



## Renault RN700 certificate

|                |      |              |                                     |
|----------------|------|--------------|-------------------------------------|
| Identification |      | Supplier     | Wolf Oil Corporation N.V.           |
|                |      | Formula name | WOLF OFFICIALTECH 5W30 MS-F (65609) |
|                |      | ACEA         | A5/B5-16                            |
|                | 1.01 | Grade        | 5W-30                               |

|                 |      |                                         |             |
|-----------------|------|-----------------------------------------|-------------|
| Lab performance | 1.02 | Shear stability                         | 9.4         |
|                 | 1.03 | HTHS (150°C)                            | 2.9         |
|                 | 1.04 | HTHS (100°C)                            | 6.2         |
|                 | 1.05 | Kinematic viscosity 40°C                | 52.9        |
|                 |      | Kinematic viscosity 100°C               | 9.6         |
|                 | 1.06 | Noack                                   | 12.2        |
|                 | 1.07 | Calcium                                 | 2687        |
|                 |      | Zinc                                    | 1051        |
|                 |      | Magnesium                               | 0           |
|                 |      | Sulphur                                 | 0.25        |
|                 |      | Phosphorus                              | 958         |
|                 |      | Chlorine                                | 10          |
|                 |      | Molybdenum                              | 0           |
|                 |      | Barium                                  | 0           |
|                 |      | Silicon                                 | 6           |
|                 |      | Boron                                   | 70          |
|                 | 1.08 | Sulphated Ash                           | 1.1         |
|                 | 1.09 | TAN                                     | 3.0         |
|                 | 1.10 | TBN                                     | 10.1        |
|                 | 1.11 | RE6 - FKM                               | PASS        |
|                 |      | RE7 - ACM                               | PASS        |
|                 |      | RE8 - HNBR                              | PASS        |
|                 |      | RE9 - AEM                               | PASS        |
|                 | 1.12 | Foaming Seq1                            | 0/0         |
|                 |      | Foaming Seq2                            | 10/0        |
|                 |      | Foaming Seq3                            | 0/0         |
|                 | 1.13 | Foaming Seq4                            | 70/0        |
|                 | 1.14 | Low temperature Cranking viscosity(CCS) | 3930@-30°C  |
|                 | 1.15 | Low temperature Pumping viscosity (MRV) | 14700@-35°C |

|                               |      |                                               |           |
|-------------------------------|------|-----------------------------------------------|-----------|
| Lab performance (continued)   | 1.16 | Density                                       | 852       |
|                               | 1.17 | Open-vessel flash point                       | 232       |
|                               | 1.18 | Pour point                                    | -42       |
|                               | 1.19 | Copper corrosion                              | 1a        |
|                               | 1.20 | Anti-wear properties                          | 0.48      |
|                               | 1.21 | De-airing                                     | 14        |
|                               | 1.22 | Water content, %                              | <0.04     |
|                               | 1.23 | Water conten, ppm                             | 65        |
|                               | 1.24 | Base oil type & ratio                         | Gr.3 100% |
|                               | 1.25 | TOC                                           | Classe 2  |
|                               | 1.26 | MCT                                           | 9.2 / 246 |
|                               | 1.27 | Oil oxidation with Biodiesel                  | PASS      |
|                               | 1.28 | Low temperature Pumping viscosity             | 17100@-35 |
| ACEA Engine tests performance | 2.01 | EP6CDT cleanliness test                       | PASS      |
|                               | 2.02 | Seq VG low temperature sludge                 | PASS      |
|                               | 2.03 | TU3M cam wear                                 | NA        |
|                               | 2.04 | M271 black sludge                             | PASS      |
|                               | 2.05 | M111 fuel economy                             | 3.1       |
|                               | 2.06 | DV6C dispersivity                             | PASS      |
|                               | 2.07 | OM646LA Viscosity stability & oil consumption | PASS      |
|                               | 2.08 | VW TDI piston cleanliness & ring sticking     | PASS      |
|                               | 2.09 | OM646LA Biodiesel Effects                     | PASS      |

|     |      |             |    |
|-----|------|-------------|----|
| LLR | 2.10 | Renault LLR | NR |
|-----|------|-------------|----|

|                                                                     |                                   |                    |
|---------------------------------------------------------------------|-----------------------------------|--------------------|
| Renault Registration Data (to be filled by Renault's delegate only) |                                   |                    |
| Registration                                                        | Final Technical data (dd/mm/yyyy) | 30.11.2020         |
|                                                                     | Sample delivery (dd/mm/yyyy)      | 18.12.2020         |
| Certificate                                                         | Certificate serial number         | RN700-21-13        |
|                                                                     | Delivered on (dd/mm/yyyy)         | 18.01.2021         |
|                                                                     | Valid till (dd/mm/yyyy)           | 18.01.2025         |
|                                                                     | Letter reference                  | QBT7300-2021-20482 |

|                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|
| Renault: Date, Name, Signature                                                                                                |
| 18.01.2021<br>Gabriel Alexandru SERBAN<br> |

|                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supplier commitment: Date, Name, Signature                                                                                                                                      |
| I hereby certify that all data submitted in this form is correct and issues from Renault-approved Independent or Renault-certified (self-agreement process) testing facilities. |
| 18/01/2021<br><br>Kathleen Adriaenssens                                                     |