

**Comments from Canada and the United States on a
proposal for a supplement to the 02 series of amendments
to UN Regulation No. 30 (Tyres for passenger cars and
their trailers) (ECE/TRANS/WP.29/GRBP/2021/9)**

While this proposal is under the 1958 agreement, Canada and the United States (U.S.) are requesting additional data and information in the event of a future, similar, proposal under the 1998 Agreement, which would require ensuring compatibility with other enforcement systems. Canada and the U.S. have prepared the following preliminary list of issues and questions on the proposal to revise the definition of a radial tire:

1. Has the safety performance of these tires been technically proven to be equivalent to, or better than, comparable tires meeting the current radial tire definitions in all jurisdictions? If so, can the technical documents supporting such proof be shared? Engineering data on the safety and performance of this new architecture would be greatly appreciated.
2. Both Canada and the U.S. will need time, and additional information, to determine if these new tire configurations can meet the current “radial tire” definitions in the U.S. and Canadian federal standards, or if a definition change would be required if these tires were to be sold in North America? The current U.S. definition, in Federal Motor Vehicle Safety Standard (FMVSS) 139, is:

“Radial ply tire means a pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.”

The Canadian definition is like the FMVSS definition, and is found in Section 2 of the Motor Vehicle Tire Safety Regulations:

“radial ply tire means a tire in which the ply cords that extend to the beads are laid at substantially 90° to the centreline of the tread.”

3. How will the presence of the new architecture be detected by non-destructive testing methods?
4. As an alternative to a definition change, has the development of a new definition/category to cover these new technologies been considered? If yes, why was this approach rejected?
5. Would this definition be limited to tires for light duty vehicles or eventually applied to larger (C-type, LT, commercial truck) tires?
6. If this new definition was applied to tires other than light duty vehicle tires, would this new definition affect the ability to retread the tire?
7. Do these tires have the same failure modes as traditional radial tires? Do the failures occur at lower, equal or higher levels for comparable tires?
8. Would any aspect of tire performance be enhanced with the new technologies enabled by this new definition of radial tires, and if so, how?
9. Are different performance tests required for these new technologies?
10. Are any patent applications, granted patents or other related publicly-available documents available for this architecture? Patent disclosures may provide useful information.

11. Can samples of these new tires be made available for safety and performance tests?
12. Will this new design reduce the number of plies on comparable tire fitments?
13. What other advantages and disadvantages does this configuration create?
14. What are the views of other Contracting Parties regarding this proposal?

Background:

At the 73rd GRBP an expert from a Contracting Party submitted an informal document (GRBP-73-20e-Rev.1) proposing to amend the “radial” definition of the UN-ECE regulations. The expert stated that a tire manufacturer applied to get a type-approval in respect of a type of tire which incorporates a new architecture. It was claimed that this new architecture has the functionalities of a radial tire (mechanical decoupling of the summit and the bead), but strictly speaking, does not meet the regulatory definition of a radial structure. Specifically, the requirement that the plies "are laid substantially at 90° is not respected everywhere, especially under the summit of the tire.

The following actions have been taken so far.

- Based on R30 and R117 tests results, the French type approval authority granted (as a first step) provisional approvals to this tire type for use in France only.
- As a second step, France has been authorized by the European Commission (EC) to grant an EC type approval.
- After reviewing the informal document at the 73rd session of GRBP, the Contracting Party was invited to submit a new working document for the next session in cooperation with the European Tyre and Rim Technical Association (ETRTO). It was subsequently noted that working document ECE/TRANS/WP.29/GRBP/2021/9 was submitted for the 74th session.
