

Status update on the development of a UN Regulation on tyre abrasion performance

Update on the work of the UNECE (GRBP/GRPE) Task Force on Tyre Abrasion – limit setting for C1 tyres

FOCUS - Event NPC 2025

Zürich, 19.06.2025 (remote presentation)

Euro 7 tyre timeline

Class	C1	C2	C3
New types from	1 July 2028	1 April 2030	1 April 2032
All from	1 July 2030	1 April 2032	1 April 2034
Non-compliant in market until	30 June 2032	31 March 2034	31 March 2036

Abrasion limits to be defined in Euro 7 tables; COM empowerment to set out abrasion limits for tyre types in Annex I to Regulation (EU) 2024/1257, referring to the work of the UN WP.29.

About TF TA

- The Task Force on Tyre Abrasion (TF TA) was established under the joint oversight of the Working Party on Noise and Tyres (GRBP) and the Working Party on Pollution and Energy (GRPE).
- Tasked to address the abrasion performance of tyres by determining a standardised measurement method which will allow for the quantification of microplastic emissions in the environment + investigate the inclusion of abrasion rate and a characterization methodology for the mileage potential index, based on the abrasion measurement method.
- Chaired by the EC and UK. Secretariat provided by ETRTO.
- Active since April 2022, with over 30 sessions completed, it's now working toward finalising the test procedures for C1 tyres and preparing a standalone UN Regulation (previously under UNR 117).
- All documents available online from TF TA UNECE wiki:
<https://wiki.unece.org/pages/viewpage.action?pageId=160694352>

Tyre abrasion testing methods developed by TF TA



©ADAC / Test und Technik

IN REAL WORLD
(On-road method)



©UTAC

LABORATORY
(Indoor drum method)

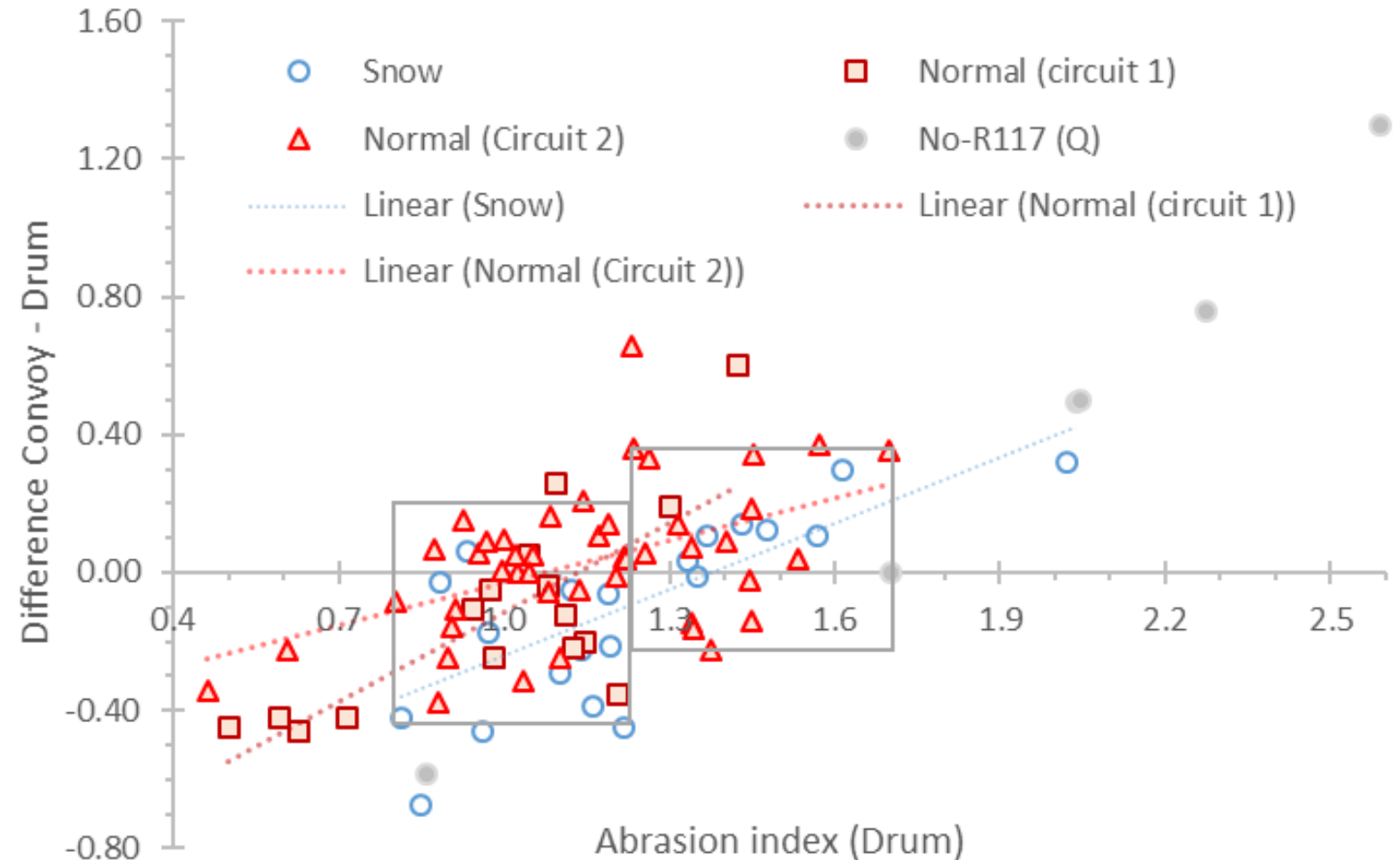
Convoy vs. Drum method

Database 20250311,
only common tyres

n=28 (snow tyres)

n=61 (normal tyres)

- Ideally the two methods should agree within their combined uncertainty. Comparisons of the two methods reveals high scatter
- Excluding high emitting tyres, the differences are ± 0.4 with a few exceptions.
- At abrasion index values > 1.2 the difference is ± 0.3 with the convoy slightly higher.
- At abrasion index values < 1.2 the difference is ± 0.3 with the convoy slightly lower.



Achieving a working document for 82nd GRBP

It is clear that concerns remain on both the measurement uncertainty and correlation between the two methods – this will require further work beyond our June deadline to resolve.

At the same time, the market assessment testing does provide us with a view of the spread of abrasion performance across the market – it should therefore be possible to take a view on limits.

Co-chairs' proposed route forward:

1. Focus on the key decision points in relation to **scope, abrasion limits and uncertainty margin handling** to agree a working document for the June deadline.
2. Continue to analyse the COVA and MA data ahead of GRBP (September) to identify potential areas of method improvement or further work needed – initial improvements could be taken on-board within an informal document for September.
3. Propose updates to the TF TA ToR for GRBP with clear timelines in relation to concrete method improvements.



Co-chairs' proposal – limits

- 1.11.13.5. The abrasion index of the candidate tyre shall be independent from the average test temperature and is calculated from the following equation:

$$AICT = \frac{ALCT}{ALRT}$$

Where:

- AICT* is the abrasion index of the candidate tyre;
- ALCT* is the abrasion level of the candidate tyre at test average temperature in mg/km/t;
- ALRT* is the abrasion level of the reference tyre at test average temperature in mg/km/t.

- 8.4. Production shall be deemed to conform to the requirements of this Regulation if the levels measured comply with the limits prescribed in paragraph 6.1. of this Regulation, with an additional allowance of ... for possible mass production variations.

Example of integration of limit into draft reg.:

1.11.13.6. The abrasion index corrected for the measurement uncertainty $AICT_{\text{corr}}$ of the candidate tyre is calculated from the following equation:

$$AICT_{\text{MUcorr}} = AICT - \text{MU}$$

Where MU is given in the **Table** (see next slide)

No need for additional uncertainty as it is the worst case. An additional MU_{COP} 0.05 could be added if any method can be used at COP regardless the method of type approval.



Summary of positions of TF TA stakeholders (where numeric limits have been proposed)

Topic	FRA	JPN	ETRTO	Co-chairs
Test method	Vehicle only	Both acceptable	Prefer vehicle	Both acceptable
Exclusions	-	Q-speed 3PMSF	Ice grip, special use, legal race	Under evaluation
Proposed limit (Normal)	1.15	~1.35	1.4	1.15 / 1.30
Proposed limit (Snow M&S)	1.15	To be confirmed	1.4	1.15 / 1.30
3PMSF allowance	+0.1	To be confirmed	+0.1	+0.05
XL allowance	+0.1	To be confirmed	+0.1	Under evaluation
UHP allowance	-	To be confirmed	+0.1	-
CoP allowance	+0.2	To be confirmed	+0.25	+0.05
Implementation steps	One	One	One	Two (Date D1)

Co-chairs' draft

1. Can we proceed on limit setting for both test methods based on current correlation?

Drafting approach: proceed with both methods, and set out a roadmap for method improvements in ToRs. Drum currently in square brackets owing to concerns from a number of participants.

2. What tyres should be in/out of scope for limit setting?

Drafting approach : requirements of UNR 117 as prerequisite. Exclude ice tyres, [exclude Q-speed 3PMSF – in brackets pending further suggestions from JASIC ahead of September], [exclude street legal race tyres (requires definition development – in square brackets for June)].

3. What tyre groupings should be used for limits?

Drafting approach : Normal, snow and special use (with blank limits). Allowances for XL, UHP, 3PMSF, [LI<77].

4. What limit values should be used?

Drafting approach : co-chair V2 limit proposals - see next slide

5. How should measurement uncertainty be accounted for within the limit setting?

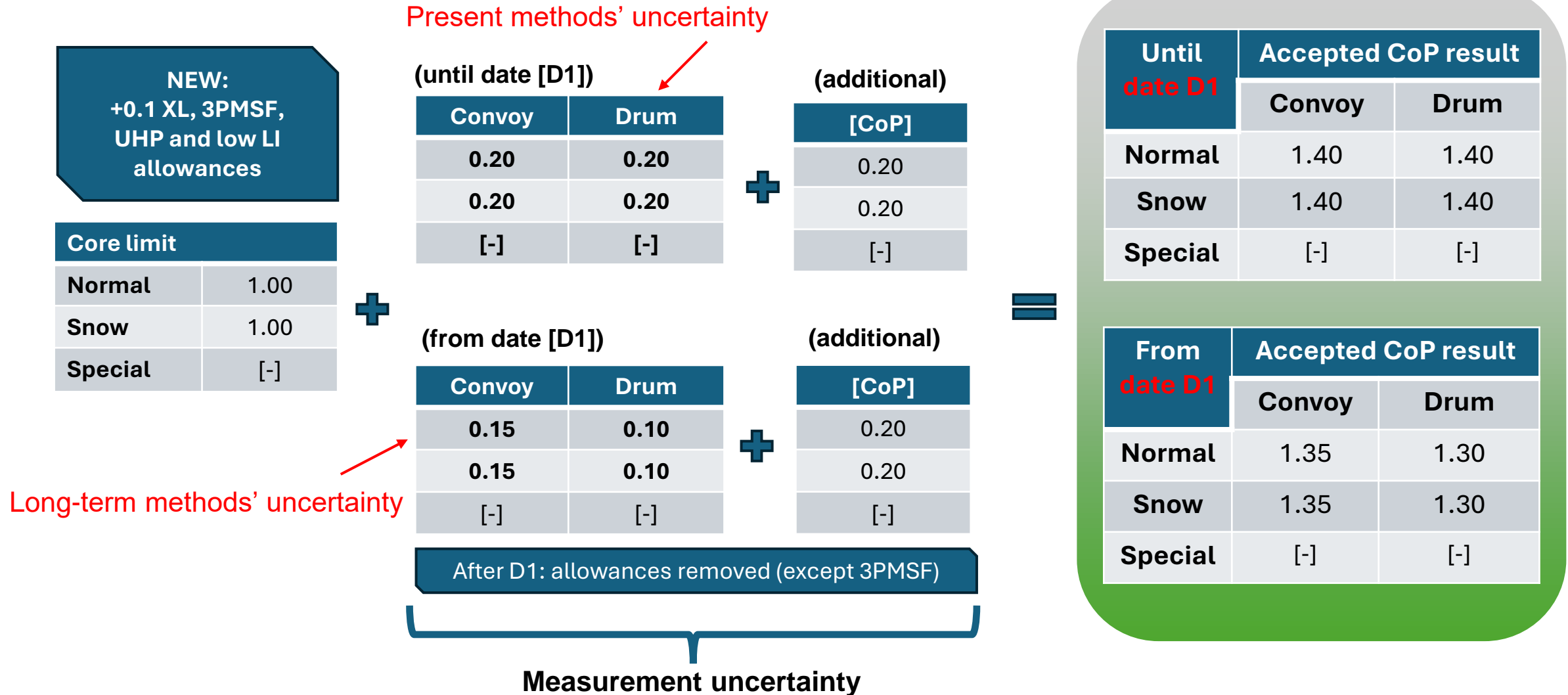
Drafting approach : a core limit with separate abrasion margin. Separate CoP allowance of 0.2

6. Can we accept a two-step approach with tightening from date D1?

Drafting approach : [a second D1 step with a long-term timeline to secure environmental benefit] [D1=2033]

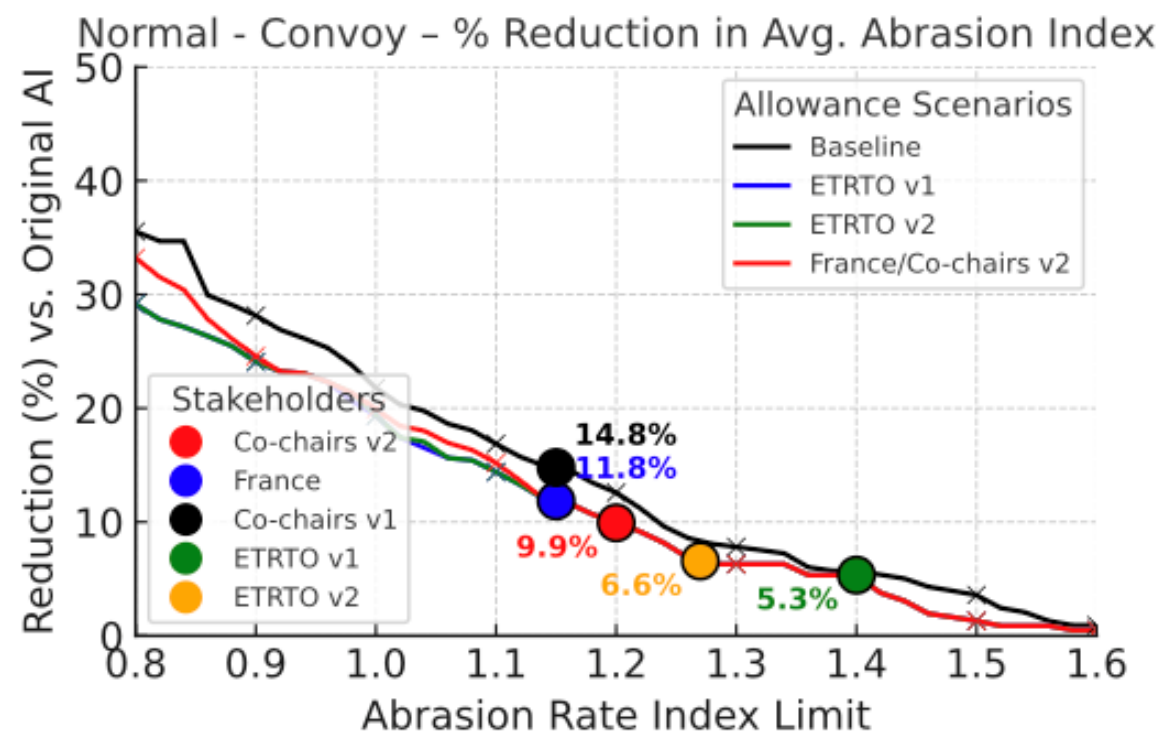
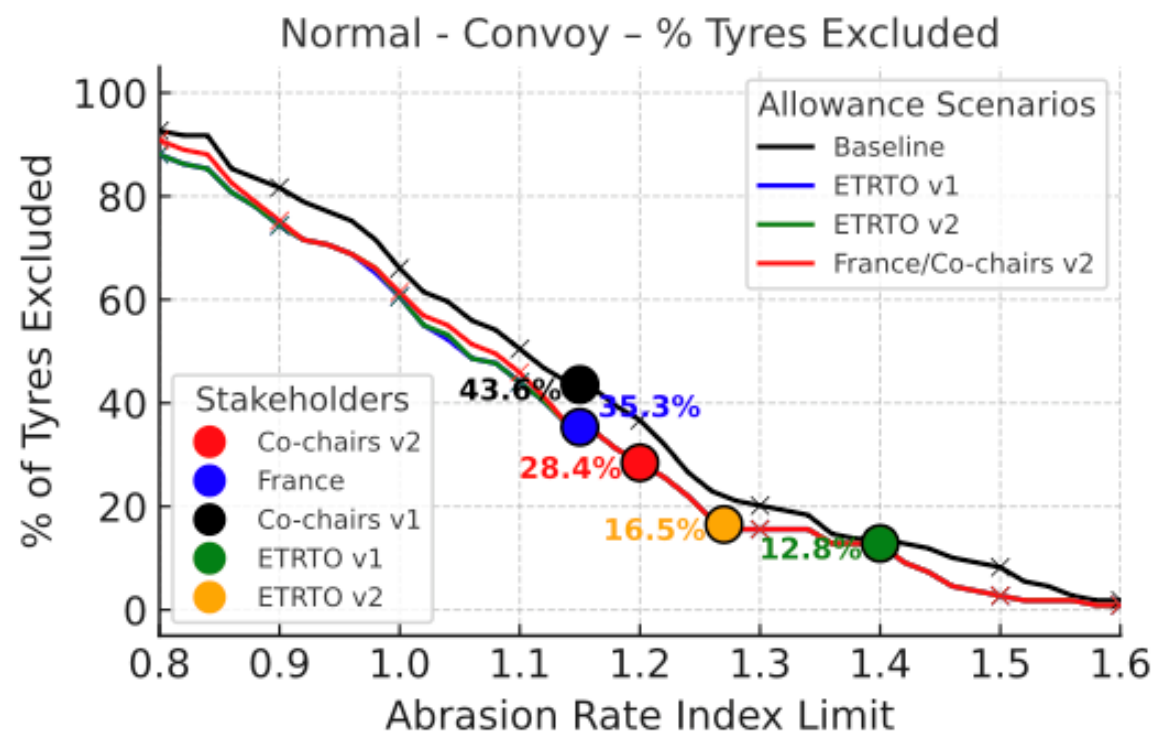


[Co-chairs' proposal (submitted to GRBP)]



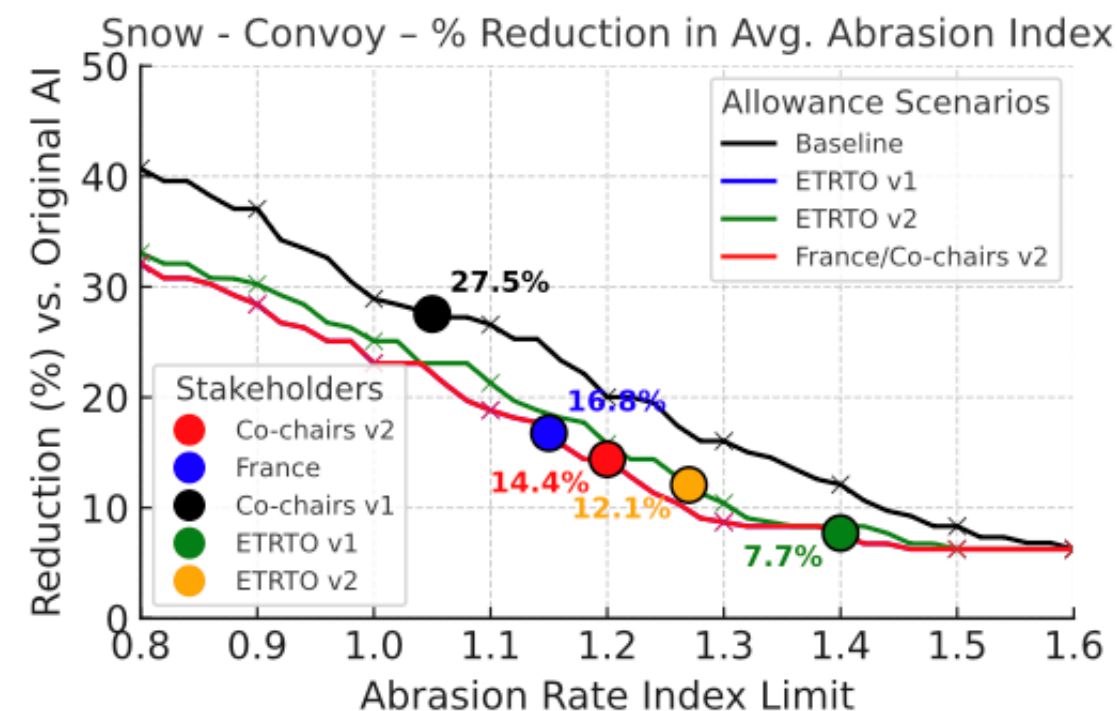
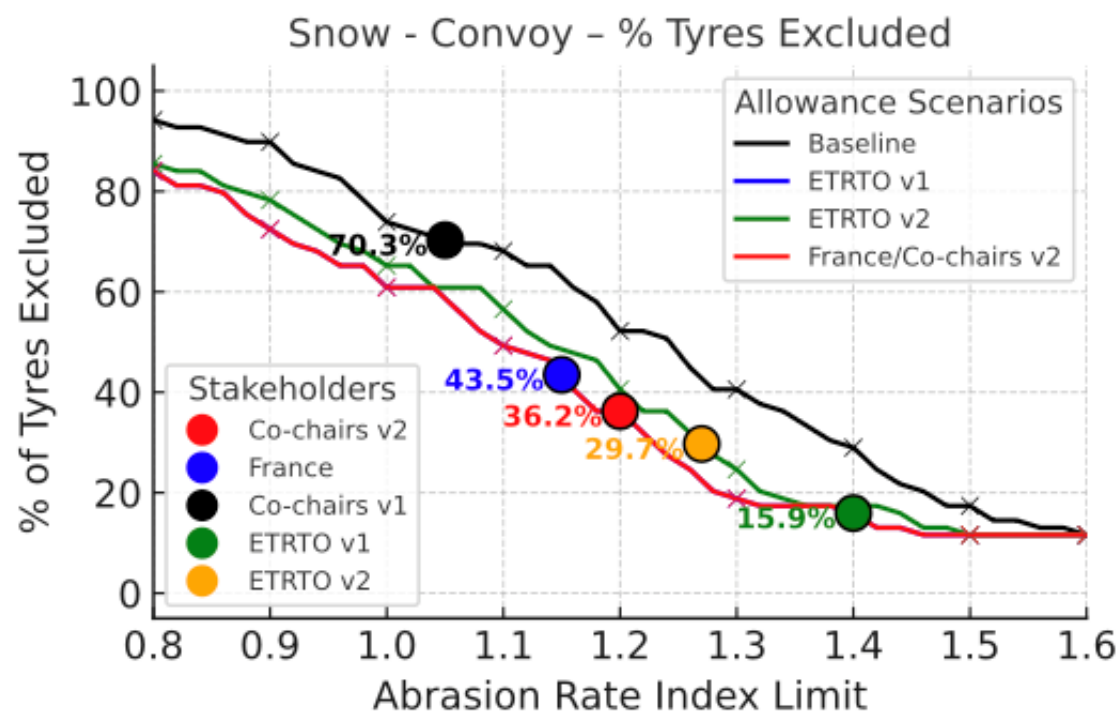
Comparison of positions

Normal tyres, convoy method



Comparison of positions

Snow tyres, convoy method



TF TA milestones

C1 tyres



- Perform the market review: 2024 and 1H 2025 (multi circuit assessment)
- Define and introduce reference tyre(s) for abrasion test in ASTM standard
- Propose abrasion limits for adoption [September 2025]
- Work on the feasibility of rating and definition of the mileage of tyres [2024-2025]

C2 tyres

- Carry out a first assessment on the method feasibility [2024-2025]
 - Propose abrasion method(s) [2026]
 - Propose abrasion limits for adoption [2027]
- Anticipation of 1 year will be evaluated depending on the C1 method(s)' suitability for C2 tyres
C2 clustering (and timeline) TBC*

C3 tyres

- Propose abrasion method(s) [2027]
- Propose abrasion limits for adoption [2029]

Thank you



vicente.franco@ec.europa.eu

© European Union 2025

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

