

**Phased Manufacturing Program (PMP) for Electric Vehicles under PM E-DRIVE  
(Vehicle Category e2W, e3W including E-rickshaw and E-Cart)**

Sr.No.	PMP Component	PMP Requirement
1	<b>Traction battery pack</b>	<p><b>Manufacturing / Assembly Process:</b> Traction battery pack to be assembled domestically.</p> <p>Assembly of traction battery pack which mainly includes cell-to-cell connections, bus bar fitment, sensors mounting, wiring, connector fitment, safety devices (DC contactor, fuses) fitment, BMS (Battery Management System) and thermal management system integration, pressure release valves fitment, enclosure fitment shall be domestically performed.</p> <p>Import of battery modules shall not be permitted. Import of battery pack either in finished or CKD form (from single supplier) shall not be permitted.</p>
2	<b>Battery Management System (BMS)</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of BMS which mainly includes assembly of electronic components/semiconductors/connectors on the PCB, wiring, connector fitment, heat- sink fitment (if provided), enclosure fitment, software/firmware flashing shall be domestically performed.</p>
3	<b>DC – DC converter</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of DC – DC converter which mainly includes assembly of electronic components/semiconductors/connectors on the PCB, wiring, connector fitment, heat- sink fitment, enclosure fitment, software/firmware flashing shall be domestically performed.</p>
4	<b>Vehicle control unit (if fitted)</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of Vehicle control unit (VCU) which mainly includes assembly of electronic components/ semiconductors/connectors on the PCB, wiring, connector fitment, heat- sink fitment, enclosure fitment, software/firmware flashing shall be domestically performed.</p>
5	<b>On Board Charger</b> (For e-2W /e-3W external portable charger may be provided in lieu of on-board charger)	<p><b>Manufacturing / Assembly Process:</b> Assembly of On-Board Charger (OBC) which mainly includes assembly of electronic components/semiconductors/connectors on the PCB, wiring, connector fitment, heat- sink fitment, enclosure fitment, software/firmware flashing shall be domestically performed.</p>
6	<b>Traction Motor</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of traction motor which mainly includes coil winding, magnet fitment, assembly of rotor, assembly of stator, shaft fitment, bearing fitment, enclosure fitment, connectors fitment, wires fitment shall be domestically performed.</p>
7	<b>Traction Motor controller including inverter</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of Traction Motor controller including inverter which mainly includes assembly of electronic components/semiconductors/connectors on the PCB, wiring, connector fitment, heat- sink fitment, enclosure fitment, software/firmware flashing shall be domestically performed.</p>
8	<b>Instrument Cluster</b>	<p><b>Manufacturing / Assembly Process:</b> Assembly of Instrument Cluster which mainly includes assembly of electronic components/semiconductors/</p>

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		connectors on the PCB, wiring, display unit, connector fitment, heat- sink fitment, enclosure fitment, software/firmware flashing shall be domestically performed.
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**Note:**

- 1) All other Components of electric vehicles (as per typical but not exhaustive) specified at **Annexure-1** shall be domestically manufactured/assembled. CMVR notified safety components shall be tested by the testing agencies notified under Rule 126 of CMVR, 1989.
- 2) In the case of integrated unit consisting of multiple PMP components (e.g. 3-in-1 combo unit consisting of DC-DC converter, on-board charger and motor controller including inverter), PMP verification for compliance shall be carried out separately for individual PMP component.
- 3) In the case of external portable charger for e-2W and e-3W the same is to be included in the ex-factory price of the vehicle.
- 4) The words 'Manufacturing & Assembly' will be used interchangeably and will mean the same thing. Definition of "manufacture" shall mean as defined in CGST Act 2017.
- 5) Direct or indirect import of finished PMP components or any other vehicle component (as per **Annexure 1**) shall not be permitted.
- 6) Guidelines for Verification of PMP compliance of EV Components (PMP and other vehicle components) shall be as per **Annexure-2**.

**7) Consequences of Misrepresentation, Non-compliance and Fraud**

- a) Vehicle OEM would be required to furnish an Affidavit cum Undertaking on Rs.500/- non-judicial stamp paper certifying that all data/ information submitted by them are true and correct and have been signed by Authorized Signatory.
- b) It will be the responsibility of the vehicle OEM to ensure that all data submitted to Test Agency is true and correct. In case there is any change in any of the data impacting PMP compliance of any of the PMP or any of the other vehicle component and hence eligibility of the electric vehicle model, post obtaining eligibility certificate, it will be the responsibility of the vehicle OEM to bring the same to the notice of concerned Test Agency.
- c) It will be the responsibility of the vehicle OEM to apprise the Testing Agency about any change(s) in electric vehicle model including change in supply chain/ sourcing e.g change in make, model, part number, technical specifications, supplier of PMP component or any of the other vehicle component post obtaining eligibility certificate, that may lead to an adverse impact on PMP compliance. In such case vehicle OEM shall seek extension of eligibility approval as per PM E-DRIVE Scheme from the test agency from which initial eligibility approval has been obtained.
- d) In case Test Agency finds that vehicle OEM has resorted to misrepresentation/ suppression of material facts/ committed fraud of any kind, then Test Agency reserves the right to revoke the Eligibility Compliance Certificate issued to the vehicle OEM and make suitable recommendations to MHI for recovery of any incentive monies disbursed to the vehicle OEM.

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**Annexure-1**

List of vehicle components other than PMP components

<b>Sr. No.</b>	<b>Vehicle Component</b>	<b>Manufacturing / Assembly Process Requirement</b>
1	Suspension System	Assembly of Suspension System which mainly includes assembly of Coil Spring, Shock Absorber, Nuts, Bolts, Washers etc. shall be domestically performed.
2	Tyres	Processes such as Rubberizing/Extrusion, Calendering, Curing, Tyre Building etc. shall be domestically performed.
3	Steering (Handle Bar/Wheel)	Assembly of Steering (Handle Bar/Wheel) which mainly includes Metallic Pipe/Bar or Wheel, Nuts/Bolts, Accelerator unit, Clutch & Brake Levers etc. shall be domestically performed.
4	Steering Lock	Assembly of Steering Lock which mainly includes Housing/Barrel, Disc/Pin Tumblers, Key slot plate, spring, Nuts/Bolts etc. shall be domestically performed.
5	Braking System (Front)	Assembly of Braking System (Front) which mainly includes Brake Pedal, Brake Pads/Brake Linings, Brake Disc, Back Plate, ABS (if fitted) Brake Caliper, Oil Reservoir, Nuts/Bolts, Hoses etc. shall be domestically performed.
6	Braking System (Rear)	Assembly of Braking System (Rear) which mainly includes Brake Drum, Brake Pads/Brake Linings, Linkages, Springs, Nuts/Bolts shall be domestically performed.
7	Horn	Assembly of Horn which mainly includes Diaphragm, Mounting Plate/Bracket, Electromagnetic Coil, Connectors, Relays, Wires, Nuts/Bolts shall be domestically performed.
8	Rear View Mirror	Assembly of Rear View Mirror which mainly includes Housing, Mirror Plate, Mounting Stem, Nuts/Bolts shall be domestically performed.
9	Wheel Rim	Processes such as Melting, Low/High Pressure Die Casting, Sprue Cutting, Heat Treatment etc. shall be domestically performed.
10	Number Plate Illumination Light	Assembly of Number Plate Illumination Light which mainly includes Housing, Mounting Plate/Bracket, Bulb, Connectors, Wires, Screws etc. shall be domestically performed.
11	Windscreen Wiping System (if applicable)	Assembly of Windscreen Wiping System which mainly includes Wiper Baldes, Washer Tank, Nozzles, Washer Pump, Tubes, Wires, Screws etc. shall be domestically performed.
12	Chassis	Assembly of Chassis which mainly includes Frame, Metallic Tubes, Mounting Baskets, Nuts/Bolts etc. shall be domestically performed.
13	Body panel	Assembly/ manufacturing of Body Panel which mainly includes Sheet Metal Panels/Plastic moulded panels, Mounting Baskets, painting, Nuts/Bolts etc. shall be domestically performed.

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<b>Sr. No.</b>	<b>Vehicle Component</b>	<b>Manufacturing / Assembly Process Requirement</b>
14	Transmission/Gear Box	Assembly of Transmission/Gear Box which mainly includes Input & Output Shafts, Bearings, Gears, Shift Linkages, Shift Fork, Housing, Nuts/Bolts etc. shall be domestically performed.
15	Reflex Reflectors	Assembly of Reflex Reflectors which mainly includes Plastic Moulded Plate/film, Mounting Frame, Screws etc. shall be domestically performed.
16	Seats	Assembly of Seats which mainly includes Metallic Plastic/FRP Frame, Seat Foam, Cover, Mounting Plates/Brackets, Nuts/Bolts/Screws etc. shall be domestically performed.
17	Electrical Switches	Assembly of Electrical Switches which mainly includes Housing/Body, Wires, Terminals, Contacts, Screws etc. shall be domestically performed.
18	Electronic Throttle	Assembly of Electronic Throttle which mainly includes soldering of electronics components/semiconductors/connectors on the PCB, wiring, connector fitment, Housing/body, lever fitment etc. shall be domestically performed.
19	Power and control wiring harness along with connectors	Assembly of Power and Control Wiring Harness along with connectors which mainly includes Wires, stripping, crimping, Insulation/cover etc. shall be domestically performed.
20	Windscreen Safety Glass (if applicable)	Assembly of Windscreen Safety Glass which mainly includes Float Glasses, PVB Material etc. shall be domestically performed.
21	Telematics / Monitoring Device  (for e3W including E-rickshaw/E-cart)	Assembly of Telematics/Monitoring Device which mainly includes assembly of electronic components/semiconductors/connectors, connector fitment, heat- sink fitment (if provided), enclosure fitment, software/firmware flashing shall be domestically performed.
22	Lighting: Headlamp, Tail lamp, Indicators, Interior Lamp & Flasher	Assembly of Lighting Components which mainly Plastic Body, Reflector/Plastic Lens (if fitted), Bulbs, assembly of electronic components/semiconductors/connectors/LEDs, Mounting bracket/frame, Wires, Connectors, Screws etc. shall be domestically performed.

**Note:**

- 1) CKD import of all child parts of the components listed above (**Annexure 1**) from single import source shall not be permitted.
- 2) Direct or indirect import of finished vehicle component listed above (**Annexure 1**) shall not be permitted.
- 3) Test agency shall have discretion to verify assembly stations carrying out specified manufacturing and assembly activities at supplier's manufacturing plant for above listed components (**Annexure 1**), if required.
- 4) Test agencies shall have discretion to seek further invoices down the supply chain line of the components listed above if needed to ascertain that applicant vehicle OEM complies the Manufacturing / Assembly Process requirements given above.

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- 5) Test agency shall have discretion to seek information about additional vehicle component other than the above list as it may be applicable to the vehicle category or provided by vehicle OEM in the vehicle model applied for eligibility assessment as per PM E-DRIVE Scheme.

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**Annexure-2**

**Guidelines for Verification of PMP compliance of EV Components (PMP and other vehicle components)**

**1) Activities qualifying indigenous source for EV component**

Domestic sourcing of raw materials / child parts or Partial domestic and partial imported sourcing of raw materials / child parts and further domestic assembly of finished component shall qualify as indigenous source, hence complying to PMP requirements under PM E-DRIVE Scheme.

**2) Activities determined as imported source for EV component**

Domestic supplier importing finished component (indirect Import) or direct import from foreign source shall qualify as imported source, hence not complying with PMP requirements under PM E-DRIVE Scheme.

**3) Verification methodology by test agencies**

- a) Verification of vehicle OEM declared suppliers' GST invoices for each PMP component and other vehicle components as per **Annexure-1** (supplier invoice to vehicle OEM)
- b) Verification of GST classification of OEM declared suppliers as 'Manufacturer' on GST portal
- c) Visit to OEM declared suppliers' manufacturing / assembly plant (list of suppliers for plant visit will be at the discretion of Test Agency)
- d) Verification of OEM declared suppliers' assembly line as per submitted Manufacturing Process Flow Diagram (MPFD)
- e) Verification of assembly stations carrying out specified manufacturing and assembly activities at supplier's manufacturing plant.
- f) Test agency shall have discretion to seek further invoices down the supply chain line of the EV components if needed to ascertain that applicant vehicle OEM complies with the requirements of PMP under PM E-DRIVE Scheme.

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