

# WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

# KEMP QUARRIES / BCS - GRAVETTE [69573]

## WL124

Component Transmission (Manual)

### PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

| RECOMMENDATIO | DN |
|---------------|----|
|---------------|----|

Resample at the next service interval to monitor. ( Customer Sample Comment:  $\mathsf{Pm4}$  )

#### **WEAR**

All component wear rates are normal.

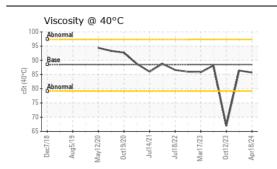
#### CONTAMINATION

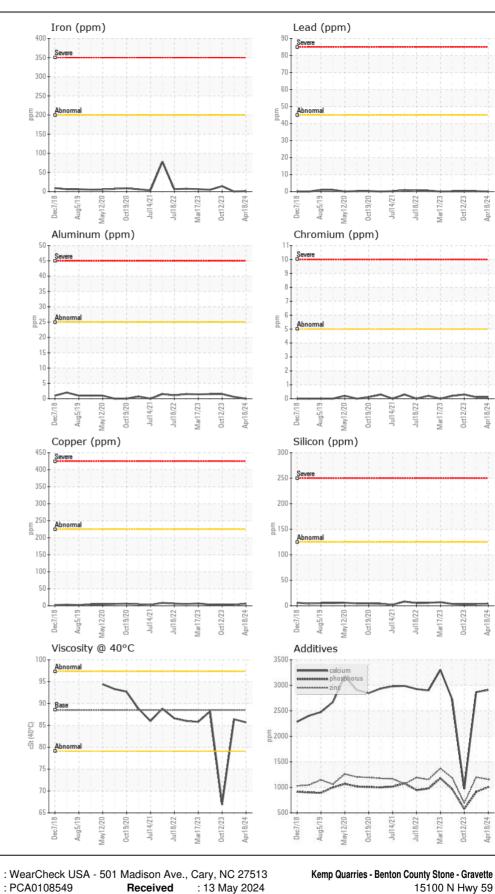
There is no indication of any contamination in the oil.

#### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| Sample DateClient Info18 Apr 202408 Feb 202412 Oct 2023Machine AgehrsClient Info384413736537365Oil AgehrsClient Info384413736537365Filter AgehrsClient Info000Oil ChangedClient InfoChangedN/AChangedFilter ChangedClient InfoChangedN/AChanged  | /              |        |             |           |             |             |             |
|--|----------------|--------|-------------|-----------|-------------|-------------|-------------|
| Sample DateClient InfoI8 Apr 202408 Feb 202412 Oct 2023Machine AgehrsClient Info384413736537365Oil AgehrsClient Info384413736537365Filter AgehrsClient Info000Oil ChangedClient InfoChangedN/AChangedFilter ChangedClient InfoChangedN/AChangedSample StatusClient InfoChangedN/AChangedIronppmASTM D5185>201014ChromiumppmASTM D5185>5c1<1<1NickelppmASTM D5185>50001SilverppmASTM D5185>70001AuminumppmASTM D5185>70<122LeadppmASTM D5185>10<1233TinppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1   | Test           | UOM    | Method      | Limit/Abn | Current     | History1    | History2    |
| Machine AgehrsClient InfoIse384413736537365Oil AgehrsClient Info0000Oil ChangedKisClient InfoChangedN/AChangedFilter ChangedIClient InfoChangedN/AChangedSample StatusClient InfoChangedN/AChangedIronppmASTM D5185m>2001014ChromiumppmASTM D5185m55C<1<1<1NickelppmASTM D5185m>5000TitaniumppmASTM D5185m>7000AluminumppmASTM D5185m>7000AluminumppmASTM D5185m>2250<1<1CopperppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>125433PotassiumppmASTM D5185m>20002VaterVisualNONENONENONENONENONESiliconppmASTM D5185m>125433PotassiumppmASTM D5185m>20002Sand/   | Sample Number  |        | Client Info |           | PCA0108549  | PCA0108537  | PCA0086995  |
| Oil Age<br>Filter AgehrsClient InfoImageS7365S7365Filter AgehrsClient Info000Oil ChangedClient InfoChangedN/AChangedFilter ChangedImageClient InfoChangedN/AChangedSample StatusVisualNORMALNORMALATTENTIONIronppmASTM D5185m>2001014ChromiumppmASTM D5185m>5<1<1<1NickelppmASTM D5185m>5000TitaniumppmASTM D5185m>7000AtuminumppmASTM D5185m>7000AtuminumppmASTM D5185m>2550<1<1CopperppmASTM D5185m>225623TinppmASTM D5185m>10<100VandatiumppmASTM D5185m>10<100Valderscalar"VisualNONENONENONENONESiliconppmASTM D5185m>20002VaterWC Mstadscalar"VisualNONENONENONESiliconppmASTM D5185m>20002VaterWC MstadNONENONENONENONESiliconppmASTM D5185m>20002Siliconppm  | Sample Date    |        | Client Info |           | 18 Apr 2024 | 08 Feb 2024 | 12 Oct 2023 |
| Filter AgehrsClient Info000Oil ChangedClient InfoChangedN/AChangedFilter ChangedClient InfoChangedN/AChangedSample StatusNORMALNORMALATTENTIONIronppmASTM D5185m>2001014ChromiumppmASTM D5185m>5<1<1<1NickelppmASTM D5185m>5000SilverppmASTM D5185m>7000AluminumppmASTM D5185m>250<1<1CopperppmASTM D5185m>225623TinppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>10<100VanadiumppmASTM D5185m>20000ValderWC Method>0.1NONENONENONENONESiliconppmASTM D5185m>20002VaterWC Method>0.1NEGNORENORESiliconppmASTM D5185m>20002Solitscalar"VisualNORENONENONENORESolitscalar"VisualNORENONENORE   | Machine Age    | hrs    | Client Info |           | 38441       | 37365       | 37365       |
| Oil ChangedClient InfoChangedN/AChangedFilter ChangedClient InfoChangedN/AChangedSample StatusNORMALNORMALATTENTIONIronppmASTM D5185m>2001014ChromiumppmASTM D5185m>5<1<1<1NickelppmASTM D5185m>50000TitaniumppmASTM D5185m>70000SilverppmASTM D5185m>70000AlumiumppmASTM D5185m>250<1<12LeadppmASTM D5185m>256233TinppmASTM D5185m>10<1000VanadiumppmASTM D5185m>10<1000White Metalscalar"VisualNONENONENONENONENONESiliconppmASTM D5185m>1254332PotassiumppmASTM D5185m>1254332Silitscalar"VisualNONENONENONENONENONESiliconppmASTM D5185m>1254332PotassiumppmASTM D5185m>125433PotassiumppmASTM D5185m>125A33Sodiumppm <t< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>38441</th><th>37365</th><th>37365</th></t<>   | Oil Age        | hrs    | Client Info |           | 38441       | 37365       | 37365       |
| Filter Changed<br>Sample Status Client Info Changed<br>NORMAL N/A Changed<br>Changed<br>NORMAL   Iron ppm ASTM D5185m >200 1 0 14   Chromium ppm ASTM D5185m >5 <1 <1 <1   Nickel ppm ASTM D5185m >5 0 0 0   Titanium ppm ASTM D5185m >5 0 0 0   Silver ppm ASTM D5185m >7 0 0 0   Aluminum ppm ASTM D5185m >25 6 2 3   Copper ppm ASTM D5185m >25 6 2 3   Tin ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >125 6 2 3   Yellow Metal scalar 'Visual NONE NONE NONE NONE   Silicon ppm ASTM D5185m >20 0  | Filter Age     | hrs    | Client Info |           | 0           | 0           | 0           |
| Sample Status NORMAL NORMAL ATTENTION   Iron ppm ASTM D5185m >200 1 0 14   Chromium ppm ASTM D5185m >5 0 0 0   Nickel ppm ASTM D5185m >5 0 0 0 0   Silver ppm ASTM D5185m >7 0 0 0 0   Aluminum ppm ASTM D5185m >25 0 <1 2 1   Copper ppm ASTM D5185m >25 6 2 3 1 1 0 0 0   Vanadium ppm ASTM D5185m >10 <1 0  | Oil Changed    |        | Client Info |           | Changed     | N/A         | Changed     |
| Iron ppm ASTM D5185m >200 1 0 14   Chromium ppm ASTM D5185m >5 <1 <1 <1   Nickel ppm ASTM D5185m >5 0 0 0   Titanium ppm ASTM D5185m >7 0 0 <1   Silver ppm ASTM D5185m >7 0 0 <1   ALuminum ppm ASTM D5185m >7 0 <1 2   Lead ppm ASTM D5185m >45 0 <1 <1   Copper ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >20 0 0   | Filter Changed |        | Client Info |           | Changed     | N/A         | Changed     |
| Chromium ppm ASTM D5185m >5 <1   | Sample Status  |        |             |           | NORMAL      | NORMAL      | ATTENTION   |
| Chromium ppm ASTM D5185m >5 <1   | Iron           |        | 4STM D5185m | >200      | 1           | 0           | 14          |
| Nickel ppm ASTM D5185m >5 0 0 0   Titanium ppm ASTM D5185m >7 0 0 <1   Silver ppm ASTM D5185m >75 0 <1 2   Lead ppm ASTM D5185m >25 0 <1 2   Lead ppm ASTM D5185m >45 0 <1 2   Copper ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0 0   Vanadium ppm ASTM D5185m >125 4 3 3   Yellow Metal scalar *Visual NONE NONE NONE NONE   Silicon ppm ASTM D5185m >20 0 0 2   Water wC Method >0.1 NORE </th <th>-</th> <th></th> <th></th> <th></th> <th>-</th> <th>-</th> <th></th>   | -              |        |             |           | -           | -           |             |
| Titanium ppm ASTM D5185m O 0 <1  |                |        |             |           |             |             |             |
| Silver ppm ASTM D5185m >7 0 0 0   Aluminum ppm ASTM D5185m >25 0 <1 2   Lead ppm ASTM D5185m >45 0 <1 <1   Copper ppm ASTM D5185m >225 6 2 3   Tin ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0 0   Vanadium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >125 4 3 3   Silicon ppm ASTM D5185m >125 4 3 3   Solit scalar *Visual NONE NONE  |                |        |             | /5        | -           |             |             |
| Aluminum ppm ASTM D5185m >25 0 <1  |                |        |             | >7        |             |             |             |
| Lead ppm ASTM D5185m >45 0 <1  |                |        |             |           | -           |             |             |
| Copper ppm ASTM D5185m >225 6 2 3   Tin ppm ASTM D5185m >10 <1 0 0   Vanadium ppm ASTM D5185m >10 <1 0 0   White Metal scalar *Visual NONE NONE NONE NONE   Yellow Metal scalar *Visual NONE NONE NONE NONE   Silicon ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >125 4 3 3   Potassium ppm ASTM D5185m >20 0 0 2   Water wC Method >0.1 NEG NORE NONE NONE   Sadt/Dirt scalar *Visual NONE NORML NORML NORML NORML   Appearance scalar   |                |        |             |           |             |             |             |
| TinppmASTM D5185m>10<1   |                |        |             | _         | -           |             |             |
| Vanadium ppm ASTM D5185m Image: Constraint of the sector of the sect | ••             |        |             |           |             |             |             |
| White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>125433PotassiumppmASTM D5185m>20002WaterWC Method>0.1NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENONENONENONEAppearancescalar*VisualNORLNORMLNORMLNORMLOdorscalar*VisualNORLNORMLNORMLNORMLOdorscalar*VisualNORLNORMLNORMLNORMLBariumppmASTM D5185m01010MolybdenumppmASTM D5185m9<1<1010MaganeseppmASTM D5185m112022149CalciumppmASTM D5185m113129062866968PhosphorusppmASTM D5185m128111551199689SulfurppmASTM D5185m128111551199689   |                |        |             | >10       |             |             |             |
| Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>125433PotassiumppmASTM D5185m>20002WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m22018BariumppmASTM D5185m01010MolybdenumppmASTM D5185m9<1<10MagnesiumppmASTM D5185m313129062866968PhosphorusppmASTM D5185m119689577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278   |                |        |             | NONE      | -           |             | -           |
| Potassium ppm ASTM D5185m >20 0 0 2   Water WC Method >0.1 NEG NEG NEG   Silt scalar *Visual NONE NONE NONE NONE   Debris scalar *Visual NONE NONE NONE NONE NONE   Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE   Appearance scalar *Visual NORML <t< th=""><th></th><th></th><th></th><th>-</th><th>-</th><th></th><th></th></t<>   |                |        |             | -         | -           |             |             |
| Potassium ppm ASTM D5185m >20 0 0 2   Water WC Method >0.1 NEG NEG NEG   Silt scalar *Visual NONE NONE NONE NONE   Debris scalar *Visual NONE NONE NONE NONE NONE   Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE   Appearance scalar *Visual NORML <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>   |                |        |             |           |             |             |             |
| WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m22018BariumppmASTM D5185m01010MolybdenumppmASTM D5185m9<1<10MagnesiumppmASTM D5185m3131200222149CalciumppmASTM D5185m11941003911577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278  |                |        |             | _         | -           |             |             |
| Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m22018BariumppmASTM D5185m01010MolybdenumppmASTM D5185m9<1<10MagnesiumppmASTM D5185m120222149CalciumppmASTM D5185m11941003911577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278  |                | ppm    |             |           |             |             | _           |
| Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m22018BariumppmASTM D5185m01010MolybdenumppmASTM D5185m00019ManganeseppmASTM D5185m12022149CalciumppmASTM D5185m313129062866968PhosphorusppmASTM D5185m11941003911577ZincppmASTM D5185m3811454138912278  |                |        |             | -         | -           |             |             |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m22018BoronppmASTM D5185m01010MolybdenumppmASTM D5185m01019ManganeseppmASTM D5185m9<1<10MagnesiumppmASTM D5185m3131200222149CalciumppmASTM D5185m11941003911577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278  |                |        |             | _         | _           |             |             |
| Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m22018BoronppmASTM D5185m01010BariumppmASTM D5185m01010MolybdenumppmASTM D5185m01019ManganeseppmASTM D5185m9<1<10MagnesiumppmASTM D5185m3131290628666968PhosphorusppmASTM D5185m11941003911577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278   |                |        |             | _         | -           |             |             |
| Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m221018BoronppmASTM D5185m222018BariumppmASTM D5185m01010MolybdenumppmASTM D5185m00019ManganeseppmASTM D5185m9<1<10MagnesiumppmASTM D5185m313129062866968PhosphorusppmASTM D5185m11941003911577ZincppmASTM D5185m128111551199689SulfurppmASTM D5185m3811454138912278  |                |        |             | -         |             |             |             |
| Emulsified Water scalar *Visual >0.1 NEG NEG NEG   Sodium ppm ASTM D5185m  <1 0 0   Boron ppm ASTM D5185m 2 2 0 18   Barium ppm ASTM D5185m 0 1 0 10   Molybdenum ppm ASTM D5185m 0 0 0 19   Manganese ppm ASTM D5185m 9 <1 <1 0   Magnesium ppm ASTM D5185m 9 <1 <1 0   Calcium ppm ASTM D5185m 11 20 22 149   Calcium ppm ASTM D5185m 3131 2906 28666 968   Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811   |                |        |             | _         | -           |             |             |
| Sodium ppm ASTM D5185m <1  |                |        |             |           | -           |             |             |
| Boron ppm ASTM D5185m 2 2 0 18   Barium ppm ASTM D5185m 0 1 0 10   Molybdenum ppm ASTM D5185m 0 1 0 19   Manganese ppm ASTM D5185m 9 <1 <1 0   Magnesium ppm ASTM D5185m 1 20 22 149   Calcium ppm ASTM D5185m 3131 2906 28666 968   Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278   |                | scalar | visual      | >0.1      | NEG         | NEG         | NEG         |
| Barium ppm ASTM D5185m 0 1 0 10   Molybdenum ppm ASTM D5185m 0 0 0 0 19   Manganese ppm ASTM D5185m 9 <1   | Sodium         | ppm    | ASTM D5185m |           | <1          | 0           | 0           |
| Molybdenum ppm ASTM D5185m 0 0 0 19   Manganese ppm ASTM D5185m 9 <1 <1 0   Magnesium ppm ASTM D5185m 9 <1 <21 0   Magnesium ppm ASTM D5185m 1 20 22 149   Calcium ppm ASTM D5185m 3131 2906 28666 968   Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278   | Boron          | ppm    | ASTM D5185m | 2         | 2           | 0           | 18          |
| Manganese ppm ASTM D5185m 9 <1   | Barium         | ppm    | ASTM D5185m | 0         | 1           | 0           | 10          |
| Magnesium ppm ASTM D5185m 1 20 22 149   Calcium ppm ASTM D5185m 3131 2906 2866 968   Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278   | Molybdenum     | ppm    | ASTM D5185m | 0         | 0           | 0           | 19          |
| Calcium ppm ASTM D5185m 3131 2906 2866 968   Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278   | Manganese      | ppm    | ASTM D5185m | 9         | <1          | <1          | 0           |
| Phosphorus ppm ASTM D5185m 1194 1003 911 577   Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278  | Magnesium      | ppm    | ASTM D5185m | 1         | 20          | 22          | 149         |
| Zinc ppm ASTM D5185m 1281 1155 1199 689   Sulfur ppm ASTM D5185m 3811 4541 3891 2278   | Calcium        | ppm    | ASTM D5185m | 3131      | 2906        | 2866        | 968         |
| Sulfur ppm ASTM D5185m 3811 4541 3891 2278   | Phosphorus     | ppm    | ASTM D5185m | 1194      | 1003        | 911         | 577         |
|  | Zinc           | ppm    | ASTM D5185m | 1281      | 1155        | 1199        | 689         |
| Visc @ 40°C cSt ASTM D445 88.5 85.7 86.4 66.9  | Sulfur         | ppm    | ASTM D5185m | 3811      | 4541        | 3891        | 2278        |
|  |                |        |             | ~~ -      |             |             |             |





Test Package : MOB 1 Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. gravette@bentoncountystone.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Tested

Diagnosed

: 14 May 2024

: 15 May 2024 - Sean Felton

Laboratory

Sample No.

Lab Number : 06177985

Unique Number : 11029311

US 72768

Contact:

Т:

F:

Sulphur Springs, AR

Apr18/24

vpr18/24

nr18/74

Apr18/24 .