

## VOLVO A30F 82299

Component Drop Box

VÕLVO PREMIUM GEAR OIL 80W-90 GL-5 (--- GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

## CONTAMINATION

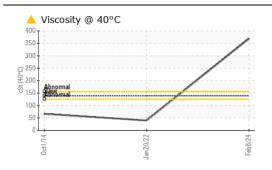
There is no indication of any contamination in the oil.

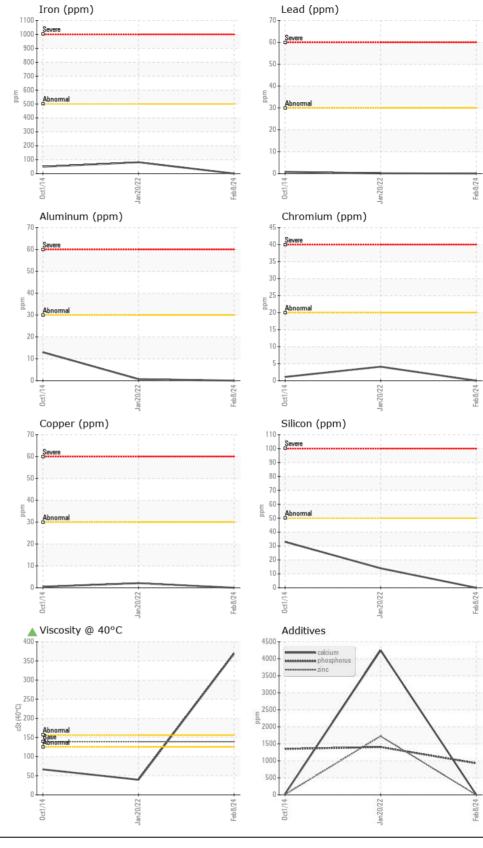
## FLUID CONDITION

The oil viscosity is higher than normal. Confirm oil type.

| Sample DateClient Info08 Feb 202420 Jan 202201 Oct 2014Machine AgehrsClient Info11988104611368Oil AgehrsClient Info000Filter AgehrsClient InfoNot ChangedNot ChangedChangedFilter ChangedClient InfoNot ChangedNot ChangedNot ChangedFilter ChangedClient InfoNot ChangedNot ChangedSample StatusClient InfoNot ChangedNot ChangedIronppmASTM D5185>20041NickelppmASTM D5185>20041NickelppmASTM D5185>10001SilverppmASTM D5185>300<131LeadppmASTM D5185>300<131CopperppmASTM D5185>300<131LeadppmASTM D5185>300<131VanadiumppmASTM D5185>300<131Vellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185>5001433PotassiumppmASTM D5185>20026WaterWC Method>0.2NCRENONENONESiliconppmASTM D5185>50014433PotassiumppmASTM D5185<  |                  | · · · · | ··=/        |           |             |              |             |
|--|------------------|---------|-------------|-----------|-------------|--------------|-------------|
| Sample DateClient Info08 Feb 202420 Jan 202201 Oct 2014Machine AgehrsClient Info11988104611368Oil AgehrsClient Info000Filter AgehrsClient InfoNot ChangedNot ChangedOil ChangedClient InfoNot ChangedNot ChangedNot ChangedFilter ChangedClient InfoNot ChangedNot ChangedSample StatusClient InfoNot ChangedNot ChangedIronppmASTM D5185>500<181NickelppmASTM D5185>20041NickelppmASTM D5185>1000<1SilverppmASTM D5185>300<113LeadppmASTM D5185>300<113LeadppmASTM D5185>300<113CopperppmASTM D5185>300<114Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185>20026NONEVellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185>500144333PotassiumppmASTM D5185>20026WaterVisualNONENONENONENONENONED   | Test             | UOM     | Method      | Limit/Abn | Current     | History1     | History2    |
| Machine AgehrsClient InfoI1988104611368Oil AgehrsClient Info015000Filter AgehrsClient InfoNot ChangdNot ChangdChangdFilter ChangedClient InfoNot ChangdNot ChangdNot ChangdFilter ChangedClient InfoNot ChangdNot ChangdNot ChangdSample Status  | Sample Number    |         | Client Info |           | VCP454424   | VCP349009    | VCP162726   |
| Oil AgehrsClient Info015000Filter AgehrsClient InfoNot ChangedNot ChangedNot ChangedNot ChangedFilter ChangedIClient InfoNot ChangedNot ChangedNot ChangedFilter ChangedIClient InfoNot ChangedNot ChangedNot ChangedSample Status-ATTENTIONATTENTIONASTMOSI8sS500<1810IronppmASTM D518sS20O41NickelppmASTM D518sS0O<10SilverppmASTM D518sS30O<113LeadppmASTM D518sS30O<1<1CopperppmASTM D518sS30O<1<1TinppmASTM D518sS20<1O0White Metalscalar'VisualNONENONENONENONESiliconppmASTM D518sS20O1433PotassiumppmASTM D518sS20O1433PotassiumppmASTM D518sS20O1433PotassiumppmASTM D518sS20O1433PotassiumppmASTM D518sS20NONENONENONESiliconppmASTM D518sS20O1433PotassiumppmASTM D518sS20NONENONENONESodu/Ti   | Sample Date      |         | Client Info |           | 08 Feb 2024 | 20 Jan 2022  | 01 Oct 2014 |
| Filter Age<br>OIntClient Info000Oil ChangedClient InfoNot ChangdNot ChangdNot ChangdNot ChangdFilter ChangedClient InfoNot ChangdNot ChangdNot ChangdNot ChangdSample StatusATTENTIONATTENTIONATTENTIONATTENTIONABNORMALIronppmASTM D5185m>200041NickelppmASTM D5185m>2000<11NickelppmASTM D5185m>2000<10SilverppmASTM D5185m5300<113LeadppmASTM D5185m>3000<113LeadppmASTM D5185m>3000<1<1CopperppmASTM D5185m>3000<1<1VanadiumppmASTM D5185m>200<100VanadiumppmASTM D5185m>200<100VanadiumppmASTM D5185m>20001433PotassiumppmASTM D5185m>20001433PotassiumppmASTM D5185m>200026WaterwC Method0.2NCNENCNENCNENCNESiltoscalar*VisualNONENONENCNENCNEAstm D5185m>20001433016Siltoscalar*Visual  | Machine Age      | hrs     | Client Info |           | 11988       | 10461        | 1368        |
| Oil ChangedClient InfoNot ChangedNot ChangedNot ChangedFilter ChangedClient InfoNot ChangedNot ChangedNot ChangedSample StatusATTENTIONATTENTIONATTENTIONABNORMALIronppmASTM D5185m>500<18149ChromiumppmASTM D5185m>20041NickelppmASTM D5185m>1000<1TitaniumppmASTM D5185m>10000SilverppmASTM D5185m>300<113LeadppmASTM D5185m>300<1<1CopperppmASTM D5185m>20<100VanadiumppmASTM D5185m>20<100White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>5001433PotassiumppmASTM D5185m>20026SiliconppmASTM D5185m>2001433PotassiumppmASTM D5185m>2001433PotassiumppmASTM D5185m>20NONENONENONESiliconppmASTM D5185m>20NONENONENONESoliconppmASTM D5185m>20NONENONENONESoliconppmASTM D5185m>20NONE </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>1500</th> <th>0</th> | Oil Age          | hrs     | Client Info |           | 0           | 1500         | 0           |
| Filter Changed<br>Sample StatusClient InfoNot Changd<br>ATTENTIONNot Changd<br>ATTENTIONNot Changd<br>ATTENTIONNot Changd<br>ABNORMALIronppmASTM D5185m>500<181149ChromiumppmASTM D5185m>20041NickelppmASTM D5185m>100<10SilverppmASTM D5185m00<10SilverppmASTM D5185m300<1<1LeadppmASTM D5185m>300<1<1CopperppmASTM D5185m>3002<1TinppmASTM D5185m>20<100VanadiumppmASTM D5185m>20<100White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>5001433PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNONENONESiliconppmASTM D5185m>20026WaterWC Method>0.2NORENONENONESiliconppmASTM D5185m>20026WaterWC Method>0.2NORENONENONESoliconppmASTM D5185m>20026WaterWC Method>0.2NORE<   | Filter Age       | hrs     | Client Info |           | 0           | 0            | 0           |
| Sample StatusATTENTIONATTENTIONATTENTIONATTENTIONATTENTIONATTENTIONATTENTIONABNORMALIronppmASTM D5185m>500<181149ChromiumppmASTM D5185m>1000<1NickelppmASTM D5185m>1000<1TitaniumppmASTM D5185m00<10SilverppmASTM D5185m>300<1<1LeadppmASTM D5185m>300<1<1CopperppmASTM D5185m>3002<1TinppmASTM D5185m>20<100VanadiumppmASTM D5185m>20<100White Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>50014330PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNONENONENONEDebrisscalar*VisualNONENONENONENONEAppearancescalar*VisualNORLNORMLNORMLNORMLAppearancescalar*VisualNORLNORMLNORMLNORMLGoronppmASTM D5185m0.00000MolybdenumppmASTM D5185m0.0000 </th <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Not Changd</th> <th>Not Changd</th> <th>Changed</th>                    | Oil Changed      |         | Client Info |           | Not Changd  | Not Changd   | Changed     |
| Iron ppm ASTM D5185m >500 <1   | Filter Changed   |         | Client Info |           | Not Changd  | Not Changd   | Not Changd  |
| Chromium ppm ASTM D5185m >20 0 4 1   Nickel ppm ASTM D5185m >10 0 0 <1   | Sample Status    |         |             |           | ATTENTION   | ATTENTION    | ABNORMAL    |
| Chromium ppm ASTM D5185m >20 0 4 1   Nickel ppm ASTM D5185m >10 0 0 <1   |                  |         | 40TH DE105  |           |             |              | 40          |
| Nickel ppm ASTM D5185m >10 0 0 <1  | -                |         |             |           |             |              |             |
| Titanium ppm ASTM D5185m O <1  |                  |         |             |           | -           |              |             |
| Silver ppm ASTM D5185m >30 0 <1  |                  |         |             | >10       | -           |              |             |
| Aluminum ppm ASTM D5185m >30 0 <1  |                  |         |             |           | -           |              |             |
| Lead ppm ASTM D5185m >30 0 <1  |                  |         |             | 00        | -           |              | -           |
| Copper ppm ASTM D5185m >30 0 2 <1  |                  |         |             |           | -           |              |             |
| TinppmASTM D5185m>20<1   |                  |         |             |           | -           |              |             |
| VanadiumppmASTM D5185mC000White Metalscalar*VisualNONENONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>50014333333PotassiumppmASTM D5185m>20026MEGNEGWaterWC Method>0.2NEGNEGNONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLBariumppmASTM D5185m0.00000MolybdenumppmASTM D5185m0.801142MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m3884424926PhosphorusppmASTM D5185m107792814061350Zincppm<   |                  |         |             |           | -           |              |             |
| White Metalscalar*VisualNONENONENONENONEHEAVYYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>500143333PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.00112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m388424926PhosphorusppmASTM D5185m107792814061350ZincppmASTM D5185m2352630367335525000  |                  |         |             | >20       |             |              |             |
| Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>5001433PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBariumppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.00112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m388424926PhosphorusppmASTM D5185m1077928414061350ZincppmASTM D5185m2352630367335525000   |                  |         |             |           | -           |              |             |
| SiliconppmASTM D5185m>5001433PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLSodiumppmASTM D5185m379198139182BariumppmASTM D5185m0.00112ManganeseppmASTM D5185m0.00112MagnesiumppmASTM D5185m3884 424926PhosphorusppmASTM D5185m107792814061350ZincppmASTM D5185m235630367335525000  |                  |         |             |           | -           | -            |             |
| PotassiumppmASTM D5185m>20026WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m0.0042BoronppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.001112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m1077928414061350PhosphorusppmASTM D5185m107792814061350ZincppmASTM D5185m2352630367335525000   | Yellow Metal     | scalar  | *Visual     | NONE      | NONE        | NONE         | NONE        |
| WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m379198139182BariumppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.00112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m10779284140613500PhosphorusppmASTM D5185m1077928172410SulfurppmASTM D5185m2352630367335525000   | Silicon          | ppm     | ASTM D5185m | >50       | 0           | 14           | 33          |
| Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m379198139182BariumppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.00112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m10779284 14061350PhosphorusppmASTM D5185m1077928172410SulfurppmASTM D5185m2352630367335525000  | Potassium        | ppm     | ASTM D5185m | >20       | 0           | 2            | 6           |
| Debrisscalar*VisualNONENONENONEIGHTSand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGNEGSodiumppmASTM D5185m379198139182NEGBoronppmASTM D5185m0.00000MolybdenumppmASTM D5185m0.0011124ManganeseppmASTM D5185m31066353526PhosphorusppmASTM D5185m10779281406135013510726SulfurppmASTM D5185m23526303673355250001110010   | Water            |         | WC Method   | >0.2      | NEG         | NEG          | NEG         |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m379198139182BoronppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.00112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m388424926PhosphorusppmASTM D5185m107792814061350ZincppmASTM D5185m2352630367335525000   | Silt             | scalar  | *Visual     | NONE      | NONE        | NONE         | NONE        |
| Appearancescalar*VisualNORML<   | Debris           | scalar  | *Visual     | NONE      | NONE        | NONE         | LIGHT       |
| Odor scalar *Visual NORML NORM NOR   | Sand/Dirt        | scalar  | *Visual     | NONE      | NONE        | NONE         | NONE        |
| Emulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m379042BoronppmASTM D5185m379198139182BariumppmASTM D5185m0.0000MolybdenumppmASTM D5185m0.001124ManganeseppmASTM D5185m0.001112MagnesiumppmASTM D5185m310635CalciumppmASTM D5185m10779284140613500PhosphorusppmASTM D5185m460172410SulfurppmASTM D5185m2352630367A 335525000  | Appearance       | scalar  | *Visual     | NORML     | NORML       | NORML        | NORML       |
| Sodium ppm ASTM D5185m 0 4 2   Boron ppm ASTM D5185m 379 198 139 182   Barium ppm ASTM D5185m 0.0 0 0 0   Molybdenum ppm ASTM D5185m 0.0 0 12 4   Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 0.0 0 6 35   Calcium ppm ASTM D5185m 31 0 6 1350   Phosphorus ppm ASTM D5185m 38 4 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 <b>30367</b> 3355 25000   | Odor             | scalar  | *Visual     | NORML     | NORML       | NORML        | NORML       |
| Boron ppm ASTM D5185m 379 198 139 182   Barium ppm ASTM D5185m 0.0 0 0 0   Molybdenum ppm ASTM D5185m 0.0 0 12 4   Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 <b>30367</b> 3355 25000  | Emulsified Water | scalar  | *Visual     | >0.2      | NEG         | NEG          | NEG         |
| Boron ppm ASTM D5185m 379 198 139 182   Barium ppm ASTM D5185m 0.0 0 0 0   Molybdenum ppm ASTM D5185m 0.0 0 12 4   Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 <b>30367</b> 3355 25000  | Sodium           | maa     | ASTM D5185m |           | 0           | 4            | 2           |
| Barium ppm ASTM D5185m 0.0 0 0 0   Molybdenum ppm ASTM D5185m 0.8 0 12 4   Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 0.0 0 111 2   Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 30367 3355 25000   |                  |         |             | 379       |             |              |             |
| Molybdenum ppm ASTM D5185m 0.8 0 12 4   Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 <b>30367</b> 3355 25000   |                  |         |             |           |             |              |             |
| Manganese ppm ASTM D5185m 0.0 0 11 2   Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 30367 3355 25000  | Molybdenum       |         | ASTM D5185m | 0.8       |             | 12           | 4           |
| Magnesium ppm ASTM D5185m 31 0 6 35   Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 30367 3355 25000   | -                |         |             |           |             |              |             |
| Calcium ppm ASTM D5185m 38 8 4249 26   Phosphorus ppm ASTM D5185m 1077 928 1406 1350   Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 30367 3355 25000   | -                |         | ASTM D5185m | 31        | 0           |              | 35          |
| Phosphorus ppm ASTM D5185m 1077 928 ▲ 1406 1350   Zinc ppm ASTM D5185m 46 0 ▲ 1724 10   Sulfur ppm ASTM D5185m 23526 <b>30367</b> ▲ 3355 25000   | -                |         |             |           | 8           |              | 26          |
| Zinc ppm ASTM D5185m 46 0 1724 10   Sulfur ppm ASTM D5185m 23526 30367 3355 25000  |                  |         |             |           |             | <b>1</b> 406 |             |
| Sulfur ppm ASTM D5185m 23526 30367   |                  |         |             | 46        |             |              |             |
|  | Sulfur           |         | ASTM D5185m | 23526     | 30367       | ▲ 3355       | 25000       |
|  |                  | cSt     |             |           | ▲ 369       |              |             |

Contact/Location: PM Services ? - RIPTAM





**RIPA AND ASSOCIATES** Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : VCP454424 Received 10149 FISHER AVENUE : 13 Feb 2024 Lab Number : 06087745 : 14 Feb 2024 TAMPA, FL Tested Unique Number : 10875190 : 15 Feb 2024 - Jonathan Hester US 33619 Diagnosed Test Package : MOB 1 **Contact: PM Services** Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. PMServices@ripaconstruction.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Contact/Location: PM Services ? - RIPTAM