



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/TRANS/WP.29/GRB/48  
27 October 2009

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

Working Party on Noise

**REPORT OF THE WORKING PARTY ON NOISE  
ON ITS FIFTIETH SESSION  
(Geneva, 1-3 September 2009)**

**CONTENTS**

	<u>Paragraphs</u>	<u>Page</u>
I. ATTENDANCE .....	1	3
II. ADOPTION OF THE AGENDA (Agenda item 1).....	2	3
III. REGULATION No. 41 – (NOISE OF MOTORCYCLES) (Agenda item 2).....	3-5	3
IV. REGULATION No. 51 - (NOISE OF M AND N CATEGORIES OF VEHICLES) (Agenda item 3)		
A. <u>Development</u> (Agenda item 3(a)) .....	6-7	4
B. <u>New sound limit values</u> (Agenda item 3(b)).....	8-9	4
C. <u>Additional sound emission provisions</u> (ASEP) (Agenda item 3(c)).....	10-14	5
V. REGULATION No. 59 - (REPLACEMENT SILENCING SYSTEMS) (Agenda item 4).....	15	6

CONTENTS (continued)		<u>Paragraphs</u>	<u>Page</u>
VI.	REGULATION No. 92 - (REPLACEMENT EXHAUST SILENCING SYSTEMS FOR MOTORCYCLES) (Agenda item 5) .....	16	6
VII.	REGULATION No. 117 - (TYRE ROLLING NOISE AND WET GRIP ADHESION (Agenda item 6)).....	17-20	6
VIII.	COLLECTIVE AMENDMENTS TO REGULATIONS NOS. 41 (NOISE OF MOTORCYCLES), 51 (NOISE OF M AND N CATEGORIES OF VEHICLES) AND 59 (REPLACEMENT SILENCING SYSTEMS) (Agenda item 7).....	21	7
IX.	EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS ON NOISE LEVELS (Agenda item 8).....	22	7
X.	INFLUENCE OF ROAD SURFACE ON TYRE ROLLING SOUND EMISSIONS (Agenda item 9).....	23-24	7
XI.	MINIMUM SOUND LIMIT VALUES FOR SILENT VEHICLES (Agenda item 10) .....	25-26	8
XII.	ENVIRONMENTALLY FRIENDLY VEHICLES (Agenda item 11) .....	27-28	8
XIII.	ELECTION OF OFFICERS (Agenda item 12) .....	29	8
XIV.	OTHER BUSINESS (Agenda item 13)		
	A. <u>Clarifications regarding Regulation No. 28 (Audible warning devices)</u> (Agenda item 13(a)).....	30-31	9
	B. <u>T&amp;E press release on United Nations noise regulations</u> (Agenda item 13(b)).....	32	9
	C. <u>Global technical regulations (gtrs)</u> (Agenda item 13(c)) .....	33	9
XV.	PROVISIONAL AGENDA FOR THE FIFTY-FIRST SESSION .....	34	9
<u>Annexes</u>			
I.	List of informal documents distributed during the session (GRB-50-...).....		11
II.	GRB informal groups .....		12

## **I. ATTENDANCE**

1. The Working Party on Noise (GRB) held its fiftieth session from 16 (afternoon) to 18 February 2009 in Geneva, under the chairmanship of Mr. Ch. Theis (Germany). Experts from the following countries participated in the work following Rule 1(a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690 and Amend.1): China; Czech Republic; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; Sweden; Switzerland; United Kingdom of Great Britain and Northern Ireland and United States of America. An expert from the European Commission (EC) participated. Experts from the following non-governmental organizations also participated: European Association of Automobile Suppliers (CLEPA); European Federation for Transport and Environment (T&E); European Tyre and Rim Technical Organization (ETRTO); International Motorcycle Manufacturers Association (IMMA); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA). Upon the special invitation of the Chairman, experts from the non-governmental organizations participated: European Tuning Organization (ETO); Fédération Internationale de Motocyclisme (FIM) and National Federation of the Blind (NFB).

## **II. ADOPTION OF THE AGENDA (Agenda item 1)**

Documentation: ECE/TRANS/WP.29/GRB/2009/2

2. GRB considered and adopted the agenda proposed for the fiftieth session (ECE/TRANS/WP.29/GRB/2009/2). The informal documents distributed during the session are listed in Annex I to this report.

## **III. REGULATION No. 41 – NOISE OF MOTORCYCLES (Agenda item 2)**

Documentation: ECE/TRANS/WP.29/GRB/2009/3, Informal documents Nos. GRB-50-02, GRB-50-03 and GRB-50-04

3. The expert from Italy, chairing the informal group on noise of motorcycles, reported on the good progress made by the experts at its informal meeting held in Geneva on 23 and 24 April 2009. He indicated that the first results of the informal group were reflected in ECE/TRANS/WP.29/GRB/2009/3. He added that four issues still remained to be solved: indication on the manufacturer's plate of the acceleration noise level, extension of the ambient temperature range, slopes and tolerance for Additional Sound Emission Provisions (ASEP) and the number of arbitrary ASEP test points. He announced the intention of the informal group to resolve these remaining issues at the next meeting and to submit to GRB a final proposal for amendments to Regulation No. 41.

4. The expert from ISO introduced GRB-50-02 proposing to exclude from the stationary testing provisions certain vehicles whose internal combustion engine does not operate under stationary conditions. The expert from France raised concerns about that exclusion and preferred to insert an alternative test procedure for such vehicles. GRB agreed to resume consideration of this subject at its next session on the basis of a new proposal jointly prepared by the experts from ISO and France.

5. GRB considered GRB-50-03 (tabled by Germany) and GRB-50-04 (tabled by India) proposing a number of amendments to ECE/TRANS/WP.29/GRB/2009/3. GRB welcomed both proposals and noted a number of comments. For the purpose of roadside enforcement testing, the experts from France, Germany, Netherlands and Norway were in favour of keeping the provisions for the stationary test including the indication of reference information on the manufacturer's plate. Other experts from Italy, the United Kingdom and IMMA considered these provisions as superfluous. Following the discussion, GRB invited the informal group to revisit this subject in detail and prepare an updated document for final decision at the next GRB session.

#### **IV. REGULATION No. 51 – NOISE OF M AND N CATEGORIES OF VEHICLES (Agenda item 3)**

##### **A. Development (Agenda item 3(a))**

Documentation: ECE/TRANS/WP.29/GRB/2009/6, Informal document No. GRB-50-02

6. The expert from ISO recalled the purpose of GRB-50-02 (see para. 4 above). GRB agreed to resume consideration of this subject at its next session on the basis of a new proposal by the experts from ISO and France for Regulation No. 51.

7. The expert from OICA introduced ECE/TRANS/WP.29/GRB/2009/6 to bring in line the requirements of Regulation No. 51 regarding the conditioning of mufflers containing absorbing fibrous materials with those of Regulation No. 59, which were subject to modification on the basis of CLEPA document ECE/TRANS/WP.29/GRB/2008/5/Rev.2 (see para. 16 below). GRB noted a number of comments and invited the experts from CLEPA and OICA to prepare updated proposals for consideration by GRB at its next session in February 2010.

##### **B. New sound limit values (Agenda item 3(b))**

8. GRB recalled its decision to start the discussion on limit values for M<sub>1</sub> category vehicles, as the monitoring process for type approvals according to Regulation No. 51 was concluded in mid-2009. In this respect, the expert from EC informed GRB of the ongoing procedure and stated that a sub-contractor would now start to analyse the data sets received during the monitoring process. He raised concerns that data delivered by the Type Approval authorities do not contain all required information, especially with regard to the vehicle weight and power to mass ratio, and volunteered to prepare a list of data sets with missing information. He expected to present the first results of this work at the next GRB session in February 2010, depending on the quality of the data sets. The expert from OICA stated that the European Automobile Manufacturers Association (ACEA) would be in the best position to provide most of the missing information. He added that some additional information would have to be provided by the Japan Automobile Manufacturers Association (JAMA), the Korea Automobile Manufacturers Association (KAMA) and the Society of American Engineers (SAE). GRB invited the experts from OICA and other associations to assist the EC in the completion of the data sets and to contact the above-mentioned associations and provide them with the missing information by December 2009 at the latest. GRB welcomed the offer by the expert from India to forward additional data sets to the expert from EC.

9. Regarding the discussion on limit values of vehicle categories other than  $M_1$ , the Chairman informed GRB that WP.29, at its March 2009 session, had invited OICA to provide, together with the technical services, additional tests results of vehicles, other than  $M_1$  category, in order to increase the number of datasets (see WP.29 report ECE/TRANS/WP.29/1072, para. 50).

**C. Additional sound emission provisions (ASEP) (Agenda item 3(c))**

Documentation: ECE/TRANS/WP.29/GRB/2009/4, ECE/TRANS/WP.29/GRB/2009/5, Informal documents Nos. GRB-50-01, GRB-50-05, GRB-50-06, GRB-50-10, GRB-50-11, GRB-50-12 and GRB-50-14

10. The expert from the Netherlands, chairing the informal group on Additional Sound Emission Provisions (ASEP), reported on the progress made during the fifteenth meeting of the group held in Flensburg (Germany), from 14 to 15 May 2009 (GRB-50-10). He introduced GRB-50-01 as a result of the informal group proposing draft amendments to Regulation No. 51 to incorporate the additional sound emission provisions. He outlined that this proposal still included a number of options to be discussed by GRB and that it could not be supported as such by the Netherlands delegation. A number of experts raised concerns that the meeting minutes in general did not exactly reflect the real discussion in the informal meetings. The expert from the United States of America stated that the little progress made by the informal group clearly showed that the exercise of testing vehicle sound emissions was extremely difficult. He voiced concerns about the accuracy and legal sustainability of the new ASEP test method, as it leaves a large range of discussion and interpretation. He preferred to withdraw the ASEP proposal.

11. GRB considered GRB-50-01 thoroughly. The expert from the United Kingdom wondered why vehicles with a hybrid drive train were excluded from ASEP. The experts from ISO and OICA explained that the test procedure for such vehicles would result in a complex test procedure and in an insufficient repeatability. For that reason, they preferred that hybrid electric vehicles be included at a later stage, once they have gained more experience with this type of vehicles. The expert from China endorsed that position. GRB noted the preference of the EC, Switzerland and the United Kingdom not to exclude such vehicles and to insert a time limited exemption only.

12. The expert from OICA gave a presentation (GRB-50-11) explaining why certain vehicles of category  $N_1$  and  $M_1$  derived from heavy commercial vehicle platforms should also be excluded from ASEP. In this respect, he suggested inserting new criteria (e.g. minimum payload and power to mass ratio) for such special purpose vehicles. On the same subject, the expert from Japan introduced GRB-50-12 presenting a counter proposal with another range of criteria. The expert from Germany suggested that another possible criterion for the exclusion of such vehicles could be the "R-point" criterion as suggested in the scope of draft Regulation on pedestrian safety (ECE/TRANS/WP.29/GRSP/2009/10) for the exemption of flat front vehicles. The experts from the EC, the Netherlands and the United Kingdom preferred to keep these vehicles in the scope of ASEP, but were ready to further discuss this issue at the next GRB session on the basis of a more detailed justification. For that purpose, GRB invited OICA to provide more evidence to exclude these vehicle categories and to prepare a concrete proposal for amendments, taking into account the proposals by experts from Japan and Germany.

13. Recalling the purpose of ECE/TRANS/WP.29/GRB/2009/4, the expert from the Netherlands introduced GRB-60-05 clarifying the proposed amendments to Annex 3 of Regulation No. 51. The proposal received some support by the experts from EC, Switzerland and the United Kingdom. The expert from Poland stated that this issue had already been discussed in the informal group and should not be re-addressed. The experts from the Czech Republic, France, Japan and the United States of America supported that position. The GRB Chairman suggested to resume consideration of this subject at the next GRB session and invited all other delegations to clarify their position.

14. The expert from the Netherlands introduced GRB-50-14 complementing GRB-50-06 and justifying an alternative ASEP as reproduced in ECE/TRANS/WP.29/GRB/2009/5. Following the discussion, GRB agreed to refer these documents to the informal group and to resume consideration of this subject at the GRB session in February 2010. The informal group was invited to prepare a final proposal for amendments to Regulation No. 51.

**V. REGULATION No. 59 – (REPLACEMENT SILENCING SYSTEMS)  
(Agenda item 4)**

Documentation: ECE/TRANS/WP.29/GRB/2008/5/Rev.2

15. Recalling the discussion at the previous GRB session, the expert from CLEPA introduced a revised proposal (ECE/TRANS/WP.29/GRB/2008/5/Rev.2) for a new 01 series of amendments to Regulation No. 59 aiming at aligning the current provisions with the new measurement method of Regulation No. 51. GRB agreed to have, at its next session in February 2010, a final review of that proposal taking into account the final position of GRB with regard to the ASEP provisions. The expert from CLEPA was invited to update the proposal with regard to the comments received under agenda item 3(a) (see para. 7 above) and to include transitional provisions necessary for the entry into force of the new series of amendments.

**VI. REGULATION No. 92 – REPLACEMENT EXHAUST SILENCING SYSTEMS  
FOR MOTORCYCLES (Agenda item 5)**

16. GRB noted that no new information had been given under this agenda item and agreed to keep it on its agenda of the next session.

**VII. REGULATION No. 117 – TYRE ROLLING NOISE AND WET GRIP  
ADHESION (Agenda item 6)**

Documentation: ECE/TRANS/WP.29/GRRF/2008/12, Informal document No. GRB-50-07

17. GRB welcomed the consent by WP.29 at its March 2009 session to set up a joint GRRF/GRB informal group on special tyre definitions. The expert from EC, chairing the informal group, reported on the outcome of the first and second meeting, held in Geneva on 23 July 2009 and on 31 August 2009, prior to the GRB session. He informed GRB that the informal group would meet again in Geneva on 16 and 17 November 2009.

18. With regard to the introductory provisions of Regulation No. 117, GRB noted that from 1 October 2009 Contracting Parties applying the Regulation shall refuse to allow the sale or entry into service of Class C1 tyres up to 185 section width which does not meet the rolling sound emission requirements. In this respect, GRB also noted that there were still some tyres in stock (i.e. "up to and including week 39") that fulfilled the sound emission requirements, but were not properly marked as such. GRB agreed that such tyres could still be sold, but should be accompanied by a certificate.

19. The expert from the Russian Federation introduced GRB-50-07 proposing amendments to the working paper STD-02-02, tabled by ETRTO and currently under consideration by the informal group. He added that his proposal had already been partially discussed in the ISO working group. GRB noted a number of comments and study reservations. GRB agreed that the informal group on special tyre definitions should consider the proposed amendments in detail at its forthcoming meeting.

20. GRB agreed to resume consideration of this subject at its next session in February 2010 on the basis of an official document jointly prepared by the EC and ETRTO, taking into account the comments received as well as the results of the informal group on special tyre definitions at its meeting in November 2009.

**VIII. COLLECTIVE AMENDMENTS TO REGULATIONS NOS. 41 (NOISE OF MOTORCYCLES), 51 (NOISE OF M AND N CATEGORIES OF VEHICLES) AND 59 (REPLACEMENT SILENCING SYSTEMS) (Agenda item 7)**

21. GRB noted that no new information had been given under this agenda item.

**IX. EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS ON NOISE LEVELS (Agenda item 8)**

22. GRB noted that no new information had been given under this agenda item and agreed to resume consideration of this subject at the next session of GRB.

**X. INFLUENCE OF ROAD SURFACE ON TYRE ROLLING SOUND EMISSIONS (Agenda item 9)**

Documentation: Informal document No. GRB-50-13

23. GRB followed with interest a presentation (GRB-50-13) by the expert from Switzerland regarding the effect of low-noise pavements in urban areas. GRB experts were invited to participate in an in-situ visit of a "nanosoft" test-track in Plan-les-Ouates in Geneva. The visit took place in the afternoon of 3 September 2009. GRB noted that a number of countries had already installed, for test purposes, such silent road pavements which proved effective in reducing noise (up to -9 dB(A)). GRB also noted that only the upper layer (up to 4 cm) of silent road pavements was different from the upper layer of regular pavement. At the present time, there were no indications for a deterioration of the physical characteristics of such pavements over the long term. However, the costs were about 1.5 to 2 times higher.

24. The GRB Chairman thanked the experts from Switzerland and ETRTO for the initiative and organization of that interesting and spectacular in-situ visit.

#### **XI. MINIMUM SOUND LIMIT VALUES FOR SILENT VEHICLES (Agenda item 10)**

Documentation: Informal documents Nos. GRB-50-08 and GRB-50-09

25. GRB noted that WP.29, at its March 2009 session, had endorsed the proposal to set up an informal group on Minimum Sound Levels for silent vehicles (MSL). The expert from Japan introduced GRB-50-08 regarding a study on approach audible systems for hybrid and electric vehicles. He also presented a number of sample sounds (steady and non-steady) for approaching silent vehicles. The expert from the United States of America stressed the need that such sounds should not only be similar to that emitted by combustion engine, but also indicate the speed, direction as well as the acceleration or deceleration of the vehicle. He recalled that this information was important, especially for visually-impaired people.

26. The expert from the United States of America reported on the work progress made in his country on silent vehicles with regard to the safety of blind pedestrians (GRB-50-09). GRB agreed with his suggestion to hold a first meeting of the informal group on MSL prior to the next GRB session, in Geneva on Monday morning 15 February 2010. For that purpose, GRB reminded the expert from the United States of America to prepare the draft Terms of Reference of the informal group for consideration at the next GRB session.

#### **XII. ENVIRONMENTALLY FRIENDLY VEHICLES (Agenda item 11)**

Documentation: Informal documents Nos. WP.29-148-11, WP.29-148-26 and GRPE-58-02

27. The GRB Chairman recalled the decision by WP.29 (see report ECE/TRANS/WP.29/1064, para. 66) to set up an informal group on Environmentally Friendly Vehicles (EFV) under the Working Party on Pollution and Energy (GRPE) in collaboration with GRB. Noise experts noted the good progress made by the informal group and considered the conclusions of feasibility study (GRPE-58-02) on developing a methodology to evaluate environmentally friendly vehicles. In this respect, GRB also noted the outcome of the discussion in WP.29 (see its report ECE/TRANS/WP.29/1077, paras. 70 and 71), as well as the statement on feasibility contained in informal documents Nos. WP.29-148-11 and WP.29-148-26.

28. In this respect, GRB invited Mr. Theis to represent GRB at the fourth international EFV conference, scheduled to be held in New Delhi from 23 to 24 November 2009.

#### **XIII. ELECTION OF OFFICERS (Agenda item 12)**

29. In compliance with Rule 37 of the Rules of Procedure (TRANS/WP.29/690 and Amend.1), GRB called the election of officers on Tuesday afternoon. Mr. C. Theis (Germany) was unanimously re-elected Chairman of GRB for the sessions scheduled in 2010.



**XIV. OTHER BUSINESS (Agenda item 13)**

**A. Clarifications regarding Regulation No. 28 (Audible warning devices) (Agenda item 13(a))**

Documentation: Informal document No. GRB-49-05

30. Recalling the discussion of this subject at the previous GRB session, the expert from China gave a presentation on the results of a number of verification tests of type approved audible warning devices and showed that these devices did not fulfil the sound pressure requirements of Regulation No. 28. GRB invited the expert from China to send his presentation to the secretariat in order to make it available on the GRB website as an informal document.

31. GRB agreed to consider this subject closely at its next session and requested the secretariat to distribute informal document No. GRB-49-05 with an official symbol.

**B. T&E press release on United Nations noise regulations (Agenda item 13(b))**

32. GRB deplored the publication in the press of articles based on a press-release issued by T&E on 31 August 2009 criticizing, without any valid reason, the development by the United Nations of new regulations on noise limit values even though such regulations are currently under discussion. The expert from T&E stated that the press-release in question had only reflected her personal opinion. However, the GRB chairman and the experts from EC, France, Germany, Italy and the United States of America strongly disapproved of the allegation made publicly that GRB was dictated to by industry. It was underlined that the sessions of the World Forum, as well as those of its subsidiary Working Parties were public forums open to all experts from accredited non-governmental organizations and delegates from governments. However, the decisions for the adoption of an amendment to an existing Regulation were taken only by delegates from the Contracting Parties applying the concerned Regulation. Therefore, GRB requested that the expert from T&E retract the press-release in question and present apologies.

**C. Global technical regulations (gtrs) (Agenda item 13(c))**

33. GRB noted SAE International paper 2009-01-1662 (entitled "Global technical regulations – No panacea, but a significant step toward harmonization") regarding the transposition of gtr No. 1 on door locks and door retention components into the national or regional legislation in the European Union, Japan and the United States of America.

**XV. PROVISIONAL AGENDA FOR THE FIFTY-FIRST SESSION**

34. The following provisional agenda was adopted for the fifty-first session of GRB, scheduled to be held in Geneva from 15 (starting at 2.30 p.m.) to 17 (concluding at 5.30 p.m.) February 2010:

1. Adoption of the agenda.
2. Regulation No. 28 – (Audible warning devices).
3. Regulation No. 41 – (Noise of motorcycles): Development.
4. Regulation No. 51 – (Noise of M and N categories of vehicles):
  - (a) Development;
  - (b) New limit values;
  - (c) Additional sound emission provisions.
5. Regulation No. 59 – (Replacement silencing systems).
6. Regulation No. 92 – (Replacement exhaust silencing systems (RESS) for motorcycles).
7. Regulation No. 117 – (Tyre rolling noise and wet grip adhesion):
  - (a) Development;
  - (b) Special tyre definition.
8. Collective amendments to Regulations Nos. 49, 51 and 59.
9. Exchange of information on national and international requirements on noise levels.
10. Influence of road surface on tyre rolling sound emissions.
11. Minimum Sound Limit values for silent vehicles.
12. Environmentally Friendly Vehicles.
13. Other business.

Annex I

## LIST OF INFORMAL DOCUMENTS DISTRIBUTED DURING THE SESSION (GRB-50-...)

No.	Transmitted by	Agenda item	Language	Title	Follow-up
1.	ASEP Chair	3(c)	E	Draft proposal for changes to the text of ECE/TRANS/WP.29/GRB/2005/2/Rev.2 (in order to incorporate the Additional Sound Emission Provisions into Regulation No. 51)	(a)
2.	ISO	2 and 3(a)	E	Proposal for draft amendments to Regulations Nos. 41 and 51	(a)
3.	Germany	2	E	German proposal for amendments to ECE/TRANS/WP.29/GRB/2009/3 (Draft 04 series of amendments to Regulation No. 41)	(a)
4.	India	2	E	India's comments on proposal for draft revision to Regulation No. 41 vide ECE/TRANS/WP.29/2009/3	(a)
5.	Netherlands	3(c)	E	NL proposal for amending Regulation No. 51-03, Annex 3: Clarification	(a)
6.	Netherlands	3(c)	E	NL ASEP proposal: Clarification	(a)
7.	Russian Federation	6	E/R	Comments and suggestions on the ETRTO proposal for draft amendments to Regulation No. 117 (STD-02-02)	(a)
8.	Japan	10	E	A study on approach audible systems for hybrid vehicles and electric vehicles – second report	(a)
9.	United States of America	10	E	Quieter cars and the safety of blind pedestrians	(a)
10.	ASEP Chair	3(c)	E	Report of the GRB ad hoc working group on ASEP	(a)
11.	OICA	3(c)	E	Exemption from ASEP of smaller commercial vehicles of category N1 and their derivatives in category M1	(a)

12.	Japan	3(c)	E	ASEP N1 Kei-car	(a)
13.	Switzerland	9	E	Low-noise pavements for urban areas	(a)
14.	Netherlands	3(c)	E		(a)

Consideration of informal documents from the 49th GRB session  
(referring to the agenda item of the current GRB session)

5	China	13(a)	E	Proposal for draft amendments to Regulation No. 28 regarding audible warning devices	(b)
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Note:

- (a) Consideration completed or to be superseded;
- (b) Resume consideration at the next session as an official document.

Annex II

## GRB INFORMAL GROUPS

<u>Informal group</u>	<u>Chairman</u>	<u>Secretary</u>
Motorcycle noise emissions (Regulation No. 41)	Mr. A. Erario (Italy) Tel: +39 06 4158 6228 Fax: +39 06 4158 3253 E-mail: antonio.erario@mit.gov.it	Mr. N. Rogers (IMMA) Tel: +41 22 920 2123 Fax: +41 22 920 2121 E-mail: nickrogers@immamotorcycles.org
Additional Sound Emission Provisions (ASEP)	Mr. B. Kortbeek (Netherlands) Tel: +31 70 339 4526 Fax: +31 70 339 1280 E-mail: boudewijn.kortbeek@minvrom.nl	Mr. H.P. Bietenbeck (OICA) Tel.: +49 221 90 32 409 Fax : +49 221 90 32 546 E-mail: hbietenb@ford.com
Special Tyre Definitions	Mr. W. Schneider (EC) Tel: +32 2 2965260 Fax: +32 2 2969637 E-mail: wolfgang.schneider@ec.europa.eu	Mr. I. Knowles (EC) Tel: +32 2 2957680 Fax: +32 2 2969637 E-mail: ian.knowles@ec.europa.eu
Minimum Sound Levels for silent vehicles (MSL)	<u>1/</u>	<u>1/</u>

Note:

1/ to be determined.

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