Chapter 1
Summary

The intention of this section is to show how type-approval and braking legislation in general are embedded in different regulatory frameworks (EU/Brussels and UN/Geneva).

Chapter 2 contains 'Definitions and Abbreviations' used in this book.

Chapter 3 describes the various concepts, procedures and instruments of international legislation with particular emphasis on EU legislation (Section 3.3) with a broad overview how the technical harmonization for motor vehicles and their trailers is implemented by EU legislation.

Chapter 4 describes the various EU vehicle categories. In the case of normal road vehicles, these correspond with the vehicle categories as defined by UNECE "Consolidated Resolution on the Construction of Vehicles (R.E.3)" for UN Regulations such as 13, 13-H, 78, 90, 131, 139 and 140 which are all annexed to the 1958 Geneva Agreement (see Section 12.2).

Motor vehicles and their trailers (categories M, N, O) are covered by the General Safety Regulation EC 661/2009, the Framework Regulation (EU) 2018/858 and Framework Directive 2007/46/EC; see Sections 5, 6 and 7.

The General Safety Regulation (EC) No 661/2009 (see Chapter 5) has become of increasing importance in EU legislation. This Regulation has repealed 50 basic EU Directives and adopts a new approach of mandatory European legislation; see also Section 5.4. A similar approach is followed by the other two new Framework Regulations for agricultural and forestry vehicles and motorcycles; see Chapters 8 and 9.

The Framework Regulation (EU) 2018/858 and the Framework Directive 2007/46/EC are the basis for the approval of vehicles and their systems. However, Directive 2007/46/EC is repealed by Regulation (EU) 2018/858 with effect from 1 September 2020 (see Section 6.2). These regulations lay down all the basic elements of EU mandatory Type Approval. This Framework Regulation (EU) 2018/858 (see Chapter 6) is the most comprehensive regulatory instrument for vehicles like cars and commercial vehicles governing all aspects of EU Type Approval and is therefore explained in more detail in order to understand the concept of European Type Approval and its associated legal aspects.

Chapters 8 and 9 deal with the two new EU Framework Regulations regarding 'Agricultural and forestry vehicles' (categories T, C, R, S) and 'two- or three-wheel vehicles and quadricycles (categories L_1 to L_7)' respectively.

Chapter 10 indicates the consequences which “Brexit” (not realized at the time of writing of this book) will have if the United Kingdom actually leaves the EU.

Significant progress on the harmonization of vehicle standards continues to be achieved through the EU‘s participation at UNECE (see Chapter 12, especially Section 12.2). A considerable proportion of this work is linked to the important role that UN Regulations will now play in the area of motor vehicle safety through the EU General Safety Regulation and the new three EU Framework Regulations (see Chapters 6, 8 and 9).

The resultant close link between EU legislation and UN Regulations will mean that European vehicles will be increasingly manufactured in accordance with UN technical standards. Thus, for the development of technical requirements, the World Forum for Harmonization of Vehicle Regulations (WP.29) takes a leading role in the world.

The UN Braking Regulations are extensively described (see Chapters 12 to 15). The framework of these UN Regulations is represented by the three basic Geneva Agreements of 1958, 1998 and 1997 (see Sections 12.2, 12.3 and 12.5).

Chapter 14 highlights specific ‘milestones’ in the development of Braking Regulations. It includes several cornerstones of the Braking Regulations (from conventional ABS to Electronic Stability Control Systems (ESC/EVSC).

The provisions for ‘Advanced Emergency Braking Systems’ (AEBS) are described in Chapter 15.

Chapter 16 (and Section 19.14) deal with the non-type-approval PTI requirements (Periodical Technical Inspection) to ensure that vehicles are operating on public roads in an acceptable safe condition during their whole lifetime.

Further Regulations containing Braking Provisions are covered by Chapter 17.

Chapter 18 describes the new International Whole Vehicle Type Approval (IWVTA) established by UN Regulation No. 0 which is applicable for vehicles of category M_1.

Chapter 19: Automation is playing an increasing role in transportation and offers the possibility of fundamentally changing transportation. Technical provisions are being drafted to address the specificities of vehicle connectivity and automation. Although it is still uncertain how fast and how strongly automation technologies will spread through the transport sector, they are very likely to make a large impact on mobility, over the coming decades, especially when it comes to autonomous vehicles (AVs). Many

technological, regulatory and legal hurdles have to be cleared before "Automated / Autonomous and Connected Vehicles" can be put into large-scale operation. Therefore, Chapter 19 covers a topic which belongs to one of the main legislative subjects currently dealt with in Geneva (UNECE) and Brussels (EU) to meet the need of developing the missing regulations for the emergence of these kind of vehicles.

Finally, Chapter 20 lists important references and website links associated with the various chapters of this book.