

# Status report to 80<sup>th</sup> GRBP (September 2024)

Task Force on Tyre Abrasion

On behalf of GRBP and GRPE

# Task Force on Tyre Abrasion

|                  |  |
|------------------|--|
| <b>Targets</b>   | <ul style="list-style-type: none"><li>• Develop a robust procedure for measuring the abrasion of tyres: Test conditions and methods;</li><li>• Define the acceptable uncertainty for the tyre abrasion test method(s) and assess the uncertainty of the tyre abrasion test method;</li><li>• Based on the abrasion test method, define a characterisation of relative mileage potential index;</li><li>• Evaluate the abrasion performance and tread depth reduction of a wide range of tyres available in the market;</li><li>• Define abrasion limits for tyres in order to limit the emission of microplastics to the environment;</li><li>• Develop a proposal of amendment to UN Regulation No 117 for the type approval of tyres in respect to their abrasion.</li></ul> |
| <b>Roles</b>     | <ul style="list-style-type: none"><li>• Co-chairs: United Kingdom (<a href="mailto:David.Miles@dft.gov.uk">David.Miles@dft.gov.uk</a>) and European Commission (<a href="mailto:Theodoros.GRIGORATOS@ec.europa.eu">Theodoros.GRIGORATOS@ec.europa.eu</a>)</li><li>• Secretariat: ETRTO (European Tyre and Rim Technical Organisation)</li></ul>  |
| <b>Reporting</b> | To both working parties: GRPE and GRBP<br>Adoption: GRBP   |
| <b>Web page</b>  | <a href="#">Task Force on Tyre Abrasion (TF TA) - Transport - Vehicle Regulations - UNECE Wiki</a><br>ToRs: <a href="#">TF TA Terms of Reference</a>   |

# Task Force on Tyre Abrasion: facts and figures

## Meetings



- 22<sup>nd</sup> online meeting: 12<sup>th</sup> March 2024 - <https://wiki.unece.org/display/trans/TFTA+session+22>
- 23<sup>rd</sup> online meeting: 25<sup>th</sup> April 2024 - <https://wiki.unece.org/display/trans/TF+TA+session+23>
- 24<sup>th</sup> online meeting: 29<sup>th</sup> May 2024 - <https://wiki.unece.org/display/trans/TF+TA+session+24>
- 25<sup>th</sup> online meeting: 28<sup>th</sup> June 2024 - <https://wiki.unece.org/display/trans/TF+TA+session+25>
- 26<sup>th</sup> online meeting: 6<sup>th</sup> September 2024 - <https://wiki.unece.org/display/trans/TF+TA+session+26>

## Attendees ~80



- CPs:  
European Commission, France, China, Germany, India, Japan, Norway, Netherlands, South Korea, Spain, Switzerland, UK, USA, Canada
- NGOs:  
ADAC, AVL, ETRMA, ETRTO, HORIBA, IDIADA, ITMA, JAMA, JATMA, LINK, OICA, SMMT, TRAC, TÜV Nord, UniBW., USTMA, UTAC, VTI

# Task Force on Tyre Abrasion: work progress

|                                       |  |
|---------------------------------------|--|
| <b>Work on the 2023 test campaign</b> | <ul style="list-style-type: none"><li>• Validation and correlation test campaign for C1 tyres:<ul style="list-style-type: none"><li>• Tyres selections (candidate and “reference” tyres) for correlation: done <input checked="" type="checkbox"/></li><li>• Tyres selections for alignment: done <input checked="" type="checkbox"/></li><li>• Validation test campaign on 3 on-road test centres and 4 drum test centres: done <input checked="" type="checkbox"/></li><li>• Alignment test campaign on 7 on-road test centres and 4 drum test centres: done <input checked="" type="checkbox"/></li><li>• Post-processing: done <input checked="" type="checkbox"/> (for the correlation)</li></ul></li></ul> |
| <b>Working document</b>               | <ul style="list-style-type: none"><li>• Test conditions and methods for C1 tyres: adopted <input checked="" type="checkbox"/><ul style="list-style-type: none"><li>• <a href="#">GRBP/2024/10</a> as amended by <a href="#">GRBP-79-12rev2</a> new supplement to UNR117.04 <input checked="" type="checkbox"/></li><li>• Adopted at WP.29 during its 193<sup>rd</sup> session in June 2024 <a href="#">ECE/TRANS/WP.29/2024/65</a> <input checked="" type="checkbox"/></li></ul></li></ul>   |
| <b>Market assessment for 2024</b>     | <ul style="list-style-type: none"><li>• <b>For C1:</b> conduct an extensive market assessment test campaign to inform abrasion limit development – ongoing <input type="checkbox"/></li></ul>  |

# Summary of the market assessment (indoor and on-road)

- Tyres from across ETRTO, JATMA and ITMA members.
- Tyre selection includes wide range of tyre sizes and wet grip and rolling resistance performances.
- Market assessment testing to complete in December for on road method and March for drum method.
- JRC carries out independent abrasion tests with few more tyres (6 3PMSF + 6 Normal).

|                              |        | On road | Drum |
|------------------------------|--------|---------|------|
| <b>Number of tyre models</b> | 3PMSF  | 67      | 31   |
|                              | Normal | 110     | 69   |
|                              | Total  | 177     | 100  |
| <b>Number tested so far</b>  | 3PMSF  | 64      | 19   |
|                              | Normal | 32      | 27   |
|                              | Total  | 96      | 46   |
| <b>Completion Rate</b>       | 3PMSF  | 96%     | 61%  |
|                              | Normal | 29%     | 39%  |
|                              | Total  | 54%     | 46%  |

Measurement outputs include among others: i. Abrasion rate, ii. Abrasion index relative to SRTT, iii. Tread depth loss.

# Task Force on Tyre Abrasion: Important information

- C1 tyres: ETRTO created a TF to work on evaluating the feasibility of characterizing tyres with respect to their “relative mileage potential calculated performance”. The first steps were presented to the TFTA (TA-23-2).
- C1 tyres: The ETRTO tool to verify the suitability of a given circuit to perform tyre abrasion tests is available on ETRTO website.
- The planned multi-circuit and multi-drum correlation exercise to verify the correlation between different circuits and drum facilities will be delayed - potential test centers are requested to express their interest to participate in the exercise.
- C2 tyres: ETRTO completed full on-road tests with C2 tyres. More tests will follow in 2024 with the aim of finalizing the on-road testing method proposal (TA-26-8). JASIC announced that a preliminary verification of drum tests will be completed by March 2025 at least for C2 tyres with  $LI \leq 107$  (TA-26-4).
- C3 tyres: ETRTO introduced the C3 tyre abrasion rate index vehicle method preliminary concepts (TA-24-3). JASIC carried out an analysis of the Japanese C3 market (TA-26-4) and presented the main differences between European and Japanese HDV fleet (TA-23-5).

# Task Force on Tyre Abrasion: next

## C1 tyres

- Complete the market assessment campaign – ongoing
- Develop proposal for C1 tyre abrasion limits – Working document at GRBP in **Sept 2025**
- Assess the feasibility of rating and definition of the mileage of tyres -“relative mileage potential calculated performance”- ongoing - **Feb 2025**
- Carry out a multi-circuit and multi-drum correlation exercise to verify the correlation between different circuits and drum facilities
- Full updated timeline of C1 activities can be found here: [TA-24-5](#)

## C2 tyres

- Assessment of C1 method suitability for C2 tyres – ongoing
- Propose abrasion method(s) – working document at GRBP in **Feb 2026\***
- Develop proposal for C2 tyre abrasion limits – working document at GRBP in **Sept 2027\***

## C3 tyres

- Propose abrasion method(s) – working document at GRBP in **Feb 2027**
- Develop proposal for C3 tyre abrasion limits – working document at GRBP in **Sept 2029**

\*Deadlines may be brought forward by one year should C1 methods be found to be suitable for C2

Thank you