



Dated 04th July, 2022

MINUTES OF THE MEETING OF TECHNICAL COMMITTEE CONSTITUTED TO REVIEW / FORMULATE STANDARDS / SPECIFICATIONS OF THREE WHEELERS INCLUDING ELECTRIC RICKSHAW HELD ON 04.07.2022 AT 11:00 A.M. IN THE COMMITTEE ROOM OF TRANSPORT DEPARTMENT LAHORE.

In Chair: Secretary, Punjab Provincial Transport Authority, Lahore
Date: Monday, 4th July, 2022
Time: 11:00 A.M.
Participants: List Attached

Meeting started with the recitation of the Holy Quran. The Chair welcomed the participants and apprised that a Technical Committee was constituted vide Transport Department's Notification No. SO(P-I)/4-1/2021 (ER) dated 14.09.2021 with two pronged agenda i.e., to review & update specifications already finalized / approved vide minutes of the meeting held on 18.10.2008 for 4-Stroke CNG Engine Motor Cab / Motor Cycle Rickshaw & specifications finalized / approved vide Transport Department Notification No. SO(TR-I)2-34/2016/(M/Cycle) dated 09.05.2018 for Motor Cab / Motorcycle Loader Rickshaws, devised under Chapter VI of Motor Vehicle Rules, 1969 and to formulate the standards / specifications of electric three wheelers for grant of manufacturing / assembling license under Rule 197-A of Motor Vehicle Rules, 1969.

2. It was also sinequanon to apprised that in previous meeting held on 03.06.2022 under the Chairmanship of former Secretary Punjab PTA, the standards/specifications of all categories of three wheelers were thrashed out at stretch and after due deliberations the same got verbally concurred. However, the Secretary Punjab PTA was transferred on 21.06.2022 and the minutes could not see the dawn of the day. Hence in line with the same agenda, merits, discussion and verbal concurrence the instant meeting was reasoned for a scheduled new date i.e., 04.07.2022.

3. During the meeting, the standards / specifications, finalized in the earlier meeting held on 03.06.2022 and prepared by Section Officer (P-I), Transport Department in consultation with Transport Planning Unit (TPU) (though not signed by the Technical Committee) were circulated among the participants to know the integrity of decisions made in the meeting dated 03.06.2022. All the participants re-endorsed and acknowledged the earlier decisions except some typo errors in standards / specifications and same were rectified. Hence, following specifications / standards are finalized:-

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ALL TYPE 3-WHEELERS TECHNICAL SPECIFICATIONS

| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-------------------|--|---|---|---|---|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| DIMENSIONS | | | | | |
| 1. | Overall length (Rule 168(d) of MVR, 1969) | Shall not exceed 290 cm (9 feet 6 inches) | Shall not exceed 290 cm (9 feet 6 inches) | Shall not exceed 290 cm (9 feet 6 inches) | Shall not exceed 290 cm (9 feet 6 inches) |
| 2. | Overall width with folded mirrors (Rule 167(c) of MVR, 1969) | Shall not exceed 142 cm (4 feet 8 inches) | Shall not exceed 142 cm (4 feet 8 inches) | Shall not exceed 142 cm (4 feet 8 inches) | Shall not exceed 142 cm (4 feet 8 inches) |
| 3. | Overall height from ground (Rule 169(3) of MVR, 1969) | Shall not exceed 183 cm (6 feet) | Shall not exceed 183 cm (6 feet) | Shall not exceed 183 cm (6 feet) | Shall not exceed 183 cm (6 feet) |
| 4. | Wheel Track | 100 – 120 cm (3 feet 4 inch – 4 feet 0 inch) | 100 – 120 cm (3 feet 4 inch – 4 feet 0 inch) | 100 – 120 cm (3 feet 4 inch – 4 feet 0 inch) | 100 – 120 cm (3 feet 4 inch – 4 feet 0 inch) |
| 5. | Wheel base | 182 – 205 cm (6 feet – 6 feet 9 inch) | 182 – 205 cm (6 feet – 6 feet 9 inch) | 182 – 205 cm (6 feet – 6 feet 9 inch) | 182 – 205 cm (6 feet – 6 feet 9 inch) |
| 6. | Overhang (Rule 170(2) of MVR, 1969) | Rear overhang: Maximum 24inch (2 ft) Side overhang: Maximum 4 inches | Rear overhang: Maximum 24inch (2 ft) Side overhang: Maximum 4 inches | Rear overhang: Maximum 24inch (2 ft) Side overhang: Maximum 4 inches | Rear overhang: Maximum 24inch (2 ft) Side overhang: Maximum 4 inches |
| COMFORT | | | | | |
| 7. | Seating Capacity (Rule 2(e)&(f) of MVR, 1969) | Two passengers plus one driver | Four passengers plus one driver | One driver seat | One driver seat |
| 8. | Passenger Seat (Rule 182 of MVR, 1969) | Seat shall be designed in such a manner that not more than 2 passengers can sit on the same. Seat | Seat shall be designed with back to back arrangement and in such a manner that not more than 2 passengers | N/A | N/A |

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-----|---|---|--|---|---|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| | | dimensions should not exceed: Length: 48 inches Width: 15 inches | can sit on each seat. Each seat dimensions should not exceed: Length :48 inches Width: 15 inches | | |
| 9. | Driver Seat (Rule 186 of MVR,1969) | Seat shall be so constructed that no person may sit or any luggage may be carried on either side of the driver. | Seat shall be so constructed that no person may sit or any luggage may be carried on back/front of the driver. | Seat shall be so constructed that no person may sit or any luggage may be carried on either side of the driver. | Seat shall be so constructed that no person may sit or any luggage may be carried on either side of the driver. |
| 10. | Passenger Seat height (Rule 182(4)(a)(i) of MVR,1969) | Minimum: 12 inches from floorboard | Minimum: 12 inches from floorboard | N/A | N/A |
| 11. | Passenger Seat Backrest (Rule 182 of MVR,1969) | a. Minimum height 15 inches above seat level b. Backrest shall be foam filled for comfort | a. Minimum height 15 inches above seat level b. Backrest shall be foam filled for comfort | N/A | N/A |
| 12. | Driver Seat height | 18 inches from floorboard | N/A | 18 inches from floorboard | N/A |
| 13. | Driver Seat Backrest (Rule 182 of MVR,1969) | a. Maximum height 15 inches above seat level b. Backrest shall be foam filled for comfort | N/A | a. Maximum height 15 inches above seat level b. Backrest shall be foam filled for comfort | N/A |
| 14. | Height of Roof (Rule 169 (3) of MVR,1969) | Minimum 54 inches from floorboard | Minimum 54 inches from floorboard | Minimum 54 inches from floorboard | Minimum 54 inches from floorboard |
| 15. | Legroom (Rule 182 (4) (a) (ii) of MVR,1969) | Every passenger shall be provided with legroom of minimum 15 inches | Every passenger shall be provided with legroom of minimum 15 inches | N/A | N/A |

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|---------------|---|---|---|--|--|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| 16 | Entrance level (Rule 190(3)(a) of MVR, 1969) | In case of empty vehicle, the entrance level (step of floorboard) shall not be less than 12 inches and more than 18 inches from ground level. | In case of empty vehicle, the entrance level (step of floorboard) shall not be less than 12 inches and more than 18 inches from ground level. | N/A | N/A |
| 17 | Protection from weather (Rule 193 (4) of MVR, 1969) | Weather resistant hard top or flex canopy for protection of driver and passengers, extended from windscreen to extreme rear edge of the vehicle | Weather resistant hard top or flex canopy for protection of driver and passengers, extended from windscreen to extreme rear edge of the vehicle | Weather resistant hard top or flex canopy for protection of driver, extended from windscreen to extreme rear edge of the vehicle | Weather resistant hard top or flex canopy for protection of driver, extended from windscreen to extreme rear edge of the vehicle |
| SAFETY | | | | | |
| 18 | Brakes (Rule 152 of MVR, 1969) | Front: Hydraulic / Mechanical Brake Rear: Hydraulic Brake | Front: Hydraulic / Mechanical Brake Rear: Hydraulic Brake | Front: Hydraulic / Mechanical Brake Rear: Hydraulic Brake | Front: Hydraulic / Mechanical Brake Rear: Hydraulic Brake |
| 19 | Hand/Parking Brakes (Rule 152 of MVR, 1969) | a. Mechanical brake b. Capable of keeping fully laden vehicle stationery at 15° slope | a. Mechanical brake b. Capable of keeping fully laden vehicle stationery at 15° slope | a. Mechanical brake b. Capable of keeping fully laden vehicle stationery at 15° slope | a. Mechanical brake b. Capable of keeping fully laden vehicle stationery at 15° slope |
| 20 | Partition (Rule 175 of MVR, 1969) | Partition between the driver and passengers made of steel safety bars | Partition between the driver and passengers made of steel safety bars | Partition between driver and load compartment, made of steel safety bars | Partition between driver and load compartment made of steel safety bars |
| 21 | Electric Wires (Rule 202 of MVR, 1969) | All electric wires, leads and harnesses should be adequately insulated meeting IP-65 standards | All electric wires, leads and harnesses should be adequately insulated meeting IP-65 standards | All electric wires, leads and harnesses should be adequately insulated meeting IP-65 standards | All electric wires, leads and harnesses should be adequately insulated meeting IP-65 standards |
| 22 | Top Speed | 50 km/hr (Maximum) | 50 km/hr (Maximum) | 50 km/hr (Maximum) | 50 km/hr (Maximum) |

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-------------------------------|--|--|--|--|--|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| 23 | Engine (Petrol/CNG) | a. 4-Stroke b. 200 CC Minimum c. Water/Air cooled engine | a. 4-Stroke b. 100 CC Minimum c. Water/Air cooled engine | a. 4-Stroke b. 150 CC - 250 CC c. Water/Air cooled engine | a. 4-Stroke b. 150 CC - 250 CC c. Water/Air cooled engine |
| 24 | Fuel Tank | a. In case of Petrol engines tank must have locking mechanism b. In case of CNG fueled vehicle, the cylinder must be fully concealed and positioned in a manner that it should have no direct contact with passenger and driver c. Vehicle must have only one CNG cylinder of approved quality d. In case of engines running on both petrol and CNG all conditions must be fulfilled e. LPG fuel not allowed | a. In case of Petrol engines tank must have locking mechanism b. CNG/ LPG fuel is not allowed (OGRA Provisions) | a. In case of Petrol engines tank must have locking mechanism b. In case of CNG fueled vehicle, the cylinder must be fully concealed and positioned in a manner that it should have no direct contact with passenger and driver c. Vehicle must have only one CNG cylinder of approved quality d. In case of engines running on both petrol and CNG all conditions must be fulfilled e. LPG fuel not allowed | a. In case of Petrol engines tank must have locking mechanism b. CNG/ LPG fuel is not allowed |
| 25 | Turning Circle (Rule 171 of MVR, 1969) | Maximum 16 feet in diameter Minimum 12 feet in diameter | Maximum 16 feet in diameter Minimum 12 feet in diameter | Maximum 16 feet in diameter Minimum 12 feet in diameter | Maximum 16 feet in diameter Minimum 12 feet in diameter |
| GENERAL SPECIFICATIONS | | | | | |
| 26 | Suspension (Rule 165 of MVR, 1969) | Front Wheel: Coil Spring + Shock Absorber Rear Wheel: Coil / Leaf Spring + Shock Absorber | Front Wheel: Coil Spring + Shock Absorber Rear Wheel: Coil / Leaf Spring + Shock Absorber | Front Wheel: Coil Spring + Shock Absorber Rear Wheel: Coil / Leaf Spring | Front Wheel: Coil Spring + Shock Absorber Rear Wheel: Coil / Leaf Spring |

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(Su) Engine specifications should comply with PEQS

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-----|---|--|--|--|--|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| 27. | Transmission (Rule 153 of MVR, 1969) | a. Direct/ Through Shaft or Chain b. Reverse gear shall be provided (except chain transmission) | a. Direct/ Through Shaft or Chain b. Reverse gear shall be provided (except chain transmission) | a. Direct/ Through Shaft or Chain b. Reverse gear shall be provided (except chain transmission) | a. Direct/ Through Shaft or Chain b. Reverse gear shall be provided (except chain transmission) |
| 28. | Doors (Rule 188 (2) of MVR, 1969) | a. Minimum height of doors: 2 feet 6 inches b. Minimum width of doors: 21 inches c. Door at any level (entrance level) shall not be less than 12 inches | a. Two-grill type doors on the front side and one door on the rear side shall be provided b. The front doors shall cover the area from driver partition to extreme left and right sides c. The rear door shall open from center and shall cover the area of total width of the vehicle | N/A | N/A |
| 29. | Exhaust Pipe (Rule 201 of MVR, 1969) | a. Extended beyond rear seat base but not protruding beyond rear end of the vehicle b. The exhaust pipe shall be so fitted or shielded that it is not likely to cause a fire through proximity to any inflammable material on the vehicle | a. Extended beyond rear seat base but not protruding beyond rear end of the vehicle b. The exhaust pipe shall be so fitted or shielded that it is not likely to cause a fire through proximity to any inflammable material on the vehicle | a. Extended to the back but not protruding beyond rear end of the vehicle b. The exhaust pipe shall be so fitted or shielded that it is not likely to cause a fire through proximity to any inflammable material on the vehicle | a. Extended to the back but not protruding beyond rear end of the vehicle b. The exhaust pipe shall be so fitted or shielded that it is not likely to cause a fire through proximity to any inflammable material on the vehicle |
| 30. | Floorboard (Rule 205 of MVR, 1969) | Made of suitable sheet metal material not less than 22 gauge closely fitted and covered with rubber mat to prevent smoke or dust from entering | Made of suitable sheet metal material not less than 22 gauge closely fitted and covered with rubber mat to prevent smoke or dust from entering | Made of suitable sheet metal material not less than 22 gauge closely fitted. | Made of suitable sheet metal material not less than 22 gauge closely fitted. |

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-----|--------------------------------------|--|---|---|---|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| 31. | Mirror (Rule 156 of MVR, 1969) | Provided either internally or externally so fitted that as to enable the drive to have view of the road in the rear of vehicle. | Provided either internally or externally so fitted that as to enable the drive to have view of the road in the rear of vehicle. | Provided either internally or externally so fitted that as to enable the drive to have view of the road in the rear of vehicle. | Provided either internally or externally so fitted that as to enable the drive to have view of the road in the rear of vehicle. |
| 32. | Lamps (Rules 151 & 172 of MVR, 1969) | <ul style="list-style-type: none"> a) Head Lamps – minimum one fitted in the center on the front side b) Front Parking Light - Two obligatory lamps showing to the front on either side emitting white light c) Rear Parking Light - Two red lamps not exceeding height of 3 feet and 6 inches d) Brake Lights – Brake indicator lamps emitting red light visible in daylight when brakes are applied e) Reverse Light – Reverse gear indicator lamp emitting white light visible in daylight f) Direction Indicators – Amber yellow turn signals two on the front and two on the rear on each side. Front direction indicators should be visible at 45° | <ul style="list-style-type: none"> a) Head Lamps – minimum one fitted in the center on the front side b) Front Parking Light - Two obligatory lamps showing to the front on either side emitting white light c) Rear Parking Light - Two red lamps not exceeding height of 3 feet and 6 inches d) Brake Lights – Brake indicator lamps emitting red light visible in daylight when brakes are applied e) Reverse Light – Reverse gear indicator lamp emitting white light visible in daylight f) Direction Indicators – Amber yellow turn signals two on the front and two on the rear on each side. Front direction indicators should be visible at 45° angle. | <ul style="list-style-type: none"> a) Head Lamps – minimum one fitted in the center on the front side b) Front Parking Light - Two obligatory lamps showing to the front on either side emitting white light c) Rear Parking Light - Two red lamps not exceeding height of 3 feet and 6 inches d) Brake Lights – Brake indicator lamps emitting red light visible in daylight when brakes are applied e) Reverse Light – Reverse gear indicator lamp emitting white light visible in daylight f) Direction Indicators – Amber yellow turn signals two on the front and two on the rear on each side. Front direction indicators should be visible at 45° angle. | <ul style="list-style-type: none"> a) Head Lamps – minimum one fitted in the center on the front side b) Front Parking Light - Two obligatory lamps showing to the front on either side emitting white light c) Rear Parking Light - Two red lamps not exceeding height of 3 feet and 6 inches d) Brake Lights – Brake indicator lamps emitting red light visible in daylight when brakes are applied e) Reverse Light – Reverse gear indicator lamp emitting white light visible in daylight f) Direction Indicators – Amber yellow turn signals two on the front and two on the rear on each side. Front direction indicators should be visible at 45° angle. |

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-----|--|---|---|---|---|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| | | angle. | | | |
| 33. | Reflectors (Rules 151A of MVR, 1969) | Reflectors shall be provided to mark extreme boundaries of vehicle on all sides | Reflectors shall be provided to mark extreme boundaries of vehicle on all sides | Reflectors shall be provided to mark extreme boundaries of vehicle on all sides | Reflectors shall be provided to mark extreme boundaries of vehicle on all sides |
| 34. | Wind screen (Rules 159 of MVR, 1969) | Shatter proof clear glass windscreen | Shatter proof clear glass windscreen | Shatter proof clear glass windscreen | Shatter proof clear glass windscreen |
| 35. | Wiper (Rules 161 of MVR, 1969) | a. Equipped with motorized wipers b. Wiper shall cover at least 60% of the wind screen area when used | a. Equipped with motorized wipers b. Wiper shall cover 60% of the wind screen area when used | a. Equipped with motorized wipers b. Wiper shall cover at least 60% of the wind screen area when used | a. Equipped with motorized wipers b. Wiper shall cover 60% of the wind screen area when used |
| 36. | Exterior Sound Level (Rule 158 of MVR, 1969) | Max 85 dbA at a distance of 3 meter | Max 85 dbA at a distance of 3 meter | Max 85 dbA at a distance of 3 meter | Max 85 dbA at a distance of 3 meter |
| 37. | Spare wheel (Rule 206 of MVR, 1969) | Shall be provided with one spare wheel | Shall be provided with one spare wheel | Shall be provided with one spare wheel | Shall be provided with one spare wheel |
| 38. | Toolkit (Rule 206 of MVR, 1969) | One Pliers, One Hammer, Two Tyre Levers, Tyre repair kits, Tyre Pump, One Screw driver, Two Spanners, One Plug Spanner, Wheel Jack, One Spare Headlight Bulb, One Spare Rear-lamp Bulb, Fuses | One Pliers, One Hammer, Two Tyre Levers, Tyre repair kits, Tyre Pump, One Screw driver, Two Spanners, One Plug Spanner, Wheel Jack, One Spare Headlight Bulb, One Spare Rear-lamp Bulb, Fuses | One Pliers, One Hammer, Two Tyre Levers, Tyre repair kits, Tyre Pump, One Screw driver, Two Spanners, One Plug Spanner, Wheel Jack, One Spare Headlight Bulb, One Spare Rear-lamp Bulb, Fuses | One Pliers, One Hammer, Two Tyre Levers, Tyre repair kits, Tyre Pump, One Screw driver, Two Spanners, One Plug Spanner, Wheel Jack, One Spare Headlight Bulb, One Spare Rear-lamp Bulb, Fuses |
| 39. | Number Plates (Rule 32 of MVR, 1969) | Standard visible / conspicuous space for number plates at the front and rear of the vehicle shall | Standard visible / conspicuous space for number plates at the front and rear of the vehicle shall | Standard visible / conspicuous space for number plates at the front and rear of the vehicle shall | Standard visible / conspicuous space for number plates at the front and rear of the vehicle shall |

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Handwritten signature 'Dagat Ahmad' in blue ink at the bottom right.

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| S # | Description | Passenger Rickshaw | | Loader Rickshaw | |
|-----|---|---|--|--|--|
| | | Motor Cab | Motorcycle | Motor Cab | Motorcycle |
| | | be provided as specified in Motor Vehicle Rule 1969. | be provided as specified in Motor Vehicle Rule 1969. | be provided as specified in Motor Vehicle Rule 1969. | be provided as specified in Motor Vehicle Rule 1969. |
| 40. | Emission Standards (Rule 35 of MVR, 1969) | Must comply with vehicle emission standards notified by the competent authority for the purpose of issuance of fitness certificate | Must comply with vehicle emission standards notified by the competent authority for the purpose of issuance of fitness certificate | Must comply with vehicle emission standards notified by the competent authority for the purpose of issuance of fitness certificate | Must comply with vehicle emission standards notified by the competent authority for the purpose of issuance of fitness certificate |
| 41. | Footrests for driver | N/A | Must be available on both sides | N/A | Must be available on both sides |
| 42. | Fire Extinguisher (Rule 203 of MVR, 1969) | Equipped with a fire extinguisher of a type specified by the said authority and may require such fire extinguisher shall be inspected at such periods and by such person, as the authority may specify. | Equipped with a fire extinguisher of a type specified by the said authority and may require such fire extinguisher shall be inspected at such periods and by such person, as the authority may specify | Equipped with a fire extinguisher of a type specified by the said authority and may require such fire extinguisher shall be inspected at such periods and by such person, as the authority may specify | Equipped with a fire extinguisher of a type specified by the said authority and may require such fire extinguisher shall be inspected at such periods and by such person, as the authority may specify |

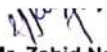
TECHNICAL SPECIFICATIONS OF ELECTRIC 3-WHEELERS (FOR ALL ALREADY APPROVED TYPES)

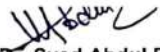
| Sr. No. | Description | Specification |
|---------|-------------------------------------|---|
| 1. | Electric Motor for Electric vehicle | a. Not less than 2 kW (rated) with appropriate Motor Control Unit (MCU) according to IP-67 Standard certification. b. Should be able to climb minimum of 10° gradient with full load on 25% of battery charge. |
| 2. | Battery Type for Electric vehicle | a. Sealed Lead Acid / Lithium-ion battery or advanced technology b. Battery disposal instructions to be provided by the manufacturer as notified by Environment Department |

| | | |
|----|---|--|
| 3. | Battery size and range for Electric vehicle | a. Minimum capacity 2 kWh with mandatory battery management system complying to IP-65 standards b. Battery range shall not be less than 60 km continuous in a single charge |
| 4. | Electric Wires (Rule 202 of MVR, 1969) | All electric wires, leads and harnesses should be adequately insulated meeting IP-65 standards |


Note: These specifications are for electric three wheelers in addition to the above mentioned specifications.


4. The meeting ended with a vote of thanks to and from the Chair.



Mr. Zahid Nabi,
Assistant Professor,
Mechanical Engineering
Department, UET Lahore

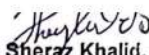

Dr. Syed Abdul Rehman
Kashif,
Associate Professor,
Electrical Engineering
Department, UET Lahore.

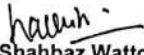

Dr. Hasan Izhar Khan,
Assistant Professor,
Automotive Engineering
Department, UET Lahore.


Mr. Muhammad Ejaz,
Laboratory Supervisor,
Mechanical Engineering
Department, UET Lahore.


Mr. Kamran Ihsan,
Transport Demand Modeler,
Transport Planning Unit,
Transport Department


Ms. Shahzadi Gulfam,
DSP (Traffic) Police HQ,
Lahore


Mr. Sheraz Khalid,
Senior Inspector,
EPA Lahore


Mr. Ahmad Shahbaz Wattoo,
Excise & Taxation Officer,
MRA, Lahore

LIST OF PARTICIPANTS

- | | | |
|-----|---|---------------------|
| 1. | Syed Asad Raza Kazmi, Secretary, Punjab Provincial Transport Authority, Lahore. | In chair / Convener |
| 2. | Mr. Zahid Nabi, Assistant Professor, Mechanical Engineering Department, UET Lahore. | Member |
| 3. | Syed Abdul Rehman Kashif, Associate Professor, Electrical Engineering Department, UET Lahore. | Member |
| 4. | Dr. Hasan Izhar Khan, Assistant Professor, Automotive Engineering Department, UET Lahore. | Member |
| 5. | Mr. Muhammad Ejaz, Laboratory Supervisor, Mechanical Engineering Department, UET Lahore. | Member |
| 6. | Mr. Kamran Ihsan, Transport Demand Modeler, Transport Planning Unit, Transport Department, Lahore. | Member |
| 7. | Ms. Shahzadi Ghulfam, DSP (Traffic) Police HQ, Lahore. | Member |
| 8. | Mr. Sheraz Khalid, Senior Inspector, EPA Lahore. | Member |
| 9. | Mr. Ahmad Shahbaz Wattoo, Excise & Taxation Officer, MRA, Lahore | Member |
| 10. | Engr. Muhammad Imran, Deputy Director, PSQCA, Lahore. | Member |
| 11. | Mr. Ejaz Ali, Motor Vehicle Examiner, Lahore. | Member |
| 12. | Mr. Yasir Numan, Sazgar Engineering (Pvt.) Ltd. | Member |

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13. **Mr. Ghulam Hussain,**
New Asia Automobile (Pvt.) Ltd. Member
14. **Mr. Javed Iqbal Saqib,**
Section Officer (P-I),
Transport Department Member / Secretary
15. **Mr. Ghufraan Khan,**
Development Incharge, SIWA (Pvt.) Ltd. Member
16. **Mr. Farhan Gillani,**
G.M., United Auto Industries (Pvt.) Ltd. Member
17. **Mr. Shahid Niazi,**
Chief Financial Officer, Plum Qingqi Motors Ltd. Member
18. **Mr. Muhammad Saleem,**
Manager, Plum Qingqi Motors (Pvt.) Ltd. Member
19. **Mr. Tahir Amin,**
Sazgar Engineering (Pvt.) Ltd. Member
20. **Mr. Waqas Ahmad Butt,**
CEO, Pak Star Automobile (Pvt.) Ltd./ Rep. of
PARMA Association, Lahore. Member
21. **Dr. Naveed Arshad,**
Associate Professor,
LUMS, Lahore -