

**1<sup>st</sup> Informal meeting: GTR motorcycle braking – 03/07/16-17**

**Participants:**

Canada : Messrs Davis, Bergevin  
USA : Mr Soodoo  
IMMA : Messrs Cart, Chesnel, Daddi, Dutrieux, Honda, Rogers, Stocker

**1. Progress report of action**

Noted : Canada had sent the draft report of the Phase 1 testing to NHTSA for review  
: The draft report was circulating inside the agency and the review would last several weeks  
: Phase 2 of this study would start by September and would involve 2002, 2003 and 2004 models.  
: An equivalent number of motorcycles (4-6) would be used for Phase 2.  
: The report of Phase 2 would then be transmitted to NHTSA by early/mid 2004  
: Once published, comments on the report could also be expected from the public, Congress, and consumer organizations.

**2. Discussion on process with developing the GTR**

**2.1 General**

Noted : NHTSA confirmed an increase of fatalities in the USA  
: The US Congress was putting a high degree of pressure on NHTSA for delivering practical solutions.  
: NHTSA wanted to know which other Administrations might want to participate in the Informal group.  
: IMMA said that the administrations of Italy, France, Canada, UK, USA and Germany had so far shown an interest in the GTR but not necessarily in the Informal group  
: IMMA(JAMA) would ask the Ministry of Transport if they wished to participate in the project.  
: Canada was currently working on a GTR development for car door locks and their experience was that philosophical differences were difficult to resolve without a focus on performance requirements.  
: IMMA's reminder that regulations were based on defining the minimum level of performance requirements

**2.2 The Canadian Consultation procedure :**

Noted : There would be an informal communication with the stakeholders (industry, consumers) and a note would be added to the Regulatory plan  
: Once the GTR was available, the rule-making procedure was as follows:

- Presentation of the proposal in the Canada Gazette (official Government publication) followed by a 75-90 days consultation period.
- Transport Canada's response to the comments
- Publication of the GTR content in the Canadian regulations

  
: Technical Standard Documents (TSDs) was the means by which Canada incorporated the US regulations into their national law.  
: It was Transport Canada's long term objective that GTRs would replace the need for TSDs.

**2.3 The USA Consultation process**

Noted : The USA procedure was as follows:

- The project would be referenced in the table of Federal Register Items Seeking Public Comment
- A Comment period closing date would be defined
- NHTSA was not be forced to respond to each of the comments

- NHTSA had to answer the comments collectively in the Preamble to the published Final Rule
- In the event of a continued disagreement with the Final Rule, the petitioner had a further 45 days to petition for Reconsideration supported by new data and argumentation
- The NHTSA board would then decide if the new petition would be retained

## 2.4 The procedure for approving the GTR

Noted : It was not yet clear how the national or Regional (e.g. EU) consultation processes would interact with the GTR development process. On the one hand it was necessary to fulfil such requirements: on the other hand it would not be practical if the national consultations only started once the GTR text had been approved by AC3; because, logically, such consultations could result in the need to reconsider the GTR text.

: FEMA's report that there was an active discussion going on between the EU institutions in order to find the most practical means of creating technical regulations

: The reasoning behind the GTR text had to be recorded at the GR level, for inclusion in the Technical report to AC3.

: It was expected that a GTR would be implemented as the next amendment to the equivalent ECE Regulation and thus would become part of the regional and national legislation in the appropriate Contracting Parties

: It was not yet clear how the layout constraints for GTRs would impact the format of ECE, regional or national regulations.

Agreed: AC3 would be asked to consider the following procedure:

1. Contracting Parties would start the national/regional consultation process after the appropriate GR had agreed the text of the GTR
2. Proposals arising from the national consultations would be considered by the GR concerned
3. The final text would then be sent to WP29 and AC3. Following this approach, the document would, in principle, be politically and technically acceptable.

: After this procedure, once approved by AC3, it would be reasonable to expect that any subsequent discussion would be a formality. (For example, the final GTR text from AC3 could be published as a Final Rule in the USA.)

## 3. Accident Data collection

Noted : Canada presented an overview of the current North American statistics *(Annex 1)*

: IMMA presented a short overview of the latest developments in the MAIDS project, which used the OECD Methodology. It was intended that results on braking issues would be available by the year end.

: The USA stated its intention that a new, all-vehicle-types study would start in 2003 for a period of 2-3 years based on a methodology similar to that of the OECD.

: The USA rider organisation the AMA supported the use of the OECD methodology in the forthcoming USA project.

: The general problem with the existing statistics was that there was little or no direct exposure data and the reasons behind the accident patterns remained a matter of speculation.

: The Informal group would need to define what to look for. It was important to know how the statistics were related to the in-depth causation studies

: Comparison between Canada and Europe would be difficult in terms of vehicle types, traffic conditions, the use of helmets and protective clothing etc.

Agreed: Canada would ask the public insurance institutions in Canada for any suitable data.

: IMMA (JAMA) would ask IRTADA (The Institute for Traffic Accident Research and Data Analysis) for access to their national database.

: The USA (NHTSA) would obtain a copy of the Hurt database so that IMMA could make a parallel analysis with the MAIDS data.

: IMMA would generate a list of questions, based on the detailed MAIDS analysis, to be answered by the administrations from their non-published databases

: The USA (NHTSA) and FEMA –for EU- would look for official Cost Benefit Analysis guidelines.

: The group would look for any specialised accident studies on motorcycle braking.

#### **4. Details of Phase1**

##### **4.1 Background information**

Noted : Canada used a self-certification approach and they therefore had no official test house.  
: The now privately operated PMG had been government owned in the past but was now used for industry testing on a private contract basis.  
: PMG had been contracted to carry out the project

##### **4.2 Technical discussion**

Noted : The Phase1 compliance reports would be released once approved by NHTSA.  
: Between each test, new OEM parts had been installed on each motorcycle, with the exception of the C1 tyres.  
: The burnishing had been made by the supplying dealers.  
: IMMA queried the accuracy of the optical system for measuring stopping distances when the motorcycle was pitching during braking because manufacturers had experienced problems. T. Canada would consider this during the Phase 2 testing.  
: IMMA(JAMA) queried the loading for the laden tests using the Japanese regulation.  
: Canada thought that there had been a misunderstanding and would check this point  
: The USA pointed out that even with a defined skid number, there could be variations in the peak coefficient of friction values. Testing showed that there could be a variation in maximum performance results of about 3-5% on the same surface. Such a variation would only be significant if the brake performance was very close to the regulatory limit.  
: For maximum performance tests, IMMA explained that what was important was to determine the lock point for a specific pair (bike, surface) on a clean dry surface, which became a fixed point for the day of testing. The wind and the drivers were other sources of variation.  
Agreed: Canada would detail the ways the brake systems had been modified or disconnected during the Phase 1 in the report  
: The skid number would be included in the GTR, as well as the method of testing it..

#### **5. Interaction GRRF - GRSG**

Noted : Canada had recently had problems in defining 3-wheeled vehicles, in particular sports cars, and the results were not harmonised with, for example, the EU  
Agreed: The problem of defining 3-wheeled vehicles would be reviewed once GRSG had completed its discussions

#### **6. Review of the current commercialised systems**

Noted : the following explanation of the current brake systems and layouts:

##### **Definition of system components and operation**

<b>System Component</b>	<b>Hydraulic</b>	<b>Mechanical</b>	<b>Operation</b>
Brake	Caliper + disc	Drum	
Transmission	Hose + fluid	Cable	
Control	Lever + master-cylinder	Lever	Typically: Front : Right hand operation Rear : Right foot operation OR Left hand operation when there is no clutch lever
ABS			automatically controls wheel slip to prevent wheel lock by

			monitoring wheel speed and an automatic modification of the transmission mode
--	--	--	---

#### Definition of typical brake system layouts

The current layouts are defined in relation to the regulatory requirements. With the exception of the split brake system allowed in the USA, each motorcycle has to have two independent controls for activating part or all of the brake system. This is achieved using variations of two basic layouts:

**1. The conventional layout:** the front brake operated by a lever on the right of the handlebar and the rear brake operated by a foot lever.

**2. The combined brake system layout:** a combined brake consisting of one disc on the front wheel linked to a disc on the rear wheel such that they are both operated by the action of the foot lever, with a secondary brake consisting of one disc on the front wheel, operated by a lever on the right of the handlebar

**A split brake system layout:** the same control operates two independent brake systems. Each system may operate on one wheel or as a combined brake system. Under the USA regulation two independent controls are not required. (Such systems are universally used in passenger cars. Because of the regulatory requirement to have two independent controls, such systems are not used on motorcycles, although one manufacturer has a system which is very similar in concept.)

#### **7. Revised Draft GTR Development Table**

Noted : the original proposal documents submitted by IMMA to GRRF (Informal 15 of 51/GRRF)

: the Draft GTR Development Table document circulated by Canada *(Annex 2)*

Agreed: the conclusions reached in the discussion of the Canadian document which IMMA would reorganise into a sequence which reflected the order prescribed for the GTR *(Annex 3)*

#### **8. Next meeting**

Agreed: The next meeting of the informal group would be held in February/March

: Canada would investigate the possibility of obtaining a room in London, to simplify travel

: IMMA would investigate the possibility of a room in Brussels

P Chesnel