

**REPORT OF THE COMMITTEE APPOINTED BY GOVERNMENT OF INDIA,  
MINISTRY OF ROAD TRANSPORT & HIGHWAYS TO CONSIDER SAFETY  
OF OCCUPANTS OF 3-WHEELER AUTO RICKSHAWS IN COMPLIANCE TO  
ORDER DATED 24.02.2012 OF HON'BLE HIGH COURT OF KARNATAKA IN  
M.F.A. No.12034/05 (MV)**

---

The Hon'ble High Court of Karnataka at Bengaluru gave the following direction to the Central Government in their order dated 24<sup>th</sup> April, 2012 in M.F.A. No.12034/05 (MV) dated 24.02.2012:

"In short, it appears to me that the report of the committee is more farcical and therefore the Central government will be well advised to constitute a committee of technical experts in the field of automotive technology, so as to address the safety of passengers in these 3 wheelers, as also the capability of the said vehicle to ply on roads as well as state and national highways, keeping in mind the relevant factor as to how this vehicle passed the homologation test. Perhaps there may be a need to review the said test itself. It is needless to state that if the report of the committee points to certain inadequacies and infirmities, the rules governing 3 wheeler auto rickshaws plying on roads will also have to be suitably amended.

Central government is directed to put into effect the order of this court."

In compliance of the above order, Government of India in the Ministry of Road Transport & Highways constituted a Committee consisting of the following vide their office order No.RT-11021/01/2011-MVL dated March, 23, 2012 read with corrigendum dated April 13, 2012:

i)	CEO & PD, NATRIP, New Delhi -	Chairman
ii)	Director, ARAI, Pune-	Member
iii)	Director, iCAT, Manesar -	Member
iv)	Director, CIRT, Pune -	Member
v)	Director, VRDE, Pune -	Member
vi)	Transport Commissioner, Maharashtra-	Member
vii)	Transport Commissioner, Karnataka -	Member
viii)	Transport Commissioner, Gujarat-	Member
ix)	Executive Director (Technical), SIAM, New Delhi	Member
x)	Director(RT), Ministry of Road Transport & Highways	Convenor-Member

2. Composition of the Committee was reviewed by the Ministry consequent upon Shri Nitin R. Gokarn taking over charge of the CEO&PD, NATRIP w.e.f. 14.9.2012. However, since the Committee under Shri Ambuj Sharma, Joint Secretary, Deptt. of Heavy Industries holding additional charge of CEO&PD, NATRIP had already done substantial work, Ministry of Road Transport & Highways decided to continue Shri Ambuj Sharma to head the Committee vide Order dated 19.10.2012.

3. The first meeting of the Committee was held on 16.04.2012. The Committee formed two Sub Groups, as follows, for an in-depth examination of all relevant issues:-



- i) **Sub Group-I** headed by Shri Shrikant Marathe, Director, ARAI was set up to review the existing provisions of CMVRs relating to homologation and also the current certification procedure. The sub-group was to make recommendations for improvement in the safety standards as well as certification procedure. The Sub Group-I comprised of following:

1. Shri Shrikant Marathe, Director, ARAI	-	Chairman
2. Sh. U.K.Bhatt, GM, iCAT	-	Member
3. Sh. D.P. Saste, Head (Safety and Homologation)-		Member
4. Sh. S.U.Khan, Tech. Officer, VRDE	-	Member
5. Sh. Vinod Kumar, Scientist 'C' VRDE	-	Member
6. Sh. Pankaj Karan, Manager, SIAM	-	Member

- ii) **Sub Group-II** headed by Shri U. D. Bhargava, Director (RT) was to study whether the three wheelers are fit to ply on the State Highways as well as National Highways and whether the plying of three wheelers on the highways poses a safety hazard. The Sub-Group-II comprised of the following:

1. Sh. U.D.Bhargava, Director (RT), MoRTH	-	Chairman
2. Sh. R.P. Khandelwal, CGM (RS), NHAI	-	Member
3. Sh. V.N.More, Transport Commissioner, Maharashtra	-	Member
4. Sh. T.Sham Bhatt, Transport Commissioner, Karnataka	-	Member
5. Sh. J.P. Gupta, Transport Commissioner, Gujarat	-	Member
6. Sh. Atanu Ganguly, Director, SIAM	-	Member

4. The second meeting of the Committee was held on 10.7.2012 to consider the reports submitted by Sub Group-I and Sub Group II.

4.1 The Committee observed that the Sub Group-I had not clearly brought out the tests or specifications which were adequate or which need to be further improved. The Sub-Group was requested to submit its clear recommendations in this regard within the next ten days.

4.2 The recommendations made in the report of Sub Group-II were considered and adopted with some editorial changes.

4.3 In the meeting held on 10.7.2012, with the permission of the Committee, a presentation on the safety features of a new category of vehicles proposed for inclusion in CMVRs, namely quadricycle, was also organized. The Committee was informed that this particular vehicle proposed to be brought out under the category of 'Quadricycle' had almost all the safety features of the 3-wheeler auto rickshaw and, in addition, some safety features over and above auto rickshaw. This vehicle had a close body structure with lockable doors which would prevent overloading; it had a hard top and safety belt for driver as well as for other occupants, both in the front seat as well as in the rear seats; two headlamps to enhance front visibility; proper signaling devices and wiper; closed luggage space incapable of being misused to accommodate passengers. Since it is a 4-wheeled vehicle, it may have higher stability as compared to 3-wheeled vehicle. Most importantly, while there are currently no crash standards for 3-wheeler auto rickshaws, the vehicle



sought to be brought out under the new category of quadricycle complied with most of the crash standards prescribed for M1 category vehicles viz. the passenger cars.

4.4 In view of the above considerations, the Committee recommends that the Government may expedite its consideration and decision on the proposal for notification of the quadricycle under CMVRs because, if the proposal is found to be acceptable, it may turn out to be an alternate solution for low-cost intra city mobility.

4.4.1 The Committee notes that the above recommendations would naturally be subject to setting up of new norms, including safety norms, for such a category of vehicles, which will be applied as per the prescribed procedure for the same.

4.5. In the meeting held on 10.07.2012, the Committee also decided to visit a few locations in the country to see the extent of compliance to existing provisions of CMVRs before submitting its report.

5. The Committee visited Bengaluru on 27.7.2012, Pune on 9.8.2012 and Delhi (Burari) on 28.8.2012 to see the extent of compliance to the existing provisions of safety related features of the auto-rickshaw. The Committee also visited RTO offices located in Pune, Bengaluru and Delhi.

6. Third meeting of the Committee was held on 26.09.2012. The revised report of Sub Group-I was discussed in detail. The Committee agreed with the observations made in the report and also accepted the suggestions made by Sub Group-I in its report.

6.1 The Committee considered and adopted the report on site visits to Bengaluru, Pune and Delhi.

6.2 The Committee also considered the suggestions submitted to it during its Pune visit by the Pune City Auto Rickshaw Federation.

7. The observations and recommendations of the Committee are as under:-

7.1 **Existing provisions of Central Motor Vehicle Rules, 1989 (CMVR) relating to homologation and the current certification procedures**

This aspect was examined by Sub Group I set up by the Committee under the chairmanship of Shri Shrikant Marathe, Director, ARAI. The terms of reference of the sub-group were as given below:

- To review the existing provisions of CMVR related to homologation and current certification procedure.
- To make recommendations for improvement in safety standards as well as certification procedure.

7.1.2 **Methodology**



The sub-group held its meeting on 4<sup>th</sup> May 2012 at ARAI. As per the Terms of Reference (ToR), the sub group reviewed the existing provisions under CMVR. Representatives of Test Agencies shared their testing and approval procedures and practices. The members took into account some research papers and study reports related to road safety and accident analysis in the context of 3 wheeler passenger vehicles. The sub-group also examined the specific recommendations of 'Report on 4 'E's of Vehicle Safety – Engineering (Vehicles)' for the future safety norms as prescribed for 3 wheelers in the light of specific focus on driver and occupant safety.

### **7.1.3 Existing Provisions and approval standards in CMVR and future safety standards**

To obtain homologation (Type Approval Certificate) of any vehicle model is the primary responsibility of vehicle manufacturer. For this purpose, the manufacturer can approach any one of the seven testing agencies notified in Rule 126 of CMVR. Broadly, the following steps are followed :

CMVR,1989 (as amended from time to time) mandates that all motor vehicles, including 3 Wheelers (Passenger or Goods carrier), shall comply with the notified rules & regulations.

- The technical requirements related to construction and approval of motor vehicles are covered under rules 93 to 126 of CMVR.
- The specific requirements under these rules for approval of a 3-wheeler are tabulated in Annexure-I. This Annexure also highlights the need for improvement in some of the existing safety standards.
- As per rule 126, a prototype of the vehicle model is required to be submitted to any one of the testing agencies specified therein.
- The test agency checks and verifies the compliance to each rule by conducting all such tests as are necessary. Test agency also verifies and approves the vehicle specifications.
- A compliance certificate is then issued to the vehicle manufacturer after successful compliance to all the stated requirements.
- In general, these rules/ test standards, which are mandatory under CMVR can be classified under three broad categories viz :
  - Safety standards
  - Performance standards and
  - Environmental / Pollution related.
- For the approval of 3 Wheeler, there are approximately 23 numbers of safety rules, which are highlighted in Annexure-I.
- Manufacturer is responsible to produce and sell vehicle model complying to the approved specifications only. Control of vehicle after its registration is beyond the purview of test agencies. Enforcement of provisions of MV Act, CMVR, State MV Rules, notifications etc. thereafter relating to maintenance of the vehicles comes in the jurisdiction of State Transport Departments.



**7.1.4** Government of India has taken steps to introduce additional safety and emission requirements from time to time. Summary of new rules brought in since the year 2005 is at **Annexure-II**.

**7.1.5** In future, the following new requirements are planned to be introduced and implemented, in the next 2-3 years, in a phased manner:-

- Electro Magnetic Compatibility (EMC) Traction Batteries used in Battery Operated Vehicles
- Revision in existing standards related to:
  - Controls and Tell Tales
  - Lighting and Light signaling devices
  - Brake hose
  - Brake performance
  - Speedometer requirements
  - Safety Glazing
  - Rear view mirror specifications

**7.1.6** The report on 4 'E's of Road Safety- Engineering (Vehicles) highlights that future standards should be aligned with EEC/ ECE international regulations. Accordingly, standards should be brought for Driver Seat and Passenger Seat for 3 wheelers.

**7.1.7 Adequacy of homologation (Type Approval) procedure**

The test agencies confirmed that they follow above procedure for approval of all vehicle models, including 3-wheelers. These procedures adequately cover the third party certification system to which India subscribes.

Sub-Group-I examined adequacy of the procedure under MV Act and CMVRs and recommended that, considering the comprehensive, objective and systematic nature of it, there is no need to amend Motor Vehicles Act/ CMVR regarding homologation / type approval procedure. The Committee is in agreement with findings of the Sub-Group.

**7.1.8 Adequacy of safety standards**

The technical requirements, which are currently notified for approval of 3-wheelers, have been examined, in the light of specific context and orders of Hon'ble High Court of Karnataka. Adequacy with respect to occupant protection and possible improvements in the safety standards have been specifically examined. Representative from Vehicle Research & Development (VRDE), DRDO, Ahmednagar, put up following points with respect to road accidents for consideration of the committee:

- As per Report Published by MoRTH- Transport Research Wing, New Delhi dated 26th December 2011 on the Road Accidents in 2010 (Page No. 8, Para 8.1) the accident data in terms of involvement by Vehicle type is as under:

**Share of Different Vehicles in total Road Accidents, Fatal Accidents, Persons Killed and Persons Injured (2010)**



Parameters	Two wheelers	Auto rickshaws	Cars	Buses	Trucks, tempos, tractors and other articulated vehicles	Other motor vehicles	Other Vehicles/ Objects
Accidents	23.8	7.3	21.8	9.5	23.3	7.8	6.6
Fatal Accidents	19.1	4.7	19.9	9.9	29.4	9.8	7.9
Persons Killed	18.3	4.7	19.2	10.3	29.6	10.2	7.8
Persons Injured	21.9	8.2	22.7	12.5	21.5	8.0	5.1

Amongst all the vehicle categories, two-wheelers accounted for the highest share in total road accidents (23.8%), followed by trucks, tempos, tractors and other articulated vehicles (23.3%), cars, jeeps and taxis (21.8%), buses (9.5%) and last is auto rickshaws (7.3%) and persons killed in auto-rickshaw is 4.7%.

- Regarding rollover safety of 3 wheelers, a technical paper by S. Mukherjee, D. Mohan & T. Gavade of IIT, Delhi on "Roll over stability of three wheeled vehicles" concludes that the shield mounted on chassis of the three wheeled vehicle (TWV) impacts the ground and does not allow TWV to tip, except when a depression is encountered on a turn, the shield behaves like an out trigger.

**7.1.9** The Committee considers that 3-wheeler existing designs are considerably less prone to toppling and rollover accidents. In order to enhance road safety, the sub-group also examined the following points which have been specifically considered:

- Whether approval requirement should include roll over protection
- Whether requirement for fitting door should be introduced
- Whether driver and passenger seat dimensions should be specified
- Whether safety belt should be fitted
- Whether performance requirements for various safety components should be enhanced
- Whether there should be maximum speed restriction (say 50- 60 kmph)

Views of the Committee on the above points are given below:

**I. Whether approval requirement should include roll over protection**

There are chances of vehicle tip over. In such cases, soft top or hard top would not make any difference for the occupant safety. In case of roll over, the hard top would provide better protection. However, roll over does not seem to be normal phenomenon in 3 wheeler accidents on account of their stability. In view of these factors, the Committee is of the view that there is no need for inclusion of roll over test for 3- wheelers.

**II. Whether requirement for fitting door should be introduced**



Fitment of door would certainly add safety to the occupants. However, the existing structures will not be suitable for fitting fixed doors. Also, fitment of doors would adversely affect the ventilation, interior illumination etc. Enclosed designs and small interior space would result in claustrophobic vehicle interiors. Therefore, the Committee is of the view that details of specifications for the doors need to be worked out by Automotive Industry Standards Committee (AISC); changes, if any, needed and their impact on safety after careful evaluation of the above.

**III. Whether driver and passenger seat dimensions should be specified**

Presently, there are no specific requirements related to minimum seat dimensions, leg space, etc. Such requirements should, therefore, be introduced. The Committee recommends that the work of prescribing technical standards for 3-wheeler driver seat and passenger seat may be taken up by AISC.

**IV. Whether safety belt should be fitted**

Seat belt will enhance the safety of the occupants. Considering that 3 wheelers are used for slow moving urban transportation for short distances, use of seat belts by the passengers is really doubtful. Driver seat should however be fitted with safety belt. AISC should work out technical standards for this purpose.

**V. Whether performance requirements for various safety components should be enhanced**

Existing safety standards for various safety components were recently revised for their alignment with ECE/ EEC regulations. Further, revision of following standards will be implemented in due course of time:

- Controls and tell tales (functionality of various safety devices should be clearly indicated to the driver. Additional symbols to be added for driver's assistance)
- Lighting and light signaling devices (new generation head lamp devices, which are energy efficient and improved illumination to be included)
- Brake hoses (additional performance tests to be included)
- Brake performance
- Speedometer calibration
- Safety glazing (for better visibility, breakage strength and other important physical parameters of glass)
- Rear view mirror specifications (performance requirements for rear vision, weather-proofness, mounting arrangements etc to be improved)
- Electro Magnetic Compatibility (EMC) (control on radiated emissions and immunity to external disturbances to be enhanced)

The details are explained in **Annexure-I**.



The Committee further recommends that in future, as and when next revision is taken up, the technical panels should examine whether the light intensity requirements for head lamps are adequate in the Indian context.

**VI. Whether there should be maximum speed restriction (say 50- 60 kmph)**

Existing 3 wheelers have maximum design speeds in the range of 45 to 65 kmph, which are already quite low. These vehicles are not expected to ply on highways. For the city/ town operations putting additional restriction on maximum speed may adversely affect the traffic movement. It is, therefore, NOT recommended to pose any additional speed limit to these relatively slow moving vehicles. The Committee notes that in any case, State Government or any authority authorized in this behalf by the State government, is empowered under Section 112(2) of the Motor Vehicles Act, 1988 to fix such speed limits as it thinks fit for any specified class or description of motor vehicles, either generally or in a particular area or for a particular road or roads, by notification in the official gazette if satisfied that it is necessary to do so in the interest of public safety or convenience or because of the nature of any road or bridge.

**7.2 Suitability of 3-wheelers to ply on the State and National Highways and whether plying of 3-wheelers on highways poses a safety hazard.**

**7.2.1** A meeting of Sub Group-II was held on 21.5.2012 under the chairmanship of Shri U.D. Bhargava, Director (RT), MoRTH. In the meeting, the representatives of the State Transport Departments pointed out that 3-wheelers generally drive at a speed of 40-50 kms. On the other hand, speed of other vehicular traffic on the National and even on State Highways is significantly higher. Therefore, plying of 3-wheelers on the Highways certainly poses a danger not only to the occupants of the auto rickshaws, but even to the other road users on State and National Highways. The danger is especially high at the point where link roads join the highways and the auto rickshaws merge with the vehicular traffic on the highways. Moreover, a large number of 3-wheeler auto rickshaws do not have all necessary safety features like rear view mirror, wipers, signaling device etc., in fully operational condition. As it is, 3-wheeler auto rickshaws are not permitted on the expressways.

**7.2.1.1** Participants were of the view that notwithstanding the observations as above, it would not be in the general public interest to just ban auto rickshaws on State and National Highways, because they provide last mile connectivity to large sections of the population, which includes rural and poor people, who do not own personalized vehicles. Besides, some stretches of State/National Highways also fall within the urban/metro/municipal city limits.

**7.3** Taking the twin factors of safety of all road users, and continuance of last mile connectivity to the large sections of the population in areas where there is no State run transport in the form of buses etc., the Committee makes the following recommendations:

- (1) Auto rickshaws should not be allowed to come on the highways where service roads are available.



- 2(a) Since the speed of vehicular traffic within the city and municipal limits is in any case significantly lower than the vehicular speed outside the city and municipal limits, auto rickshaws may be allowed to continue to operate on the State and National Highways, but only within the city and municipal limits.
- 2(b) The Committee considers that it would not be appropriate to single out 3-wheeler auto rickshaws for placing restrictions on movement on the State and National Highways. The Committee feels that by the same logic, 3-wheeler auto rickshaws along with other slow moving vehicles like tractors, agricultural tractor-trailers, etc. would need to be restricted on the State and National Highways wherever service roads are available.
- 2(c) The Committee recommends that restriction (if applied) should apply to all 3-wheelers, irrespective of whether they are carrying passengers or goods or both.
- (3) In order to obviate necessity of running of auto rickshaws on the highways, National Highways Authority of India (NHAI)/State authorities should make provision for bus bays and lay-byes at the junction of link roads with State and National highways. This will provide connectivity to the passengers located in the rural or interior areas without compromising their safety or safety of other road users/auto rickshaw drivers/passengers.
- (4) The Committee recommends that as a long-term measure, in order to secure safety of road users, provision should be made for a separate service road for movement of slow moving traffic.
- (5) Noting that the above recommendations, even if accepted, may take a long time to fructify, the Committee recommends that meanwhile, wherever it is possible, a separate lane should be earmarked on left side of the highways for movement of the 3-wheeler auto rickshaws and other slow moving traffic.

**7.4** In its meeting held on 10.7.2012, the Committee decided to visit a few locations in the country to see the extent of compliance to the existing provisions of CMVRs before submitting its report. Accordingly, the Committee randomly visited a few sites in Bengaluru on 27.7.2012, Pune on 9.8.2012 and Delhi (Burari) on 28.8.2012. The Committee also visited RTO offices located in Bengaluru, Pune and Delhi. The Committee was assisted by technical personnel from ARAI/ICAT during these site visits. A tabular statement indicating the results of the site visits of the Committee on the compliance to various safety features of CMVRs is at **Annexure-III**.

**7.5** The observations/ recommendations of the Committee based on its findings during site visits are as under:-

- (i) Data collected from the RTOs visited by the Committee shows that about 93% percent of the auto rickshaws inspected were certified as fit. The vehicles declared unfit for any reason were to come back for certification after removing deficiencies pointed out during inspection.
- (ii) The Committee, assisted by technical experts, randomly checked 80 three-wheeler passenger auto rickshaws – 18 at Bengaluru, 38 in Pune and 24 in Delhi. Hardly any vehicle was found fit in all respects. Most common



deficiencies included non-availability of retro-reflectors and front brakes; non-functional wipers, directional indicators, brake lamps and headlights. Modifications in the rear view mirror were also very common. The Committee considers that there is apparently a strong case for the Enforcement Agencies checking vehicles plying on the roads. Of course, this will require reinforcement of RTO offices themselves with adequate technical manpower. The Committee recommends that MoRTH may work in this direction.

- (iii) Some of the RTOs are over-worked, making an effective inspection difficult. Some of the offices are not even located in proper buildings. These problems need to be addressed by the concerned State Government, MoRTH, may take up these issues with the State Transport Commissioners.
- (iv) Although the Committee did not notice any over-loading of auto rickshaws within the city limits, a number of auto rickshaws were found carrying more than three passengers in the outskirts. The Transport Departments need to be impressed upon to improve enforcement in the suburbs and rural areas.
- (v) The States need to put in place safe, affordable and efficient transport solutions for the people residing in rural and semi urban areas, which will obviate the need of people risking their safety by travelling in over-loaded auto rickshaws or unfit vehicles. MoRTH may take it up with the States/UTs in an appropriate manner.
- (vi) The Committee also noted that though Section 59 of the Motor Vehicles Act, 1988 empowers the Central Government to specify life of a motor vehicle reckoned from the date of its manufacture, having regard to public safety, convenience and objective of this Act, no such gazette notification has been brought out by the Central Government so far. The Committee is of the view that MoRTH may consider bringing out End-of-Life of Vehicle (ELV) Regulations at least in respect of commercial vehicles, including 3-wheeler auto rickshaws, in the near future so as to ensure that only safe and fuel efficient vehicles complying with prescribed emission norms ply on the roads.
- (vii) During its visit to Pune, members of the Pune City Auto Rickshaws Federation met the Committee and submitted a Memorandum dated 9.8.2012 containing suggestions for auto rickshaw body construction/safety. A copy of Memorandum is at Annexure-IV. The Committee gave a patient hearing to the Members of the Federation on the points made by them in their representation. Some of the suggestions related to design and performance of the vehicle. The Committee recommends that MoRTH may take up these issues with the 3-wheeler auto rickshaws manufacturers. If necessary, a meeting of the Federation and other stakeholders may be arranged with the manufacturers under the aegis of MoRTH so that suggestions and feedback of the users is brought to the notice of manufacturers to enable them to bring about required changes and improvements.
- (viii) Suggestions of the Federation having bearing on safety included fiber or metal sheet hood top body, closure of right side permanently, provision of first-aid box, provision of light inside the vehicle, automatically operated wiper, hand grips for passengers, provision of fire extinguisher, better



arrangement of fixing headlight, tail light and indicators, hand brakes, improvement of wheel lock system, and proper front brakes. The Committee obtained comments of a testing agency on the suggestions made by the Federation.

- (ix) During its site visit at Pune, the Committee found that a number of auto rickshaw owners had replaced the soft top of their auto rickshaws with fibre top. During discussions with the drivers of these auto rickshaws, it was found that drivers considered it to be more durable, passenger friendly and safe in case of roll over. The Committee obtained fresh comments of the testing agencies on this aspect in view of the perception of the auto rickshaw drivers.

**7.6** The Committee notes that the suggestion of the Federation mainly relate to either performance of safety system and components or design and construction related observations based on the field experience. Further, many of the suggestions were vehicle model specific and hence not relevant for the purpose of standardization. A note containing the comments on the points put forth by the Auto Rickshaw Federation is at Annexure-V. The suggestions of the Federation having bearing on the safety of auto rickshaws, have been taken into account by the Committee while finalizing this report. The Committee recommends that suggestions of the Federation may also be communicated by MoRTH to Society of Indian Automobile Manufacturers (SIAM) and Transport Department of Government of Maharashtra for appropriate action.

## **8. Summary of observations and recommendations**

For the sake of convenience, the observations/recommendations of the Committee are summarized below:

### **8.1 Whether existing provisions of CMVRs relating to homologation and existing certification procedures are adequate and recommendations for improvements.**

**8.1.1** The technical requirements relating to construction and approval of motor vehicles are covered under Rules 93-126 of CMVRs. There are approximately 23 numbers of safety rules which are specifically applicable to 3-wheelers (Annexure-I).

**8.1.2** The Government has been taking steps to introduce additional safety and emission requirements for 3-wheelers (Annexure-II).

**8.1.3** The Committee considers that there is no need for inclusion of rollover test for 3-wheelers as rollover does not seem to be normal phenomena in 3-wheeler accidents.

**8.1.4** The Committee recommends that small/appropriate size doors may be fitted in the auto rickshaws for occupants' safety but duly keeping in view requirements of ventilation, interior illumination etc. The specifications for the doors may be worked out by AISC after careful evaluation of the requirements, changes needed and their impact on occupants' safety.



8.1.5 AISC should work out technical standards for the driver seat and the passenger seat as there are no specific requirements at present on minimum seat dimension, leg space etc.

8.1.6 The Committee considers that seat belt for passengers may not serve any purpose because 3-wheelers are slow moving vehicles in urban transport for short distance. However, driver's seat should be fitted with safety belt. AISC should work out technical standards for safety belt for driver's seat.

8.1.7 The Committee notes that Government has been taking steps to introduce additional safety and emission requirements for 3-wheelers (**Annexure-II**). The Committee observes that the existing safety standards for various safety components were recently revised for their alignment with ECE/ EEC regulations. As mentioned in a prior section of this report the following new requirements are planned to be introduced and implemented in the next 2-3 years in a phased manner:-

- Controls and tell tales (functionality of various safety devices should be clearly indicated to the driver. Additional symbols to be added for driver's assistance)
- Lighting and light signaling devices (new generation head lamp devices, which are energy efficient and improved illumination to be included)
- Brake hoses (additional performance tests to be included)
- Brake performance
- Speedometer calibration
- Safety glazing (for better visibility, breakage strength and other important physical parameters of glass)
- Rear view mirror specifications (performance requirements for rear vision, weather-proofness, mounting arrangements, etc to be improved)
- Electro Magnetic Compatibility (EMC) for traction batteries used in Battery operated vehicles (control on radiated emissions and immunity to external disturbances to be enhanced)

8.1.8 The Committee recommends that, as and when revision of standards for various safety components is taken up in future, the technical panel should examine whether the light intensity requirements for head lamps are adequate in the Indian context.

8.1.9 The Committee is of the view that no additional speed limits need to be recommended for 3-wheelers which have maximum designed speeds in the range of 45-65 kmph which are not on a high side. Putting additional restrictions on maximum speed of 3-wheelers may adversely affect traffic movement. Speed restrictions in specific regions/on specific roads can be imposed by State Governments under S.112(2) of Motor Vehicle Act.

8.1.10 Question of replacing soft top of auto rickshaws with hard top was discussed in great detail. Taking into consideration the views as brought out above, the Committee is of the opinion that technically, hard top does not provide any additional safety to the occupants of auto rickshaws because these are slow moving vehicles, meant essentially for intra-city mobility. Since the vehicle does not have a closed body structure, the benefit of



a hard top in case of a roll-over was really doubtful. However, the hard top would definitely be more durable than the existing soft top. Therefore, the Committee recommends that when the suggestions of the Federation are taken up with auto manufacturers, they may be advised to provide hard top also as an option.

**8.1.11** As regards certification procedure, the Committee notes that India follows third party certification system for homologation. Rule 126 of CMVR provides that a proto type of a vehicle model shall be submitted to any of the seven testing agencies specified in the said rule. The test agencies check and verify compliance to each rule by conducting necessary tests. The testing agencies also verify and approve the vehicle specifications. A Type Approval Certificate (TAC) is thereafter issued by the testing agency to the vehicle manufacturer certifying compliance to the prescribed rules and regulations. During discussions, the testing agencies confirmed that they follow the prescribed procedure for type approval of all vehicle models, including 3-wheelers. The Committee, therefore, considers that the existing provisions of CMVRs are adequate and no amendment to provisions of CMVRs concerning certification procedure is warranted.

## **8.2 Suitability of 3-wheelers to ply on the State and National Highways and whether plying of 3-wheelers on highways poses safety hazards.**

Taking into account the maximum designed 45-65 kmph speed of 3-wheelers, the fact that they generally drive at the speed of 40-50 kmph, the finding that essential safety features like rear view mirror, wipers, signal devices etc. are absent/not functional in a large number of 3-wheelers, the transportation requirements of rural populations and poor people for last mile connectivity and consideration of safety of occupants of 3-wheelers and other road users, the Committee makes the following recommendations :

- (1) Auto rickshaws should not be allowed to come on the highways (National as well as State) where service roads are available except as suggested in sub-para 2(a) below.
- (2)(a) Since the speed of vehicular traffic within the city and municipal limits is in any case significantly lower than the vehicular speed outside the city and municipal limits, auto rickshaws may be allowed to continue to operate on the State and National Highways, but only within the city and municipal limits.
- (2)(b) The Committee considers that it would not be appropriate to single out 3-wheeler auto rickshaws for placing restrictions on movement on the State and National Highways. The Committee, therefore, recommends that by the same logic, 3-wheeler auto rickshaws along with other slow moving vehicles like tractors, agricultural tractor-trailers etc. should not be allowed to ply on the State and National Highways wherever service roads are available.
- (2)(c) The Committee recommends that restriction should apply to all 3-wheelers, irrespective of whether they are carrying passengers or goods or both.
- (3) In order to obviate necessity of running of auto rickshaws on the highways, NHAI/State authorities should make provision for bus bays and lay-byes at the junction of link roads with State and National highways. This will provide connectivity to the passengers located in the rural or interior areas



without compromising their safety or safety of other road users/auto rickshaw drivers/passengers.

- (4)(a) The Committee recommends that as a long-term measure, in order to secure safety of road users, provision should be made for a separate service road for movement of slow moving traffic.
- (4)(b) Noting that the above recommendations may take a long time to fructify even if accepted, the Committee recommends that meanwhile, wherever it is possible, a separate lane should be earmarked on left side of the highways for movement of the 3-wheeler auto rickshaws and other slow moving traffic.
- (5) Based on their experience during site visits, and the presentation made before the Committee on the new vehicle sought to be included in a new category of vehicle "quadricycle" under CMVRs, the Committee makes the following recommendations:
  - (i) The enforcement agencies need to pay more attention to checking of vehicles plying on road for fitness as per CMVRs. MoRTH may take it up with the State Transport Departments.
  - (ii) The RTO offices need to have adequate technical manpower for effective discharge of their responsibilities. Besides, some of the RTO Offices do not have proper building also. MoRTH may work in this direction and take up this issue with the State Transport Departments.
  - (iii) Enforcement authorities need to tackle over-loading of 3-wheelers in the rural areas, outskirts and suburbs. MoRTH may take up this issue with the State Transport Departments.
  - (iv) The States need to put in place safe, affordable and efficient transport solutions for the people residing in hilly, rural and semi urban areas, so that people do not have to risk their safety by travelling in over-loaded or unfit auto rickshaws and other such vehicles. MoRTH may take up this issue with the States/UTs appropriately.
  - (v) MoRTH may convene a meeting of Pune City Auto Rickshaw Federation with the automobile manufacturers so that the suggestions and feedbacks of the users is brought to the notice of manufacturers to enable them to bring about required changes and improvements in the design of auto rickshaws.
  - (vi) MoRTH may formally write to the auto rickshaw manufacturers for giving option of hard top models also as the same would be more durable, passenger friendly and safe in case of rollover even if that is a rare phenomena in accidents.
  - (vii) The Government may expedite consideration and decision on the proposal for notification of quadricycle as a new category of vehicle under CMVRs as it could provide a viable and safer intra-city mobility solution. The Committee would like to add that the recommendation is subject to setting up of new norms, including



safety norms, for such a category of vehicles as per the prescribed rules and procedure.

- (viii) MoRTH may consider bringing in End of Life (ELV) Regulations for commercial vehicles, including 3-wheeler auto rickshaws so as to ensure that only safe and fuel efficient vehicles complying with prescribed emission norms, only ply on the roads.