

INDIAN RAILWAYS

RAIL COACH FACTORY, KAPURTHALA

SPECIFICATION FOR DIESEL OPERATED PLATFORM TRUCK

Specification No. Mech/M&P/3000/1

1 INSTRUCTIONS TO TENDERERS FOR FILLING TECHNICAL BID:-

- 1.1 The bidder must submit the technical offer as per the specification. All the information as asked for must be given accordingly. e.g. wherever a parametric value is asked, it should be furnished, if a write up is asked for this should be provided and if a brochure or drawing or sketch is expected this should be provided.
- 1.2 Unless otherwise stated, latest alterations/ revisions of specifications/ standards/ drawings shall be applicable. In respect of safety standards and environmental standards relevant to the machine, the machine manufacturers shall ensure compliance with international (CE/ISO/DIN/JIS)/National standards (IS) (where applicable).
- 1.3 Tenderers should offer and quote for all the specified concomitant accessories, as these are considered essential for commissioning and utilization of the machine. Even if bidder does not recommend the purchase any of these accessories upfront, the price must be quoted for comparison purposes and their recommendation/suggestion indicated in the offer. Tenderers should also quote for optional accessories, spares and consumable spares as asked in the specifications.
- 1.4 In case, any item is required in sets, please specify nos./pieces per set. This is essential for proper technical evaluation of the offer. Offers received without this may be considered as incomplete and liable to be rejected.
- 1.5 The bidder should quote only for the specified make of sub-assemblies and equipment wherever specified. Makes of sub-systems other than the specified ones will normally not be acceptable. In case, some other make is quoted, specific reasons for the same including its features/advantages over specified makes must be brought out in the offer along with the supporting documents.
- 1.6 In case there is a contradiction in any information provided (some parametric values given in the specification and those given in the brochure or some other document enclosed by the tenderer), unless specifically mentioned in the deviation cum confirmation statement, the values as given in the specification shall be taken as confirmed by the tenderer and offer evaluated accordingly.
- 1.7 The Purchaser may accept internationally accepted alternative specifications which ensure equal or higher quality than the specifications mentioned in the Technical Specification. However, the decision of the Purchaser in this regard shall be final. A copy of the alternative specifications offered should be sent along with the offer. The Tenderer should also furnish "Statement of Deviations" from tender specifications along with the offer.
- 1.8 Purchaser reserves the right to verify the details submitted by the bidder by actual site visits.

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2.0 **DESCRIPTION:**

2.1 Diesel Operated Platform Truck Cap. 3000 Kg with all the standard accessories as per Specification.

3.0 **SCOPE:**

3.1 The scope of the specification covers design, manufacture, supply, erection, commissioning and proving out of Diesel Operated Platform Truck Cap 3000 Kg.

4.0 **CAPABILITY:-**

4.1 Transportation materials of different sizes and shapes loaded on its platform and or one or more trailing trolleys coupled together – trailing loads weighing up to 3000 KG.

4.2 Transporting the trailing loads efficiently over rough surfaces.

4.3 High order of maneuverability so as to be able to operate in very narrow aisles and to negotiate very sharp turns.

4.4 Uncoupling from the trailing trolleys through control located near the operator's seat to avoid manual uncoupling of the towing hook.

4.5 Efficient working in hot, humid and dusty atmosphere of Railway Workshops. Temperature variation may be from 0° C to 50° C and Relative Humidity will be up to 98%.

4.6 Heavy duty working round the clock.

4.7 Diesel Operated Platform Truck should be capable of Auto Start by battery.

5.0 **Leading parameters (Schedule-I):** The machine shall conform to the following leading parameters.

Leading Parameters:-

5.1	Full rated capacity	:	3000 Kg
5.2	Speed	:	Unladen 9-13 km/hr Laden 7-13 km/hr
5.3	Wheel Size	:	Front :- 500x125 mm-02 nos Rear:- 500x125 mm-02 nos
5.4	Gradability	:	Laden:- 1:15 Unladen:- 1:10
5.5	Turning Radius	:	3200-3300 mm.
5.6	Wheel Base	:	1800-1850 mm.
5.7	Platform Size	:	1850 x 1200 ± 20 mm with chequered sheet. The platform should provided with end wall on the leading end (height 800-1000 mm) and remaining three ends to be flush with the platform.
5.8	Platform Height	:	600 -650 mm
5.9	Brake	:	Hydraulic foot operated on two rear wheels.

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- Parking hand brake.
- 5.10 Engine : Single Cylinder 4 stroke, air cooled, 10 HP diesel engine electric start with battery as well as rope start arrangement
- 5.11 Gear System. : Three or four forward and one reverse gear through rear wheel drive system.
- 5.12 Cooling System. : Air cooled.
- 5.13 Towing : Having suitable towing arrangement for load carrying trolleys at the rear end of platform.
- 5.14 Ground clearance : 170 mm.
- 5.15 Suspension : Suitable suspension such as leaf spring should be provided.
- 5.16 Rear Axle : It should be made from solid or tubular cross section, robust and strong enough to withstand the shock and jerks during moving on uneven surfaces.

6.0 TECHNICAL SPECIFICATION:

6.1 Size and Manoeuvrability:

The Truck should be of compact design so as to be capable of operating in very narrow aisles and negotiating very sharp turns. The Truck should also be of rugged and sturdy design to be capable of heavy duty working round the clock in railway workshops.

6.2 Chassis:

The chassis frame should be of robust construction constructed from rolled steel section and heavy steel plates adequately braced and gusseted. The chassis should be so designed to have the centre of gravity very low or stability of the truck while hauling the desired loads.

6.3 Steering and Gear Box:

The steering should be of car type for suitable angular velocity ratio for easy in manoeuvring. The truck should be provided with gear box of reputed make and best quality with at least three forward and one reverse speeds, and heavy duty clutch. The speed reduction from the engine to the front driving wheel should be through a reliable system. Spare parts for its maintenance should be easily available in the market.

6.4 Towing:

Towing bracket of ample proportions should be provided on the truck, facilitate attaching of trolleys. The detachment of trolleys from truck should be through mechanical means necessary control being located near the operator so that the operator does not have to get down from the truck for detaching the trolley.

6.5 Brakes:

Internally expanding double shoe type hydraulic brakes operate-able by a foot

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pedal should be provided.

6.6 Tyres and Wheels:

All wheels should be non-skid solid rubber cushioned type, mounted on bearings of adequate loading capacity and reputed make like SKF/FAG.

6.7 Suspension:

Suitable suspension system should be provided to absorb shocks and to provide greater riding comfort to the operator. The springs used for suspension system should be of reputed make and best quality.

6.8 Lubrication:

The bearings should be pre packed with grease, and self lubricating bushes should be used to the maximum extent possible to reduce routine maintenance to minimum. Grease nipples and other lubrication points should be provided at easily accessible locations.

6.9 Seat:

Cushioned seat for the driver with back-rest should be provided for maximum comfort to the driver.

6.10 Controls:

All controls should be designed so as to give maximum accessibility to the driver taking into consideration the comfort of the driver.

6.11 Diesel Engine:

The diesel engine of reputed make and type and of suitable horsepower should be provided to facilitate hauling of specified loads at specified speeds. Diesel truck should be capable of Auto Start with the help of battery. The starter & alternator should be of Lucas/ Bosch only.

6.12 Cowling:

The complete power-pack including the engine should be enclosed in a sheet metal cowling, which should have provision for ventilation to prevent overheating of the engine. The cowling should be so designed to facilitate easy accessibility at all points for maintenance.

6.13 PAINTING:

All surfaces to be painted should be thoroughly cleared of loose mill scales, rust, foreign matter by wire brush etc. All surfaces to be painted should be suitably subjected to anti-corrosive treatment before applying two coats of primer like red oxide/zinc chromate and two coats of synthetic enamel paint yellow and black. The colour scheme should be submitted for approval along with the tender offer.

6.14 MAINTAINABILITY:

The design of equipment will ensure that all important equipments like hydraulic equipment etc. are so positioned as to ensure easy accessibility for normal maintenance and removal for repairs etc. Grease nipples/oil cups should be provided to ensure positive lubrication at required locations.

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7.0 SPARE PARTS:

The tenderer should quote separately item-wise for spare parts recommended for two years normal maintenance.

8.0 ACCESSORIES:

8.1 List of standard accessories which will be supplied free of cost with “Diesel operated Platform Truck” should be furnished. The list should also include the following:-

- a) Spark arrestor for exhaust.
- b) Heavy duty air cleaner.
- c) Charge Reading Indicator.

8.2 List of optional accessories which may be useful to improve the working/ efficiency of Diesel Operated Platform Truck duly indicating price of each should be furnished.

9.0 SPECIAL FEATURES:

The tenderer should separately explain the special features, if any, of the equipment offered by him.

10.0 COMMISSIONING AND PROVING OUT TESTS:

10.1 The tenderer or his agent will be required to inspect the consignment at the consignee’s premises before unpacking is done and carry out a joint check of the receipt of components to avoid subsequent complaints regarding short shipment or transit damages.

10.2 For the purpose of erection, testing and commissioning of the equipments at site at Rail Coach Factory, Kapurthala (Punjab) India, the tenderer will arrange his own adequate number of personnel, material including consumables, tools and equipments etc. However, RCF shall provide necessary compressed air, water and electric supplies free of cost for the installation, commissioning and prove out of the machine. The tenderer shall arrange erection, commissioning and testing of the equipment at site at Rail Coach Factory, Kapurthala (Punjab) India-144 602, within 15 days from the date of receipt of supplies.

10.3 After successful commissioning, the supplier will prove the performance of the equipment meeting the tendered specification to the WM/TPT of Rail Coach Factory at consignee’s premises within 15 days of commissioning of the machine.

11.0 TRAINING:

Technical experts of the supplier, during commissioning of equipment will fully and adequately train operation/ maintenance staff nominated by the consignee at Rail Coach Factory, Kapurthala (Punjab).

12.0 SERVICING AND WAREHOUSING FACILITIES:-

12.1 The tenderer will clearly spell out in the offer the facilities available with him or his agent for providing adequate after-sales service in India during warranty

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period. The complete details such as organization for after sales service, availability of technically competent engineers and warehousing facilities for spares should be clearly indicated. Bidders not offering complete servicing/repair facilities in India to ensure quick response to maintenance/ servicing calls are not likely to be considered.

- 12.2 After the warranty period and AMC period, if any, the manufacturer or his agent shall agree to provide service supports for trouble shooting and obtaining spare parts. The manufacturer shall be obliged to provide spare parts required by the Purchasers for a period of 15 years from the date of delivery of the machine at the ultimate destination to safeguard against obsolescence.
- 12.3 Tenderer who are OEM, shall undertake to supply spare parts for a period of expected life of machine. Alternatively, tenderers shall also submit undertaking from OEM for supply of spare parts for a period of expected life of the machine
- 12.4 Tenderers shall indicate the list of spares required for maintenance of the machine beyond warranty period. Current cost of such spares and current service charges for the items of work of repair of machine shall also be indicated
- 12.5 During warranty period, the supplier or his authorized agent shall attend for break down as soon as possible, but in no case later than 72 hours of receipt of intimation of the breakdown. The supplier has to furnish proper guarantee to this effect.

13.0 TECHNICAL LITERATURE:

- 13.1 One copy of the printed illustrative catalogue showing features of various machines and its elements must be enclosed with each copy of the bid.
- 13.2 The successful tendered will also have to furnish, for each machine 4 copies of spare parts catalogue giving the part list number of each component with exploded views and assembly drawings of major assembly, maintenance manual, trouble shooting guide, operational manual of the machine and all electrical circuit diagrams to the consignee. The bidders should provide a list of literature, they will supply along with the machine. The technical literature shall be provided in English Language.

14.0 REFERENCES:

The tenderer should provide satisfactory evidence, acceptable to the purchaser to show that he is a licensed manufacturer and has adequate plant and manufacturing capacity and has a “quality assurance programme” He should furnish a statement giving a list of supplies made by him or similar machines in the last 5 years along with the purchaser’s names and addresses, order number, date and quantity supplied and their performance certificates and whether the supplies were made within the delivery period else his offer may not be considered. In the absence of the above information, the tender is liable to be rejected.

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15.0 **COLOUR SCHEME:**

The tenderer will indicate three suitable colour schemes for the equipments in his tender offer. The purchaser will approve one of these colour schemes at the time of issue of purchase order.

16.0 **WARRANTY:**

The warranty of stores will be as per IRS condition of contract.

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SCHEDULE-I
(Specification No. Mech/M&P/3000/01)

	Leading parameters	
1	Full rated capacity	3000 Kg
2	Speed	Unladen 9-13 km/hr Laden 7-13 km/hr
3	Wheel Size	Front :- 500x125 mm-02 nos Rear:- 500x125 mm-02 nos
4	Gradability	Laden:- 1:15 Unladen:- 1:10
5	Turning Radius	3200-3300 mm.
6	Wheel Base	1800-1850 mm.
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8	Platform Height	600 -650 mm
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10	Engine	Single Cylinder 4 stroke, air cooled, 10 HP diesel engine electric start with battery as well as rope start arrangement
11	Gear System.	Three or four forward and one reverse gear through rear wheel drive system.
12	Cooling System.	Air cooled.
13	Towing	Having suitable towing arrangement for load carrying trolleys at the rear end of platform.
14	Ground clearance	170 mm.
15	Suspension	Suitable suspension such as leaf spring should be provided.
16	Rear Axle	It should be made from solid or tubular cross section, robust and strong enough to withstand the shock and jerks during moving on uneven surfaces.

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