

History1

History2

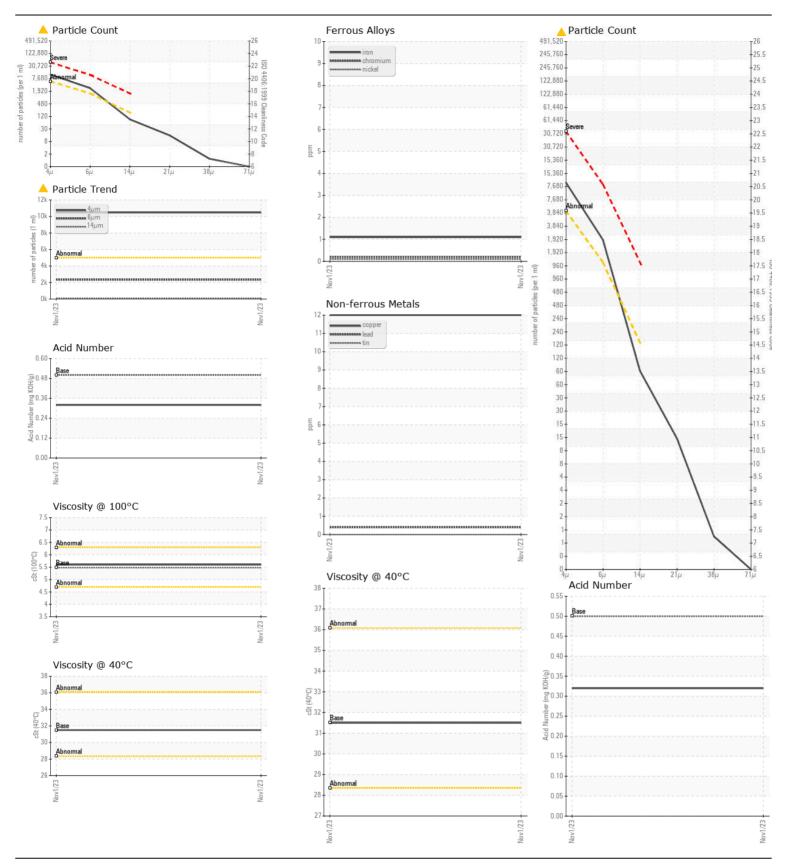
## Machine Id MORTON 25-VBH114-301-000 (CCN001) Component Hydraulic System Fluid PETRO CANADA HYDREX AW 32 (250 GAL)

| RECOMMENDATION   | Test             | UOM    | Method        | Limit/Abn | Current    |
|--|------------------|--------|---------------|-----------|------------|
|  | Sample Number    |        | Client Info   |           | PC007651   |
| We recommend you service the filters on this component. We             | Sample Date      |        | Client Info   |           | 01 Nov 202 |
| recommend an early resample to monitor this condition.                 | Machine Age      | hrs    | Client Info   |           | 0          |
|  | Oil Age          | hrs    | Client Info   |           | 0          |
|  | Filter Age       | hrs    | Client Info   |           | 0          |
|  | Oil Changed      |        | Client Info   |           | N/A        |
|  | Filter Changed   |        | Client Info   |           | N/A        |
|  | Sample Status    |        |               |           | ABNORMA    |
| WEAR   | Iron             | ppm    | ASTM D5185(m) | >20       | 1          |
|  | Chromium         | ppm    | ASTM D5185(m) |           | <1         |
| All component wear rates are normal.                                   | Nickel           | ppm    | ASTM D5185(m) | >10       | <1         |
|  | Titanium         | ppm    | ASTM D5185(m) |           | 0          |
|  | Silver           | ppm    | ASTM D5185(m) |           | <1         |
|  | Aluminum         | ppm    | ASTM D5185(m) | >10       | <1         |
|  | Lead             | ppm    | ASTM D5185(m) | >10       | <1         |
|  | Copper           | ppm    | ASTM D5185(m) | >75       | 12         |
|  | Tin              | ppm    | ASTM D5185(m) | >10       | 0          |
|  | Vanadium         | ppm    | ASTM D5185(m) |           | 0          |
|  | White Metal      | scalar | Visual*       | NONE      | NONE       |
|  | Yellow Metal     | scalar | Visual*       | NONE      | NONE       |
| CONTAMINATION  | Silicon          | ppm    | ASTM D5185(m) | >20       | 0          |
| CONTAMINATION  | Potassium        | ppm    | ASTM D5185(m) |           | <1         |
| There is a moderate amount of silt (particulates < 14 microns in size) | Water            | ppin   | WC Method     |           | NEG        |
| present in the oil.  | Particles >4µm   |        | ASTM D7647    |           | A 10478    |
| •  | Particles >6µm   |        | ASTM D7647    |           | A 2342     |
|  | Particles >14µm  |        | ASTM D7647    |           | 76         |
|  | Particles , 01um |        |               | - 10      | 10         |

## **FLUID CONDITION**

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| Sample Number         Client Info         PC0076512             Sample Date         Client Info         0             Oil Age         hrs         Client Info         0             Oil Age         hrs         Client Info         0             Oil Age         hrs         Client Info         N/A             Sample Status         Client Info         N/A             Sample Status         Client Info         N/A             Konge         ppm         ASTM 05185(m)         >20         1             Iron         ppm         ASTM 05185(m)         >10         <1             Nickel         ppm         ASTM 05185(m)         >10         <1             Aluminum         ppm         ASTM 05185(m)         >10         <1             Aluminum         ppm         ASTM 05185(m)         >10         0             Vanadium         ppm         ASTM 05185(m)         >20 <t< th=""><th>Test</th><th>UOIVI</th><th>wethod</th><th>LIMIU/ADD</th><th>Curren</th><th></th><th>HISTOLA</th><th>HIStory2</th></t<> | Test                | UOIVI  | wethod                                | LIMIU/ADD | Curren    |     | HISTOLA | HIStory2 |
|--|---------------------|--------|---------------------------------------|-----------|-----------|-----|---------|----------|
| Machine Age         hrs         Client Info         0             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         N/A             Filter Changed         Client Info         N/A             Sample Status          ABNORMAL             Iron         ppm         ASTMD5185(m)         >10         <1             Chromium         ppm         ASTMD5185(m)         >10         <1             Nickel         ppm         ASTMD5185(m)         >10         <1             Silver         ppm         ASTMD5185(m)         >10         <1             Lead         ppm         ASTMD5185(m)         >10         0             Vanadium         ppm         ASTMD5185(m)         >20         0             Vanadium         ppm         ASTMD5185(m)         >20         0             Vanadium         ppm <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PC00765</th><th>512</th><th></th><th></th></t<>                                    | Sample Number       |        | Client Info                           |           | PC00765   | 512 |         |          |
| Oil Age         hrs         Client Info         0             Filter Age         hrs         Client Info         N/A             Oil Changed         Client Info         N/A              Sample Status         Viana               Iron         ppm         ASTMD5185(m)         >20         1             Nickel         ppm         ASTMD5185(m)         >10         <1             Silver         ppm         ASTMD5185(m)         >10         <1             Silver         ppm         ASTMD5185(m)         >10         <1             Silver         ppm         ASTMD5185(m)         >10         <1             Aluminum         ppm         ASTMD5185(m)         >10         0             Vinte Metal         scalar         Visual*         NONE         NONE             Vinto Metal         scalar         Visual*         NONE         NONE <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>01 Nov 20</th><th>023</th><th></th><th></th></td<>  | Sample Date         |        | Client Info                           |           | 01 Nov 20 | 023 |         |          |
| Filter Age         hrs         Client Info         N/A             Cli Changed         Client Info         N/A             Filter Changed         Client Info         N/A             Sample Status         ASTMD5185(m)         >20         1             Nickel         ppm         ASTMD5185(m)         >10         <1             Nickel         ppm         ASTMD5185(m)         >10         <1             Aluminum         ppm         ASTMD5185(m)         >10         <1             Silver         ppm         ASTMD5185(m)         >10         <1             Aluminum         ppm         ASTMD5185(m)         >10         <1             Vanadum         ppm         ASTMD5185(m)         >10         <1             Vanadum         ppm         ASTMD5185(m)         >0         0             Vellow Metal         scalar         Visual*         NONE         NONE </th <th>Machine Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th></th> <th></th> <th></th>                             | Machine Age         | hrs    | Client Info                           |           | 0         |     |         |          |
| Oil Changed         Client Info         N/A             Filter Changed         Client Info         N/A             Sample Status         ABNORMAL             Iron         ppm         ASTM D5185(m)         >20         1            Iron         ppm         ASTM D5185(m)         >10             Nickel         ppm         ASTM D5185(m)         >10             Nickel         ppm         ASTM D5185(m)         >10             Aluminum         ppm         ASTM D5185(m)         >10        1            Lead         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >10         0            Vanadium         ppm         ASTM D5185(m)         >20         0            Yellow Metal         scalar         Yisual*         NONE         NONE            Yellow Metal         scalar         Yisual*         NONE             Yellow Metal   | Oil Age             | hrs    | Client Info                           |           | 0         |     |         |          |
| Filter Changed<br>Sample Status         Client Info         N/A             Iron         ppm         ASTM D5185(m)         >20         1             Iron         ppm         ASTM D5185(m)         >10         <1             Nickel         ppm         ASTM D5185(m)         >10         <1             Silver         ppm         ASTM D5185(m)         >10         <1             Aluminum         ppm         ASTM D5185(m)         >10         <1             Lead         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0             Vellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         0             Vellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D7647  | Filter Age          | hrs    | Client Info                           |           | 0         |     |         |          |
| Sample Status         ABNORMAL             Iron         ppm         ASTM D5185(m)         >20         1             Chromium         ppm         ASTM D5185(m)         >10         <1             Nickel         ppm         ASTM D5185(m)         >10         <1             Aluminum         ppm         ASTM D5185(m)         >10         <1             Aluminum         ppm         ASTM D5185(m)         >10         <1             Copper         ppm         ASTM D5185(m)         >10         <1             Vanadium         ppm         ASTM D5185(m)         >10         <1             Vanadium         ppm         ASTM D5185(m)         >20         0             Vanadium         ppm         ASTM D5185(m)         >20         0             Vanadium         ppm         ASTM D5185(m)         >20         0             Silicon         ppm         ASTM D5185(m)         >20         0   | Oil Changed         |        | Client Info                           |           | N/A       |     |         |          |
| Sample Status         ABNORMAL   | Filter Changed      |        | Client Info                           |           | N/A       |     |         |          |
| Iron         ppm         ASTM D5185(m)         >20         1             Chromium         ppm         ASTM D5185(m)         >10         <1             Nickel         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >10         <1             Aluminum         ppm         ASTM D5185(m)         >10         <1             Lead         ppm         ASTM D5185(m)         >10         0             Copper         ppm         ASTM D5185(m)         >75         12             Vanadium         ppm         ASTM D5185(m)         >70         0             Vellow Metal         scalar         Visual*         NONE         NONE             Vellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20              Particles >4µm         ASTM D7647   |                     |        |                                       |           | ABNORM    | AL  |         |          |
| Chromium         ppm         ASTM D5185(m)         >10         <1  |                     |        |                                       |           |           |     |         |          |
| Nickel         ppm         ASTM D5185(m)         >10         <1  | Iron                | ppm    | ASTM D5185(m)                         | >20       | 1         |     |         |          |
| Titanium         ppm         ASTM D5185(m)         0             Silver         ppm         ASTM D5185(m)         >10         <1             Aluminum         ppm         ASTM D5185(m)         >10         <1             Lead         ppm         ASTM D5185(m)         >10         <1             Copper         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         >10         0             Value         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         o         1             Vater         WC Method         >0.1         NEG              Particles >4µm         ASTM D7647         >100         1             Particles >4µm         ASTM D7647         >10         1             Particles >5µm         ASTM D7647         >3 <td< th=""><th>Chromium</th><th>ppm</th><th>ASTM D5185(m)</th><th>&gt;10</th><th>&lt;1</th><th></th><th></th><th></th></td<>               | Chromium            | ppm    | ASTM D5185(m)                         | >10       | <1        |     |         |          |
| Silver         ppm         ASTM D5185(m)         <1  | Nickel              | ppm    | ASTM D5185(m)                         | >10       | <1        |     |         |          |
| Aluminum         ppm         ASTM D5185(m)         >10         <1  | Titanium            | ppm    | ASTM D5185(m)                         |           | 0         |     |         |          |
| Lead         ppm         ASTM D5185(m)         >10         <1  | Silver              | ppm    | ASTM D5185(m)                         |           | <1        |     |         |          |
| Lead         ppm         ASTM D5185(m)         >10         <1  | Aluminum            | ppm    | ASTM D5185(m)                         | >10       | <1        |     |         |          |
| Copper         ppm         ASTM D5185(m)         >75         12             Tin         ppm         ASTM D5185(m)         >10         0             White Metal         scalar         Visual*         NONE         NONE             Yellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         0             Patisoles >4µm         ASTM D56185(m)         >20         <1             Particles >4µm         ASTM D7647         >5000         A 10478             Particles >6µm         ASTM D7647         >100         A         2342             Particles >4µm         ASTM D7647         >100         A         2342             Particles >14µm         ASTM D7647         >100         A              Particles >21µm         ASTM D7647         >10         1              Particles >38µm         ASTM D7647  |                     |        |                                       |           |           |     |         |          |
| Tin         ppm         ASTM D5185(m)         >10         0             Vanadium         ppm         ASTM D5185(m)         0             White Metal         scalar         Visual*         NONE         NONE             Yellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         c1             Potassium         ppm         ASTM D5185(m)         >20         c1             Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >160         76             Particles >14µm         ASTM D7647         >10         1             Particles >38µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         191/11/4         21/18/13             Sand/Dirt         scalar         Visual*         NONE         NONE        <   |                     |        |                                       |           |           |     |         |          |
| Vanadium         ppm         ASTM D5185(m)         0             White Metal         scalar         Visual*         NONE         NONE             Yellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         0             Potassium         ppm         ASTM D5185(m)         >20         <1             Patricles >4µm         ASTM D5185(m)         >20         <1             Particles >6µm         ASTM D7647         >100         ▲ 2342             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         1911714         ▲ 21718/13             Silt         scalar         Visual*         NONE         NONE             Debris         scalar         Visual*         NORML         NORML  |                     |        |                                       |           |           |     |         |          |
| White Metal         scalar         Visual*         NONE         NONE             Yellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         0             Potassium         ppm         ASTM D5185(m)         >20         <1             Particles >4µm         ASTM D5185(m)         >20         <1             Particles >6µm         ASTM D7647         >5000         ▲ 10478             Particles >6µm         ASTM D7647         >160         76             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         1911714         ▲ 21/18/13             Silt         scalar         Visual*         NONE         NONE             Sodium         ppm         ASTM D7647         >0.1         NORML<   |                     |        |                                       | -         | -         |     |         |          |
| Yellow Metal         scalar         Visual*         NONE         NONE             Silicon         ppm         ASTM D5185(m)         >20         <1             Potassium         ppm         ASTM D5185(m)         >20         <1             Water         WC Method         >0.1         NEG             Particles >4µm         ASTM 07647         >100         A 2342             Particles >6µm         ASTM 07647         >100         1             Particles >6µm         ASTM 07647         >10         1             Particles >38µm         ASTM 07647         >3         0             Particles >71µm         ASTM 07647         >3         0             Silt         scalar         Visual*         NONE         NONE             Solt Cleanliness         scalar         Visual*         NONE         NONE             Sand/Dirt         scalar         Visual*         NORM         NORML  |                     |        |                                       | NONE      | -         | E   |         |          |
| Silicon         ppm         ASTM D5185(m)         >20         0             Potassium         ppm         ASTM D5185(m)         >20         <1   |                     |        |                                       |           |           |     |         |          |
| Potassium         ppm         ASTM D5185(m)         >20         <1   |                     | Jouran | •••••••                               |           |           |     |         |          |
| Potassium         ppm         ASTM D5185(m)         >20         <1   | Silicon             | maa    | ASTM D5185(m)                         | >20       | 0         |     |         |          |
| Water         WC Method         >0.1         NEG             Particles >4µm         ASTM D7647         >5000         ▲ 10478             Particles >6µm         ASTM D7647         >1300         ▲ 2342             Particles >1µm         ASTM D7647         >160         76             Particles >21µm         ASTM D7647         >10         1             Particles >38µm         ASTM D7647         >10         1             Particles >31µm         ASTM D7647         >3         0             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE              Sold Unt         scalar         Visual*         NONE              Boron         ppm         ASTM D5185(m)         0         3   |                     |        |                                       |           |           |     |         |          |
| Particles >4μm         ASTM D7647         >5000         ▲ 10478             Particles >6μm         ASTM D7647         >1300         ▲ 2342             Particles >14μm         ASTM D7647         >160         76             Particles >21μm         ASTM D7647         >40         13             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE              Debris         scalar         Visual*         NORE         NONE             Appearance         scalar         Visual*         NORL         NORML             Cdor         scalar         Visual*         NORL         NORML             Boron         ppm         ASTM D5185(m)         0         0   |                     | PP     | ( )                                   |           |           |     |         |          |
| Particles >6µm         ASTM D7647         >1300 $\blacktriangle$ 2342             Particles >14µm         ASTM D7647         >160         76             Particles >21µm         ASTM D7647         >40         13             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14 $\checkmark$ 21/18/13             Silt         scalar         Visual*         NONE         NONE             Debris         scalar         Visual*         NONE         NONE             Sand/Dirt         scalar         Visual*         NORM         NORML             Odor         scalar         Visual*         NORM         NORML             Boron         ppm         ASTM D5185(m)         0         3             Magnesium         ppm         ASTM D5185(m)         0  |                     |        |                                       |           |           |     |         |          |
| Particles >14µm         ASTM D7647         >160         76             Particles >21µm         ASTM D7647         >40         13             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE             Debris         scalar         Visual*         NONE             Sand/Dirt         scalar         Visual*         NORM         MORE             Appearance         scalar         Visual*         NORM         MORML             Odor         scalar         Visual*         NORML         NORML             Boron         ppm         ASTM D5185(m         0         3             Barium         ppm         ASTM D5185(m         0         0   |                     |        |                                       |           |           |     |         |          |
| Particles >21µm         ASTM D7647         >40         13             Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE             Debris         scalar         Visual*         NONE             Sand/Dirt         scalar         Visual*         NONE             Appearance         scalar         Visual*         NORML             Odor         scalar         Visual*         NORML         NORML             Sodium         ppm         ASTM D5185(m         NORML              Boron         ppm         ASTM D5185(m         0         0             Maganese         ppm         ASTM D5185(m         0         0   |                     |        |                                       |           | -         |     |         |          |
| Particles >38µm         ASTM D7647         >10         1             Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE         NONE             Debris         scalar         Visual*         NONE         NONE             Sand/Dirt         scalar         Visual*         NONE         NONE             Appearance         scalar         Visual*         NORM         NORML             Odor         scalar         Visual*         NORM         NORML             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m) <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>                              |                     |        |                                       |           |           |     |         |          |
| Particles >71µm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c) $19/17/14$ $\checkmark$ 21/18/13             Silt         scalar         Visual*         NONE         NONE             Debris         scalar         Visual*         NONE         NONE             Sand/Dirt         scalar         Visual*         NONE         NONE             Appearance         scalar         Visual*         NORM         NORML             Odor         scalar         Visual*         NORML         NORML             Boron         scalar         Visual*         >0.1         NEG             Boron         ppm         ASTM D5185(m)         0         3             Molybdenum         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Phosphorus         ppm         ASTM   |                     |        |                                       |           |           |     |         |          |
| Oil Cleanliness         ISO 4406 (c)         >19/17/14         ▲ 21/18/13             Silt         scalar         Visual*         NONE         NONE             Debris         scalar         Visual*         NONE         NONE             Sand/Dirt         scalar         Visual*         NONE         NONE             Appearance         scalar         Visual*         NORM         NORML             Odor         scalar         Visual*         NORML         NORML             Codor         scalar         Visual*         NORML         NORML             Sodium         ppm         ASTM D5185(m)         0         3             Boron         ppm         ASTM D5185(m)         0         0             Magnese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         21             Phosphorus         ppm  |                     |        |                                       |           |           |     |         |          |
| Silt         scalar         Visual*         NONE         NONE            Debris         scalar         Visual*         NONE         NONE            Sand/Dirt         scalar         Visual*         NONE         NONE            Appearance         scalar         Visual*         NORM         NORML            Appearance         scalar         Visual*         NORML         NORML            Odor         scalar         Visual*         NORML         NORML            Emulsified Water         scalar         Visual*         >0.1         NEG            Sodium         ppm         ASTM D5185(m)         0         3            Boron         ppm         ASTM D5185(m)         0         0            Molybdenum         ppm         ASTM D5185(m)         0         0            Magnesium         ppm         ASTM D5185(m)         0         0            Magnesium         ppm         ASTM D5185(m)         0         21            Phosphorus         ppm         ASTM D5185(m)         330         3111    |                     |        |                                       |           | -         | /13 |         |          |
| Debris         scalar         Visual*         NONE             Sand/Dirt         scalar         Visual*         NONE             Appearance         scalar         Visual*         NORML         NORML             Odor         scalar         Visual*         NORML         NORML             Odor         scalar         Visual*         NORML         NORML             Emulsified Water         scalar         Visual*         >0.1         NEG             Sodium         ppm         ASTM D5185(m)         0         3             Boron         ppm         ASTM D5185(m)         0         0             Barium         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         21             Phosphorus         ppm         ASTM D5185(m)         <  |                     | scalar | · · · · · · · · · · · · · · · · · · · |           |           | _   |         |          |
| Sand/Dirt         scalar         Visual*         NONE         NONE            Appearance         scalar         Visual*         NORML         NORML             Odor         scalar         Visual*         NORML         NORML             Emulsified Water         scalar         Visual*         >0.1         NEG             Sodium         ppm         ASTM D5185(m)         2             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Magnese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Phosphorus         ppm         ASTM D5185(m)         0         21             Phosphorus         ppm         ASTM D5185(m)         30         311             Sulfur         ppm         ASTM D5185(m)  |                     |        |                                       |           |           |     |         |          |
| Appearance         scalar         Visual*         NORML         NORML            Odor         scalar         Visual*         NORML         NORML             Emulsified Water         scalar         Visual*         >0.1         NEG             Sodium         ppm         ASTM D5185(m)         2             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Phosphorus         ppm         ASTM D5185(m)         0         0             Zinc         ppm         ASTM D5185(m)         30         311             Sulfur         ppm         ASTM D5185(m)         30         311             Sulfur         ppm         ASTM D5185(m)         760   |                     |        |                                       |           |           |     |         |          |
| Odor         scalar         Visual*         NORML         NORML             Emulsified Water         scalar         Visual*         >0.1         NEG             Sodium         ppm         ASTM D5185(m)         2             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Maganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <1             Calcium         ppm         ASTM D5185(m)         0         <1             Phosphorus         ppm         ASTM D5185(m)         30         311             Zinc         ppm         ASTM D5185(m)         30         311             Sulfur         ppm         ASTM D5185(m) <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>  |                     |        |                                       |           |           |     |         |          |
| Emulsified Water         scalar         Visual*         >0.1         NEG            Sodium         ppm         ASTM D5185(m)         2             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         0             Calcium         ppm         ASTM D5185(m)         0         <1             Phosphorus         ppm         ASTM D5185(m)         50         21             Zinc         ppm         ASTM D5185(m)         330         311             Zinc         ppm         ASTM D5185(m)         760         719             Sulfur         ppm         ASTM D5185(m)         760         0.32             Visc @ 40°C         CSt         ASTM D7279(m)   |                     |        |                                       |           |           |     |         |          |
| Sodium         ppm         ASTM D5185(m)         2             Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <             Calcium         ppm         ASTM D5185(m)         0         <1             Phosphorus         ppm         ASTM D5185(m)         30         311             Zinc         ppm         ASTM D5185(m)         30         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH'g         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         <  |                     |        |                                       |           |           |     |         |          |
| Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <1             Calcium         ppm         ASTM D5185(m)         0         <1             Phosphorus         ppm         ASTM D5185(m)         50         21             Zinc         ppm         ASTM D5185(m)         33.0         311             Sulfur         ppm         ASTM D5185(m)         43.0         276             Sulfur         ppm         ASTM D5185(m)         76.0         719             Visc @ 40°C         CSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         CSt<   |                     | Scalai | visuai                                | 20.1      | NEG       |     |         |          |
| Boron         ppm         ASTM D5185(m)         0         3             Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <1             Calcium         ppm         ASTM D5185(m)         0         <1             Phosphorus         ppm         ASTM D5185(m)         300         311             Zinc         ppm         ASTM D5185(m)         330         311             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6   | Sodium              | maa    | ASTM D5185(m)                         |           | 2         |     |         |          |
| Barium         ppm         ASTM D5185(m)         0         0             Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <1             Calcium         ppm         ASTM D5185(m)         50         21             Phosphorus         ppm         ASTM D5185(m)         330         311             Zinc         ppm         ASTM D5185(m)         430         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D7279(m)         31.5         31.5             Visc @ 40°C         cSt         ASTM D7279(m)         5.48         5.6   |                     |        | ( )                                   | 0         |           |     |         |          |
| Molybdenum         ppm         ASTM D5185(m)         0         0             Manganese         ppm         ASTM D5185(m)         0         0             Magnesium         ppm         ASTM D5185(m)         0         <1             Calcium         ppm         ASTM D5185(m)         50         21             Phosphorus         ppm         ASTM D5185(m)         330         311             Zinc         ppm         ASTM D5185(m)         430         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6   |                     |        | ( )                                   | -         | -         |     |         |          |
| Manganese         ppm         ASTM D5185(m)         0             Magnesium         ppm         ASTM D5185(m)         0         <1   |                     |        | ( )                                   |           |           |     |         |          |
| Magnesium         ppm         ASTM D5185(m)         0         <1   |                     |        |                                       | -         |           |     |         |          |
| Calcium         ppm         ASTM D5185(m)         50         21             Phosphorus         ppm         ASTM D5185(m)         330         311             Zinc         ppm         ASTM D5185(m)         430         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D974*         0.50         0.32             Visc @ 40°C         cSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6  | -                   |        |                                       |           |           |     |         |          |
| Phosphorus         ppm         ASTM D5185(m)         330         311             Zinc         ppm         ASTM D5185(m)         430         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D974*         0.50         0.32             Visc @ 40°C         cSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6  | -                   |        |                                       |           |           |     |         |          |
| Zinc         ppm         ASTM D5185(m)         430         276             Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D5185(m)         760         0.32             Visc @ 40°C         cSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6   |                     |        |                                       |           |           |     |         |          |
| Sulfur         ppm         ASTM D5185(m)         760         719             Acid Number (AN)         mg KOH/g         ASTM D5185(m)         760 <b>0.32</b> Visc @ 40°C         cSt         ASTM D7279(m)         31.5 <b>31.5</b> Visc @ 100°C         cSt         ASTM D7279(m)         5.48 <b>5.6</b>   |                     |        | · · · · · ·                           |           |           |     |         |          |
| Acid Number (AN)         mg KOH/g         ASTM D974*         0.50         0.32             Visc @ 40°C         cSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6   |                     |        |                                       |           |           |     |         |          |
| Visc @ 40°C         cSt         ASTM D7279(m)         31.5         31.5             Visc @ 100°C         cSt         ASTM D7279(m)         5.48         5.6  |                     |        |                                       |           |           |     |         |          |
| Visc @ 100°C cSt ASTM D7279(m) 5.48 5.6  |                     | 0 0    |                                       |           |           |     |         |          |
|  | -                   |        |                                       |           |           |     |         |          |
|  | -                   |        | · · · ·                               |           |           |     |         |          |
|  | viscosity muck (VI) | Ocale  | ACTIVI DZZTU                          | 110       | 110       |     |         |          |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CAMTAC MFG (division of Linamar) CALA Sample No. 148 ARROW RD : PC0076512 Received : 09 Jan 2024 Lab Number GUELPH, ON : 02607493 Tested : 11 Jan 2024 ISO 17025:2017 Accredited : 11 Jan 2024 - Wes Davis CA N1K 1T4 Unique Number : 5708579 Diagnosed Laboratory Test Package : IND 2 (Additional Tests: KV100, TAN Man, VI) Contact: Stu Burbidge stu.burbidge@linamar.com To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (519)780-2270 Validity of results and interpretation are based on the sample and information as supplied. F: (519)780-2274