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Questions about dollies

Results of discussions with Finnish dolly manufacturers

Coupling devices of dollies

- There is a need to limit the turning angle of the fifth wheel. Maximum angle of 20° like in Sweden and Denmark would be ok in Finland in the future (now 30°). It would be better in terms of stability because with a smaller angle the fifth wheel would straighten itself easier when the combination is moving.
- Bearing under the fifth wheel should be mandatory.
- Locking of the position of the fifth wheel is needed when coupling the dolly to the semi-trailer but maybe there is no need for a requirement.

Brakes of dollies

- Value of deceleration: 50 % is demanded in Finland (centre-axle trailer). It is good to have a bigger value for a dolly than for a semi-trailer (45%) but 55 % would be too much for a dolly because the difference between the front and the rear would be too big.
- Compatibility band for dollies: The band for centre-axle trailers is used in Finland.
- EBS brakes should be mandatory for all new vehicles in modular combinations. The brakes work much better together and the extra cost for a manufacturer is small. The problem is that if there is no requirement, the customer is sometimes not willing to pay anything for better brakes.
- The dolly does not make any changes to the braking signal when it transmits the signal from the towing vehicle to the semi-trailer.
- Transmission of failure information (PIN 5): A CAN-router is able to transmit the information that tells the vehicle that has sent the failure information. How is this information handled in the towing vehicle?
- Parking brake of a dolly: There is no need for a dolly to achieve a 12 % value for dolly + semi-trailer combination because the parking brake of a semi-trailer takes care of the load of a dolly.

Stability systems

- Technically it is possible to have ESC-systems on all vehicles in a combination. The problem may be jack-knifing if the ESC of a dolly is activated and the ESC of a semi-trailer is not.
- It would be good to apply the brakes of a semi-trailer when ESC of a dolly is activated but this cannot be done by today's techniques. The information of activity of ESC- system of one of the vehicles can be transmitted in the control line.
- It is possible to adjust the side acceleration from which the system is activated. This should be done after the likely loading conditions of the vehicle are decided.
- Rear Underrun Protection System sometimes makes it difficult to install the coupling device of a towing vehicle as near to the rear axle as would be needed for a good stability.

Conspicity markings and reg 70 sign in a dolly?