

TECHNICAL SPECIFICATIONS OF SKID STEER LOADER MACHINE

SN	SPECIFICATION
1.	<p><u>General :</u> It should be employable for the following tasks with the use of suitable attachments:-</p> <ul style="list-style-type: none"> a) Rock Breaking b) Limited Dozing work (Back hoe Loader) c) Snow clearance
2	<p><u>CHARACTERISTICS</u></p> <p>a) <u>Essential</u></p> <ul style="list-style-type: none"> i) Small enough to be used in confined places for constructions of class 3/3.5 track/mule track up to 5 ft width in high altitude mountainous terrain and should be able to function up to temp(-)15 degree C. ii) Self-propelled machine with capability to travel with a speed of 8 to 9 kmph X-country and high on site mobility. iii) Maintenance-free positive gear meshed transmission /hydraulic transmission. iv) It should have an excavator or a loader or excavator cum loader attachment with single/dual-cylinder loader arm, fixed to the machine at any one time with capability to fit other attachments. v) Weight with operating weight (weight with standard dirt bucket, full fuel standard tyres and an 80 kg operator) not exceeding 3600 Kg. vi) Should be possible to operate the machine in High Altitude Areas up to 18000 ft above MSL and in slushy /water logged areas for track construction tasks. vii) Changing of attachments should be user friendly and should not exceed 10 minutes in field conditions. <p>b) <u>Desirable</u></p> <ul style="list-style-type: none"> i) Should be able to clear landslides consisting of boulders up to 30 to 40 cm disaster (upto 300 kgs weight). ii) Should have a cabin to provide weather protection to operator.
3.	<p><u>Excavation performance</u> Excavator should be capable of excavating speedily in soft soil and to limited capability in rocky areas. However, it should be able to break rocks and clear the rocky outcrops/burden as desired. It should be able to work on slopes of mountains.</p>
4.	<p><u>Dozing Performance</u> Should be capable of carrying out limited dozing of soft soil/loose rocks /loose earth</p>
5.	<p><u>Performance of the equipment</u> The performance of the skid steer should be:-</p> <ul style="list-style-type: none"> a) Dump Ht-Min 2000mm

	b) Rated OP Capacity – Min 600 kg ±10 kg.
	c) Tipping Load-1100 to 1300 Kg.
6.	<u>Attachments</u> It should have capability of fitting and working with following attachments:-
	a) Excavator buckets of capacities 300 mm,450mm, 600mm
	b) Riper Tooth with 5 teeth
	c) Ditch cleaning bucket Size-550 mm-700 mm
	d) Rock Breaker, Hydraulic vibrating type
	e) Stump grinder/tree cuter, operating height 24 inches, wheel diameter 20 inches
	f) Earth Auger, Auger bit size 300 mm
	g) Snow blower-Chain driving with rotating protrusion
	h) Back hoe loader, Cutting depth 2.5 m, minimum horizontal reach 3.36m.
	i) <u>Track</u> Rubber tracks as attachments should preferably be easily mountable over wheels in field conditions.
7.	<u>Mobility</u> The machine should be self-propelled with high on-site mobility and cross country performance.
8.	<u>Night aids</u> Luminous markers should be provided on the machine and attachment to enable the operator to gauge the depth of the trench and location of arm and bucket at night.
9.	<u>Transportability</u> Should be capable of being transported over a long distance:- a) By road in 5/7.5 ton class vehicle. b) By Air in IL-76 aircraft. c) On Board /under sluing in MI-26 helicopter in full or semi knocked down state. If transported in semi Knocked down state, it should be possible to reassemble the machine in field with ease.
10.	The Skid steer shall be simple to operate and simple to store and maintain .
11.	A user handbook giving complete operation and maintenance instructions shall be provided with the equipment. The skid steer also be provided with tool kit and fast running spares.
12.	The firm should be able to provide Skid Steer Loader (one number) for trial and evaluation on “No cost No commitment basis” at HQ NDRF, New Delhi immediately if required by a technical committee to be detailed by DG, NDRF.

TECHNICAL SPECIFICATIONS:

SN	Parameters	Specifications
1	Engine assembly	Four cylinders, Liquid cooled /Power-min 60 hp deliverable at altitude 4500 mtr or above specifics of power to be

		certified by OEM. Capacity : min 2.60 Ltr
2	Transmission	Hydrostatic 4x4 independent drive
3	Tyre	04 Nos, Pneumatic Tubeless 10x16.5 Standard duty
4	Power train	Through positive gear boxes, slip free drive through forged gears/hydraulic systems.
5	Axle and suspension	Rigidly fixed, integrated into chassis
6	Brakes	Hydraulically activated and released multiple fade free brakes forming integral part of the drive motor.
7	Electric system	12/24V 150 AH-maintenance free automobile battery.
8	Cooling system	Liquid cooled one pump one loop system. Coolant is Ethylene Glycol/ water mixed (1.1)
9	Steel tracks	Manganese enriched steel with solid blocks.
10	Back hoe	Cutting depth 2.5 m, Horizontal reach–minimum 3.36 m, Swing capacity 90 degrees either side, cutting force 16.3 KMS .
11	Rock Breaker	Hydraulic, vibrating type rock breaker
12	Snow blower	Chain driven with rotating protrusions
13	Gross Vehicle Weight	Not exceeding 3600 Kg
14	Fitments	Each skid steer loader should be fitted with cold starting /provision/aids and lift hooks.

WARRANTY CLAUSE

SN	SUBJECT
1.	The seller warrants that the goods supplied under this contract conform the technical specifications prescribed and shall perform according to the said Technical specifications
2.	The Seller warrants for a period of 24 months from the date of acceptance of stores by Joint Receipt Inspection Team or date of installation and commissioning whichever is later, that the goods/stores supplied under the contract and each component used in the manufacturer there of shall be free from all types of defects /failures.
3.	If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications. The seller shall either replace or rectify the same free of charge, maximum within 45 days of notification or such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration record of the down time would be maintained by user in log book. Spares required for warranty repairs shall be provided by seller at the time of deliveries. The seller

	also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.
4.	Seller hereby warrants that necessary service and repair back up during the warranty period of the equipment shall be provided by the seller and he will ensure that the downtime is within 5% of the warranty period.
5.	If particular equipment /goods fails frequently and/or, the cumulative down time exceeds 20% of the warranty period, the complete equipment shall be replaced free of cost by the Seller within a stipulated period of 4 days of receipt of the notification from the Buyer. Warranty of the replaced equipment would start from the date of acceptance by the buyer /date of installation and commissioning.
6.	In case the complete delivery of Engineering Support Package is delayed beyond the period stipulated in this contract, then the seller undertakes that the warranty period for the goods /stores shall be extended to that extent. Service Life:- Service life of the equipment/Skid loader should be minimum 10 years. Firm should agree to ensure the supply of spares during the service life of the equipment /skid steer loader.

REPAIR AND MAINTENANCE

SN	Brief Parameters
	Firm should have proven capability to repair and maintain the equipment in-site in high altitude areas and have preferably supplied to Army, BRO or CPMFS earlier for high attitude operations. The supplier is required to provide the following.
	a) Technical literature <ul style="list-style-type: none"> (i) Users hand book /operators manual (ii) Design Specification (iii) Technical manual (iv) Manufacturer recommended list of spares (v) Illustrated spare parts list (vi) Technical manual on Spl test equipment with drawing reference (vii) Complete equipment schedule (viii) Table of tools and equipment (TOTE) and carried Spares.
	b) One set of gauges
	c) One set of special maintenance tools
	d) One set of special test equipment
	e) Presence of technical representative of the OEM during evaluation
	f) Servicing schedule
	g) Condemnation limit

	h) Permissive repair schedule
	i) Packing specifications/instructions
	j) Any addl. information suggested by the OEM
	Sufficiency clause in terms of installation material and spares should also be included by the supplier.
