         1010         850             Calcium         ppm         ASTM D5185m         1070         1114             Phosphorus         ppm         ASTM D5185m         1150         800             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7644         >20         12.5             Nitration         Abs/Lmm         *ASTM D764  |               |               |                | ASTM D5185m | 0          | 8           |          |          |
| Calcium         ppm         ASTM D5185m         1070         1114            Phosphorus         ppm         ASTM D5185m         1150         800             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         4             Potassium         ppm         ASTM D5185m         >20         31             Soot %         %         *ASTM D7844         0              Nitration         Abs/:nm         *ASTM D7845   |               | •             |                | ASTM D5185m | 1010       | 850         |          |          |
| Phosphorus         ppm         ASTM D5185m         1150         800             Zinc         ppm         ASTM D5185m         1270         1021             Sulfur         ppm         ASTM D5185m         2060         2110             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >+100         20             Sodium         ppm         ASTM D5185m         >20         31             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         12.5             Nitration         Abs/cm         *ASTM D7624         >20         12.5             FLUID DEGRADATION         *ASTM D7   |               | -             |                | ASTM D5185m | 1070       | 1114        |          |          |
| ZincppmASTM D5185m12701021SulfurppmASTM D5185m20602110CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+10020SodiumppmASTM D5185m>+1004PotassiumppmASTM D5185m>2031INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440NitrationAbs/cm*ASTM D7624>2012.5SulfationAbs/lim*ASTM D7415>3024.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/lim*ASTM D7414>2522.1  |               | Phosphorus    |                |             | 1150       |             |          |          |
| SulfurppmASTM D5185m20602110CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+10020SodiumppmASTM D5185m>+1004PotassiumppmASTM D5185m>20311INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440NitrationAbs/cm*ASTM D7624>2012.5SulfationAbs/tm*ASTM D7415>3024.5CxidationAbs/.1mm*ASTM D7414>2522.1   |               |               |                | ASTM D5185m | 1270       |             |          |          |
| Silicon       ppm       ASTM D5185m       >+100       20           Sodium       ppm       ASTM D5185m       4           Potassium       ppm       ASTM D5185m       >20       31           INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7624       >20       12.5           Nitration       Abs/cm       *ASTM D7624       >20       12.5           FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >25       22.1   |               | Sulfur        |                |             | 2060       | 2110        |          |          |
| Silicon       ppm       ASTM D5185m       >+100       20           Sodium       ppm       ASTM D5185m       4           Potassium       ppm       ASTM D5185m       >20       31           INFRA-RED       method       limit/base       current       history1       history2         Soot %       %       *ASTM D7624       >20       12.5           Nitration       Abs/cm       *ASTM D7624       >20       12.5           FLUID DEGRADATION       method       limit/base       current       history1       history2         Oxidation       Abs/.1mm       *ASTM D7414       >25       22.1   |               | CONTAMINAN    | TS             | method      | limit/base | current     | history1 | history2 |
| SodiumppmASTM D5185m4PotassiumppmASTM D5185m>2031INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440NitrationAbs/cm*ASTM D7624>2012.5SulfationAbs/.1mm*ASTM D7415>3024.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2522.1  |               | Silicon       | ppm            | ASTM D5185m | >+100      | 20          |          |          |
| PotassiumppmASTM D5185m>20 <b>31</b> INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440NitrationAbs/m*ASTM D7624>2012.5SulfationAbs/.1mm*ASTM D7415>3024.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2522.1   |               | Sodium        |                | ASTM D5185m |            | 4           |          |          |
| Soot %         %         *ASTM D7844         0             Nitration         Abs/cm         *ASTM D7624         >20         12.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         22.1   |               |               |                |             |            | 31          |          |          |
| Nitration         Abs/cm         *ASTM D7624         >20         12.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         22.1  |               | INFRA-RED     |                | method      | limit/base | current     | history1 | history2 |
| Nitration         Abs/cm         *ASTM D7624         >20         12.5             Sulfation         Abs/.1mm         *ASTM D7415         >30         24.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         22.1  |               | Soot %        | %              | *ASTM D7844 |            | 0           |          |          |
| Sulfation         Abs/.1mm         *ASTM D7415         >30         24.5             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         22.1  |               |               |                | *ASTM D7624 | >20        |             |          |          |
| Oxidation         Abs/.1mm         *ASTM D7414         >25         22.1  |               |               |                |             |            |             |          |          |
|  |               | FLUID DEGRAD  |                | method      | limit/base | current     | history1 | history2 |
|  |               | Oxidation     | Abs/.1mm       | *ASTM D7414 | >25        | 22.1        |          |          |
|  |               |               |                |             |            | 4.0         |          |          |

# DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## 🔺 Wear

Piston, ring and cylinder wear is indicated. All other component wear rates are normal.

### Contamination

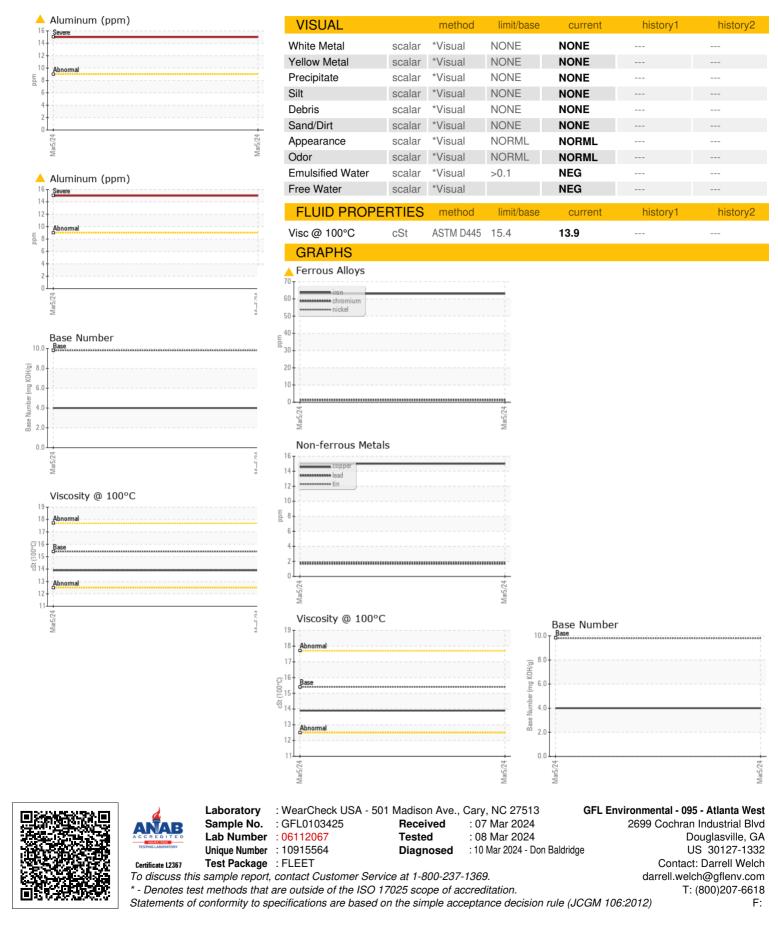
There is no indication of any contamination in the oil.

### **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.



# **OIL ANALYSIS REPORT**



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