

Technical Specification along TDs for Emergency Rescue Vehicle (Tender)

S/No.	Specification	Trial directives
1.	<p><u>Chassis:</u></p> <p>i. A wheelbase Right-hand drive, BS VI. 4200/ 4500/ 4800 mm wheelbase with company-fitted Driver cabin.</p>	<p>BOO to be check and verify through relevant certificate provided by OEM.</p>
2.	<p><u>On the chassis of vehicle, Cabin Structure having following dimension to be made:</u></p> <p>i. Cabin Dimension: 6300 x 2222 x 2520 mm.</p> <p>ii. Cabin Frame: MS pipe (80 x 40 x 5mm), (40mm x 40mm x 4mm) & (25 x 25 x 3mm), Channel (60 x 40 x 4 mm) Angle (40 x 40 x 4 mm) and various size as per requirement.</p> <p>iii. Cabin Base Support: 80 x 80 x 4 mm MS pipe must be provided on every 18”.</p> <p>iv. Reinforcements: Cross-braced supports by 80 x 80 x 4 mm MS pipe on every 18 inches for enhanced strength.</p> <p>v. Welding: TIG/MIG welding for a robust and corrosion-resistant finish.</p> <p>vi. Further this cabin will be partitioned in following 5 compartments namely:</p> <p>a) Compartment 1</p> <p>b) Compartment 2</p> <p>c) Compartment 3</p> <p>d) Compartment 4</p> <p>e) Compartment 5</p> <p>vii. The designs for all these compartments have been developed in accordance with the 4200 mm chassis specifications which may be modified according to chassis.</p>	<p>For (i), (ii), (iii), (iv) & (vi) BOO to be physically check and verify</p> <p>For (iv) & (vii) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>
3.	<p>To improve clarity and consistency, the term "locker" has been replaced with "compartment" throughout the document. Additionally, the details and specifications of compartments mentioned in Paragraph 6 under the heading "Compartment Area" have been integrated into these sections and removed from Paragraph 6.</p> <p><u>Compartment 1:</u></p> <p>i. Compartment 1 Dimension: 2125 x 1145 x 1825mm.</p> <p>ii. Shelves of Compartment:</p> <p>Shelves: 01 No. 1475 x 1145 mm, 810 mm height from base with provision of Detachable shelf with a nut and bolt fastening system with Bolt Size: M10 x 80 mm (Hex Head, Nut Type: M10 Hex Nut, Washer: M10 Flat Washer</p> <p>a) Shelves should have depth of 40 mm parapet.</p>	<p>For (i), (ii-a), (iv) and (vi) BOO to be physically check and verify</p> <p>For (ii-b, c) & d), (iii), (v) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>

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	<p>b) Shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>c) 02 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p> <p>d) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>iii. Compartment Finishing Panels: Anti-skid aluminium sheet with 3mm thickness on wall and bottom & ceiling.</p> <p>iv. 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment & Shelves for safety/fastening of equipment & tools.</p> <p>v. 04 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double "j" Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools.</p> <p>vi. Compartment should have SS square pipe (25 x 25 x 3mm) in front of both side of compartment for safety of equipment & tools</p> <p><u>Compartment 2:</u></p> <p>i. Compartment 2 Dimension: 2125 x 1170 x 1900mm.</p> <p>ii. This compartment is partitioned by a wall made by MS pipe (80 x 40 x 5mm) & (40mm x 40mm x 4mm), Channel (60 x 40 x 4 mm) and various size as per requirement in two parts namely Right- side/Driver side and Left-side/Conductor side.</p> <p>iii. Left-Side/Conductor side Compartment:</p> <p>a) Dimension: 1190 x 1170 x 1900mm.</p> <p>b) Compartment should have SS square pipe (25 x 25 x 3mm) in front of compartment for safety of equipment & tools.</p> <p>c) Shelves: 01 No. 1170 x 860 mm with adjustable of height & Detachable.</p> <p>d) Shelves: 01 No. 1170 x 500 mm with adjustable of height & Detachable.</p> <p>e) Height adjustable system to be made from GI angle (40 x 40 x 4mm) or any suitable system with locking arrangement at specified positions.</p> <p>f) Shelves should have depth of 40 mm parapet.</p> <p>g) Shelves should have 01 no. SS square pipe (25 x 25 x 3mm) in front side of shelves.</p> <p>h) Shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>i) 01 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p>	<p>For (i), (ii),(iii-a, b, c, d, e, f, g, k, & l), (iv-a, b, c, d, e, & i,) and (vi) BOO to be physically check and verify</p> <p>For (iii-h, i, j) &d), (iv-f, g, h, & j), (v) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate..</p>

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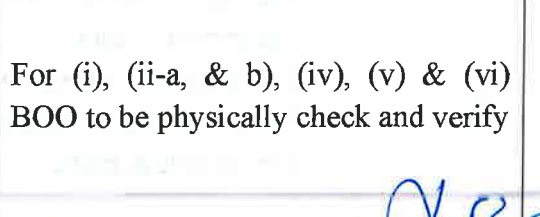
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	<p>j) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>k) 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment & Shelves (total-06 D hook) for safety/fastening of equipment & tools.</p> <p>l) 02 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double “j” Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools</p> <p>iv. Right-Side/Driver side Compartment:</p> <p>a) Dimension: 895 x 1170 x 1900 mm.</p> <p>b) Shelves: 03 Nos.</p> <p>I. 1170 x 570 mm with adjustable of height & Detachable.</p> <p>II. 1170 x 570 mm with adjustable of height & Detachable.</p> <p>III. 1170 x 570 mm with adjustable of height & Detachable.</p> <p>c) Height adjustable system to be made from GI angle (40 x 40 x 4mm) or any suitable system with locking arrangement at specified positions.</p> <p>d) Shelves should have 01 no. SS square pipe (25 x 25 x 3mm) in front side of shelves.</p> <p>e) All Shelves should have depth of 40 mm parapet.</p> <p>f) All shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>g) 01 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p> <p>h) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>i) 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment & Shelves for safety/fastening of equipment & tools.</p> <p>j) 02 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double “j” Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools.</p> <p>v. Compartment Finishing Panels: Anti-skid aluminium sheet with 3mm thickness on wall and bottom & ceiling.</p> <p>Compartment 3:</p> <p>i. Compartment 3 Dimension: 2125 x 1170 x 1825mm.</p> <p>ii. Shelves of Compartment:</p> <p>a) Shelves: 01 No. 1475 x 1170 mm, 810 mm height from base (Fixed)</p>	
		<p>For (i), (ii-a, & b), (iv), (v) & (vi) BOO to be physically check and verify</p> 

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	<p>b) Shelves should have depth of 40 mm parapet.</p> <p>c) Shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>d) 02 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p> <p>e) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>iii. Compartment Finishing Panels: Anti-skid aluminium sheet with 3mm thickness on wall and bottom & ceiling.</p> <p>iv. 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment & Shelves for safety/fastening of equipment & tools.</p> <p>v. 04 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double "j" Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools.</p> <p>vi. Compartment should have SS square pipe (25 x 25 x 3mm) in front of both side of compartment for safety of equipment & tools</p>	<p>For (ii-c, d & e), (iii) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>
<p><i>K</i></p>	<p><u>Compartment 4:</u></p> <p>i. Compartment 4 Dimension: 2125 x 1135 x 1825mm.</p> <p>ii. Shelves of Compartment:</p> <p>a) Shelves: 01 No. 1475 x 1135 mm, 810 mm height from base (fixed).</p> <p>b) Shelves should have depth of 40 mm parapet.</p> <p>c) Shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>d) 02 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p> <p>e) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>iii. Compartment Finishing Panels: Anti-skid aluminium sheet with 3mm thickness on wall and bottom & ceiling.</p> <p>iv. 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment & Shelves for safety/fastening of equipment & tools.</p> <p>v. 04 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double "j" Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools.</p> <p>vi. Compartment should have SS square pipe (25 x 25 x 3mm) in front of both side of compartment for safety of Equipment & tools.</p>	<p>For (i), (ii-a, & b), (iv), (v) & (vi) BOO to be physically check and verify</p> <p>For (ii-c, d & e), and (iii) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>

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	<p><u>Compartment 5:</u></p> <p>i. Compartment 5 Dimension: 2125 x 1180 x 1900mm.</p> <p>ii. Shelves of Compartment:</p> <p>a) Shelves: 01 No. at height from base 905mm, (Width 1485mm, Height 1000mm & depth 455 mm)</p> <p>b) Shelves should have depth of 40 mm parapet.</p> <p>c) Shelves should have 03 Nos. SS Flat (25 x 10 x 3mm) in front side of shelves.</p> <p>d) Shelves should have Anti-slip vinyl flooring over 3mm anti-skid aluminium sheet.</p> <p>e) 02 Nos, 10 Watt (3000K/ Warm White), IP66 (water proof), recess/concealed LED light to be placed in ceiling of cabin.</p> <p>f) Edge Protection: Aluminium channel trim for durability and clean finish.</p> <p>g) 02 Nos (L) type Hook (width 50mm, Height 100mm) made from MS Flat (25 x 4mm) on front side of shelves on the height of 550mm.</p> <p>iii. Compartment Finishing Panels: Anti-skid aluminium sheet with 3mm thickness on wall and bottom & Ceiling.</p> <p>iv. 02 Nos. Heavy Duty D hook (50 x 40 mm, 8mm Thick) must be provided on each side of compartment for safety/fastening of equipment & tools.</p> <p>v. 02 Nos Heavy duty SS Ratchet Belt with 50mm x 10 mtr High Density polyester, Double “j” Steel hook (load bearing capacity 3000Kg) for safety/fastening of equipment & tools.</p> <p>vi. Compartment should have SS square pipe (25 x 25 x 3mm) in front of both side of compartment for safety of equipment & tools.</p> <p>a) Back side wall of this compartment will be used as gate of this compartment opening it both sides up (Hydraulic Lock) and down (Manually). Features of Anti-reverse lock to prevent unintentional lowering as mentioned in platform para- “M” also to be provided for this purpose.</p> <p>(Below mentioned at para-4 (manual lifting platform) is also part of this compartment)</p> <p><u>Compartment Shutter:</u></p> <p>1 Compartment Shutter:</p> <p>a) Shutter: 10 Nos.</p> <p>b) Dimension:</p>	<p>For (i), (ii-a, b, c, & g), (iv), (v), and (vi) BOO to be physically check and verify</p> <p>For (ii-d, e, & f), and (iii) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p> <p>For (i-a, b, d, f, g, i, j, k, l, m & n), BOO to be physically check and verify</p>

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	<ul style="list-style-type: none"> i. 1050mm (W) x 1520mm (H), 02 Nos for Compartment 1. ii. 1090mm (W) x 1520mm (H), 02 Nos for Compartment 2. iii. 1090mm (W) x 1440mm (H), 02 Nos for Compartment 3. iv. 1055mm (W) x 1440mm (H), for Compartment 4. v. 1082mm (W) x 1440mm (H), for Compartment 4. vi. 1100mm (W) x 1520mm (H), 02 Nos for Compartment 5. c) Material: High-grade aluminium alloy with anodized coating for corrosion resistance and durability. d) Thickness: Minimum 2 mm for enhanced strength and rigidity. e) Finish: Smooth, scratch-resistant, and waterproof surface finish. f) Shutter Type: Rolling aluminium shutter with horizontal slats for compact and smooth operation. g) Slat Dimensions: Standard width of 50-75 mm per slat for uniform appearance and structural stability. h) Sealing: Rubber gasket sealing along edges to ensure dustproof and waterproof protection. i) Centre Locking System: Centralized locking mechanism with a robust stainless-steel lock. j) Hinges and Rolling System: High-strength stainless steel hinges for smooth and silent movement. k) Rolling System: Equipped with a heavy-duty spring-based rolling mechanism for effortless opening and closing. Roller tracks lined with durable plastic to prevent wear and reduce noise. l) Hooks and Safety Mechanism: Hooks designed on both sides to prevent accidental sliding of shutter. m) Operation: Manual operation. n) Drainage System: Integrated drainage holes to prevent water accumulation within the rolling track. 	<p>For (i-c, e, & h,) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>
4.	<p><u>Manual Lifting Platform:</u></p> <ul style="list-style-type: none"> i. Platform: The manually operated lifting system is designed for integration into emergency vehicles. It enables the loading and unloading of equipment or objects through a platform mechanism. This Platform will be part of cabin structure hence additional Hinges (200mm) and 40 x 40 x 4mm MS Pipe & 25 x 25 x4 mm thick Angle will be required as per size requirement. ii. Dimensions: 1220 mm x 1220 mm x 75 mm thick. iii. Surface Finish: Non-slip textured surface for enhanced safety during loading/unloading. 	<p>For (i), & (ii), BOO to be physically check and verify</p> <p>For (iii), (iv), & (v) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.</p>

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	iv. Weight Capacity: Capable of supporting a load up to 300 kg (or as per operational requirement). v. Lock: Anti-reverse lock to prevent unintentional lowering.	
5.	<p><u>Manually Operated Awning:</u></p> i. Awning Dimensions: Length: 3700mm & Width: 1530mm. ii. Mount Brackets Material: Aluminium. iii. Handle Crank Specifications: a. Material: Steel Core with Plastic Coating or Aluminium for lightweight durability. b. Length: 1200-1500 mm (adjustable to user preference). c. Handle Grip Material: Rubber or moulded plastic for comfort and slip-resistance. iv. Frame Depth (When retracted): Compact to fit alongside the vehicle, typically 5-6 inches(150mm). v. Frame Material: High-strength aluminium or stainless steel for lightweight durability, Corrosion-resistant anodized or powder-coated finish to withstand environmental conditions. vi. Frame Component: a. Front Bar: Reinforced aluminium extrusion with integrated weather seals. b. Side Arms: Tensioned folding arms with gas struts or springs for smooth deployment and retraction. vii. Colour Options: colours to match the vehicle viii. Material of Cloth: Waterproof PVC-coated polyester. ix. Weight: 300-400 GSM (grams per square meter) for optimal balance of strength and portability. x. Operation: Manual crank system for extending and retracting the awning smoothly. xi. Locking mechanism to secure the awning in both retracted and extended positions. xii. Wind Resistance: Designed to withstand winds up to 30-40 km/h, with optional tie-down points for additional stability. xiii. Integrated Drainage: Channels within the frame to manage rainwater runoff. xiv. Mounting Position: Along the roofline or side panel of the emergency vehicle.	For (i), (iii-b), (vii), (x), (xi), (xiii), and (iv) BOO to be physically check and verify For (ii) (iii-a & c), (iv), (v), (vi), (viii), (ix), and (xii) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.
6.	<p><u>Air Cut:</u></p> i. Size: Width 1960mm, Height 900mm.	For (i), (ii), (v), (vi) and (vii) BOO to be physically check and verify

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S/No.	Specification	Trial directives
	ii. NDRF INDIA logo size: 1220mm x 750mm by sticker or paint as per different colours being used in NDRF Logo. iii. Angle of Air cut: 45 degrees (+/_ 10 degree). iv. Air Cut Material: 1mm thick MS sheet. v. Finishing: Smooth surface with optional matte/ glossy finish vi. Colour: Matching the vehicle's exterior. vii. Mounting System: Bolted mounting brackets with rubber padding to prevent vibrations.	For (iii), and (iv) BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.
7.	<p><u>Underbody Storage:</u></p> i. Storage: 04 Nos. Dimensions are mentioned below: a) Width: 1505mm, Height: 425mm and Depth: 420 (Conductor side, just below the Compartment No. 4) b) Width: 700mm, Height: 400mm and Depth: 1130 (Back Side, just below the Compartment No. 4) c) Width: 1600mm, Height: 490mm and Depth: 500 (Driver side, just below the Compartment No. 4) d) Width: 500mm, Height: 445mm and Depth: 560 (Driver side, just below & between the Compartment No. 1& 2) e) Width: 1280mm, Height 490, for spare tyre of vehicle without floor and walls, only front door with handle & lock. ii. Storage floor & Wall should have 3mm aluminium tread plate for a durable and anti-slip surface. iii. Storage frame: MS pipe (40mm x 40mm x 4mm), Channel (60 x 40 x 4 mm) Angle (40 x 40 x 4 mm) and various size as per requirement. iv. Welding: TIG/MIG welding for a robust and corrosion-resistant finish. v. Reinforcements: Cross-braced supports by 40x40x4mm MS Bar on every 18 inches for enhanced strength. vi. Locks: Automotive-grade cam lock system with a weatherproof rubber seal for water and dust resistance. vii. Hinges: Heavy-duty stainless-steel hinges, allowing for smooth opening and closing. viii. Handles: Recessed pull handles for easy operation and to avoid accidental damage. ix. Drainage: Floor drain hole with a removable rubber-sealed cap for cleaning and liquid drainage.	For (i), (iii), and (ix) BOO to be physically check and verify For (ii), (iv), (v) (vi), (vii), and (viii)BOO to check and verify through lab test reports from govt./NABL approved labs and OEM certificate.
8.	<p><u>Miscellaneous:</u></p> i. Paint: Acrylic base coat over epoxy primer with fade-resistant finish, offering excellent corrosion and chemical resistance and matching the vehicle's exterior paint. ii. 12 Volt Electric wiring (1mm FRLSH) in Cabin.	For (i), (iii), (iv) and (vi) BOO to be physically check and verify For (ii), and (v) BOO to check and verify through lab test reports from

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	iii. Fitment of flashlight with siren. iv. The boundaries of the vehicle should be marked with 50 mm Radium tape. v. 05 Nos 50-Watt LED flood light (3000K/ Warm White), IP66 (water proof), (Manual lifting at height 600mm) installed with appropriate size of Nut bolt & antivibration rubber seal on top of cabin, 02 Nos on each side and 01 Nos on back side. vi. Indicator light: 08 of appropriate size (03 right and left, position-300 mm below from the top of the vehicle on equal distance and 02 on back side position-300 mm below from the top of the vehicle on left and right)	govt./NABL approved labs and OEM certificate.



Piyush Anand, DG NDRF



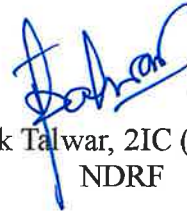
Narendra Singh Bundela, IG
NDRF



Anil Verma, DIG (Prov./Proc.),
HQ NDRF



P. K. Tiwary, Commandant, 08
BN NDRF



Deepak Talwar, 2IC (Proc.), HQ
NDRF



D. R. Choudhary, 2IC, 16 BN
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