GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION

GUIDE BOOK ON USE RATE HIRE CHARGES AND TRANSFER VALUE OF EQUIPMENT AND SPARE PARTS

(THIRD EDITION)

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PREFACE

The Second Revised Edition of the Guide Book on Transfer of used Equipment was published by Central Water Commission in 1975. Adoption of this Guide Book was recommended during the first conference of State Ministers of Irrigation held at New Delhi in July, 1975. This Guide Book has been widely used by the Equipment Managers not only in Irrigation and Power Sectors but also in other sectors using Heavy Earthmoving and Construction Equipment.

In the intervening period a number of cases of disputes regarding transfer value of equipment were referred to Central Water Commission for a negotiated settlement. Keeping in view the nature of problems leading to disputes in fixation of transfer price of equipment, it was considered necessary to make certain changes in the Guide Book. Accordingly, the matter was placed before the Standing Committee of Senior Mechanical Engineers. The Standing Committee in its 10th Meeting held in May, 1983 decided to revise the Guide Book. The work was assigned to a Sub-Committee consisting of the following:

1.	Chief Engineer (CMO), CWC.	... Chairman
2.	Shri D.S. Sapkal, Chief Engineer, Irrg. Deptt., Maharashtra.	... Member
3.	Shri K.H. Patel, Suptd. Engineer, Irrg. Deptt., Gujarat	... Member
4.	Shri T.N. Murthy, Suptd. Engineer, Farakka Barrage Project, W. Bengal.	... Member
5.	Shri B.S. Rai, Suptd. Engineer, Irrg. Deptt., U.P.	... Member
6.	Director (P&M), CWC	... Convener.

The revised draft Guide Book prepared by the Sub-Committee was considered and finalised by the Standing Committee of Senior Mechanical Engineers during its 12th meeting held at Trivandrum in September, 1986.

In this revised edition of the Guide Book the method of calculating depreciation has been modified keeping in view the actual working conditions and utilisation of equipment in hours vis-a-vis life in years in the Irrigation & Power Sector and the ease in maintenance of accounts. A format of Agreement has been designed and appended with the Guide Book to be signed at the time of transfer of equipment by the concerned project authorities with a view to minimise disputes at later stages. Life and repair provision of some equipment which were not covered in the earlier Guide Book have also been incorporated.

In order to streamline procedures and conditions for hiring of equipment, a new chapter on "Hiring of Equipment to contractors and other private bodies has also been incorporated in the Guide Book. In view of the enlarged scope of the Guide Book, the Standing Committee decided to change its name from "Guide Book on Transfer of Used Equipment" to "Guide Book on Use Rate, Hire Charges and Transfer value of Equipments and Spare Parts."

It is hoped that the Revised Edition will be found useful by the Equipment Managers and will reduce the cases of disputes regarding transfer value and use rates of equipment.

Kurien Matthew

(KURIEN MATTHEW)
CHIEF ENGINEER (CMO)
CENTRAL WATER COMMISSION

NEW DELHI

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CHAPTER 1 - PROCEDURE FOR TRANSFER OF SURPLUS EQUIPMENT & SPARE PARTS

1.1 SURPLUS DECLARATION : METHODOLOGY

1.1.1 Equipment

1.1.1.1. The requirement of equipment vis a vis programme of works with the Deptt. as a whole and/or a project in particular, should be reviewed every year, well before the commencement of working season and equipment which are not likely to be used at their present location should be identified. Such equipment should immediately be transfered to other locations/work sites where they can be gainfully utilised. Equipment which are not likely to be used anywhere in the Deptt. should be declared surplus.

1.1.1.2 Each State Govt. should constitute an equipment deployment committee to undertake such review regularly.

1.1.1.3 Equipment actually declared surplus or likely to be declared surplus in the near future should be classified in three categories as follows:

A) Equipment in good working order.
B) Equipment which can be economically put into good working order after repairs.
C) Equipment which cannot be repaired economically or are unfit for further use due to obsolescence or other reasons.

1.1.1.4 Lists of surplus equipment classified under A and B above i.e. equipment in good working order and equipment which can be repaired economically should be circulated by the Project/State to other State/River Valley Projects. Five copies of the lists of surplus equipment should also be sent to Central Water Commission for necessary co-ordination in expediting rehabilitation of surplus equipment.

1.1.1.5 The lists of surplus equipment should indicate following particulars:

a) Serial No.
b) Project Identification No.
c) Particulars of Equipment.
   i) Nomenclature (e.g. Shovel, Dozer, Dumper etc.)
   ii) Make & Model
   iii) Manufacturers' serial No.
   iv) Details of engine :

       Horse Power
       Make & Model
       Serial Number

d) Capacity
e) Date of initial purchase
f) Initial acquisition cost
g) Total cumulative hours worked upto date since purchased new

h) Present condition of Machine i.e. Category A or B.
i) Approximate transfer value.
j) Date when equipment can be released.
k) Remarks.

1.1.1.6 If after circulation of the list of surplus equipment as above, no response is received from any State/Project within six months from date of circulation, the owning project should take immediate steps for disposal of the equipment to its best advantage e.g. disposal through DGS&D or by inviting sealed bids or public auction depending on rules prevalent in respective States/Organisations.

1.1.1.7 For equipment classified under category 'C' i.e. beyond economical repairs, action for disposal as indicated above should be taken straightaway without circulating the lists of such equipment to other projects.

1.1.2 Spare Parts

1.1.2.1 The stock of Spare Parts should also be reviewed every year, and spare parts for equipment declared surplus/beyond economical repair/obsolete should also be declared Surplus. Even for equipment which are still under use, the stock of spare parts should be periodically reviewed. Detailed lists of surplus spare parts may be drawn up in ascending order of part numbers, assemblywise so as to facilitate easy identification. The lists of surplus spare parts be circulated to all projects/units holding the subject equipment, with reference to "Directory on Census of Equipment" published by Central Water Commission. Five copies of such lists should be sent to CWC also to help rehabilitation of these parts. The lists of spare parts should be prepared separately for engine and chasis side and should indicate:

a) Category of equipment.
b) Make & Model of equipment and engine.
c) Details of spare parts:
   Serial number
   part number
   Description
   Rate
   Amount
   Total amount

1.1.2.2 For disposal of surplus spare parts, following order of preference should be observed:

i) The Govt. Deptt. who take surplus equipment will have first preference to take the surplus spare parts.

ii) Spare parts, which are not required by Departments taking surplus equipment and when equipment of same make/model is working at other projects/locations in the State, should be transferred to such projects/locations.

iii) Surplus spare parts which cannot be rehabilitated by above methods and for which there is no response from projects in other states within six months of circulation of lists of surplus spare parts, should be disposed of immediately to the best advantage of the owning project/State.

1.2 CONDITION OF EQUIPMENT

1.2.1 At the time of transfer, equipment should invariably be in good working order. Equipment which have not completed their stipulated life and are in economically repairable condition shall also be repaired by the owner before its actual transfer to buyer. However, if facilities/funds for repair are not available with the seller, the cost of repair necessary to put the equipment in good working order, shall be estimated as mutually agreed to.

1.2.2 Seller will keep records such as log-book, history book, etc. ready for examination of the buyer alongwith complete information regarding latest major repairs & overhaul carried out in the machine.

1.3 BOOK VALUE

1.3.1 In case of equipment purchased new, the book value will be the purchase price plus freight, insurance, all taxes & duties, port clearance-charges. erection and commissioning expenses & other incidental charges.

1.3.2 In case of equipment purchased second hand, the book value will comprise of the purchase (transfer) price, freight, insurance, taxes, and duties paid & other incidental charges upto erection and commissioning of equipment including cost of overhaul/repair/reconditioning, etc. carried out after its purchase but before it is put to use.

1.3.3 Cost of initial spare parts will not be included in the book value, However, if additions & improvements are made to increase utility or efficiency of equipment, the book value shall be increased by the amount spent for such additions and improvements.

1.3.4 Book value shall not be modified due to change in market price of equipment or due to change in exchange rate in case of imported equipment.

1.3.5 Cost of civil works such as foundation for generators, foundation for batching & mixing plants, crushers, etc. if any, equired for erection of equipment shall not form part of the book value.

1.4 LIFE OF EQUIPMENT

1.4.1 Life of equipment in hours and years as given in Appendix 'A' shall be adopted.

1.4.2.1 In case of equipment purchased second hand which have not completed their scheduled life in hours or years at the time of transfer, thelife will be taken as the balance scheduled life.

1.4.2.2 For equipment which have completed their scheduled life in hours and years and is reconditioned, the balance life will be taken as 25% of the original scheduled life.

1.4.2.3 The optimum life of tyres shall be taken as 6000 hrs. or 1,00,000 kms. Actual life shall be fixed taking into account various factors effecting tyre life as given in Appendix 'B'.

1.5 PERIOD FOR COMPUTING DEPRECIATION

1.5.1 The period for computing depreciation shall be from the date of acquisition till the agreed date of transfer.

1.5.2 The period in years and the total working hours clocked by the equipment shall form the basis for computing depreciation.

1.5.3 Period for depreciation shall be calculated to the nearest completed six months. Period of less than 3 months shall be ignored & period of more than 3 months shall be taken as completed half year.

1.6 SCRAP VALUE

Scrap value of equipment shall be taken as 10% of original book value (when purchased new).

1.7 DEPRECIATION

1.7.1 Depreciation of equipment ranges from book value to scrap value. Depreciation shall be calculated based on total hours worked with reference to life in hours and also based on years lapsed since purchase with reference to life in years and the actual depreciation shall be taken as the average of depreciation based on hours and years.

1.7.2 Depreciation shall be calculated based on straight line method of depreciation.

1.8 TRANSFER VALUE

1.8.1 When equipment are in good working order and have not completed their scheduled life in years or hours, transfer value shall be the book value minus depreciation worked out as per para 1.7 above.

1.8.2 When equipment are not in good working order but are economically repairable and have not completed their scheduled life in years or hours and the equipment are put in good working order after such repairs before transfer, the transfer value shall not be less than 25% of original book value. Actual transfer value may be decided between buyer and seller.

1.8.2.1 However, if the facility/funds for repair are not available with the seller, the cost of repair necessary to put the equipment in good working order shall be estimated as mutually agreed to and the estimated cost of such repairs shall be deducted from the depreciated cost worked out as per para 1.8.1 which shall not be less than 25% of book value and the net transfer price shall not be less than 10% of original book value.

1.8.3 For equipment which have completed their scheduled life in years and hours and are in good working order or are reconditioned before transfer, the transfer value shall not be less than 25% of original book value in case of diesel powered equipment and not less than 33% in case of electrically powered equipment.

1.9 TRANSFER OF SPARES

The owing project is entitled to transfer alongwith equipment, spare parts comprising both fast and slow moving to the extent of 16% of original book value of equipment.

1.10 GENERAL

1.10.1 The transfer price of equipment shall be calculated based on book value of equipment when the transfer is between Government Departments (State or Central).

1.10.2 In case of transfer of equipment from Govt. Departments (State or Central) to Public Sector Undertakings (State or Central), the transfer value shall be calculated on the basis of current market price of similar or equivalent equipment

1.10.3 The spare parts shall be transferred at the book value of the owning project.

1.10.4 No storage charges and supervision charges shall be levied on the transfer price of equipment.

1.10.5 Storage charges not exceeding 3% can be levied on the value of spares to be transferred but no supervision charges shall be levied.

1.11 PERIOD FOR TAKING DELIVERY

1.11.1 In case, there is no dispute about the transfer value of equipment, the purchasing project should take delivery of machines at the earliest but not later than four months from the date of signing of agreement for transfer of equipment failing which the owning Project will be free to dispose of the equipment to its best advantage.

1.11.2 In case, there is a dispute regarding the transfer value of equipment, the delivery of equipment shall be taken by purchaser pending settlement of the dispute and the transfer of equipment should not be held up on this account.

1.12 METHOD OF RAISING DEBITS

1.12.1 When the value of equipment/spare parts has been agreed to between buyer and the seller, buyer will pay full amount of the transfer value before taking delivery of equipment and spare parts.

1.12.2 In case of transfer of equipment and spare parts where transfer value have not been finally settled at the time of signing of agreement and negotiation in this regard through Central Water Commission is called for, the buyer shall pay 70% of the transfer value indicated by seller before taking delivery of equipment.

1.12.3 The difference between the transfer price finally decided after negotiated settlement and the price paid as per para 1.12.2 before taking delivery shall be paid/refunded within one month of the settlement of dispute by CWC.

1.13 ASSISTANCE DURING TRANSFER

1.13.1 Seller shall provide all assistance during transfer to the extent possible, regarding dismantling, packing, loading and forwarding of equipment and spare parts on actual cost basis.

1.14 AFTER SALES SERVICE

1.14.1 In case, it is desired by the purchasing project after sales service will be provided where possible by the selling project for a period of three months after equipment are taken over, on actual cost basis, on mutually agreed terms and conditions.

1.15 SETTLEMENT OF DISPUTES

1.15.1 All cases of dispute, regarding transfer value, condition of equipment, etc. relating to transfer of equipment shall be referred to Central Water Commission either by the seller or by the buyer. The decision of Central Water Commission in this regard shall be final and binding on both the parties.

1.16 AGREEMENT

1.16.1 The buyer and seller should sign an Agreement before the actual transfer of the equipment to avoid difficulty at a later stage. The agreement should inter-alia include:

i) willingness of the buyer and the seller to the transfer of equipment/spare parts.
ii) The brief particulars of the equipment, namely make, model, Sl. No. of equipment, date of purchase and its value, total hours worked.

The seller should furnish on request to the buyer complete information regarding latest major repairs and replacement of parts carried out in the machine.

iii) Condition of the machine:

a) machine is in working order.

or

b) the machine is in economically repairable condition and the seller agrees to put the machine in satisfactory working condition before the actual transfer.

or

c) the machine is in economically repairable condition and the estimated cost of rapairs as mutually agreed upon, is to be Rs._____.

iv) Mutually agreed date of transfer of equipment.

v) Agreed transfer price of equipment/spare parts.

vi) Payment terms as agreed to.

vii) Clause regarding agreement of the seller and the buyer to refer the case to CWC in case of any dispute.

A model form for the agreement is enclosed at Appendix 'C'.

CHAPTER 2 - SCHEDULED WORKING HOURS, REPAIR PROVISION AND HOURLY USE RATE OF CONSTRUCTION PLANT & MACHINERY.

2.1 SCHEDULED WORKING HOURS

2.1.1 Shifts of Operation :

Two shifts working is considered most economical in view of the high cost of Three shifts working due to low availability factor and higher standby equipment required. Further due attention for maintenance and repairs can be given in the remaining available time. Three-shifts working should, therefore, be resorted to only in emergencies for specific jobs and periods. Single-shift-operation should be limited to works which are either located in difficult terrain subjected to vagaries of weather or where these are spread over such as in canal excavation, flood embankments, road works, etc. only when it is difficult to provide the supporting facilities for a two-shifts operation.

2.1.2 Plant Planning :

Scheduled working hours in a year with 200 available working days should be taken as below.

No. of shifts in operation	Total available time in hrs.	Availability factor	Actual available time in hrs. 2x3	Average no.of days/ yrs on 8 months basis	Available Scheduled machine hours	Average utilisation factor	Scheduled production hours
1	2	3	4	5	6	7	8
One shift	8	0.9	7.0	200	1400	0.85	1200
Two shifts	16	0.8	12.5	200	2500	0.80	2000
Three shfts	24	0.7	16.5	200	3300	0.75	2500

2.1.2.1 The above scheduled production hrs. are after taking into account the availability factor and average utilisation factor and should be taken into account for purposes of equipment planning and calculating efficiency of utilisation without any further reduction in hours.

2.1.2.2 Where increased or reduced number of working days are available depending upon the tropical conditions and geographical locations of the works or the programme of works the scheduled production hours should be increased or decreased proportionately.

2.1.2.3 For old machines, scheduled production hours should be taken as under :

Life stage of equipment in hours	Scheduled production hrs. as a percentage of scheduled production hrs. given above.
0 to 40%	100%
40 to 75%	80%
75 to 100%	65%
above 100%	40%

2.1.2.4 The efficiency of utilisation for all machines in each category be worked out w.r.t. scheduled working hours given above, inclusive of standby equipment.

2.1.2.5 The provision of standby equipment shall be made as under :

Single shift	10%
Double shift	20%
Three shifts	30%

2.1.2.6 As the equipment planning is done on peak work requirement the work phasing within the time during which it is required to be accomplished should be such that the peak requirement of equipment is not more than 25% compared to that of the average requirement.

2.1.2.7 There is need for planned replacement of equipment by inducting new equipment at different stages of project construction. It should, however, be ensured that the new equipment inducted spends, at least about 75% of its life on the project.

2.2 PERFORMANCE EVALUATION

2.2.1 Performance of equipment should be evaluated in relation to the production accomplished vis-a-vis the work targets set, and scheduled production hours could be used only as a guide. However, for the purpose of calculating efficiency of utilisation, the scheduled production hours and actual hours worked by the equipment shall be taken into account. Production targets should be drawn at Plant Planning stage for each job.

2.2.2 Evaluation of performance and utilisation should be limited to production oriented equipment only.

2.2.3 A comprehensive job deployment schedule should be drawn up and watched all through the year to keep work abreast with schedule.

2.2.4 Where equipment suffer from recurring mechanical and or structural defects or where machines are starved of essential spares, while persistent action should be taken to keep the equipment in working order, the deployment schedule and production targets should be kept under constant review simultaneously. Such situations should be brought to the notice of State Government and Central Water Commission.

2.3 REPAIR PROVISION

2.3.1 The repair provision for various categories of equipment over the whole life should be taken as given in Appendix-A. Over and above this repair provision, escalation of prices of spares might be provided for as per para 2.3.4 below.

2.3.2 Scaling of repair provision should be as below :

Ist stage 10% of total repair provision.

2nd stage 15% of total repair provision.

3rd stage 25% of total repair provision.

4th stage 30% of total repair provision.

5th stage 20% of total repair provision.

2.3.3 The repair provision could vary to the extent of about 20% over and above the indicated provision if severity of job conditions so demand.

2.3.4 The escalation of prices of spares could be provided for by a notional increase of the book value @7% per year from the date of purchase, and percentage scaled repair provision applied over this notional book value to arrive at the provision for the stage under consideration. As for instance, the scaled provision for the third stage of operation is 25% and if it occurs in the 4th year since purchase of equipment the repair provision for the 4th year could then be 25% of (C+.21C), where C is the capital cost.

2.4 HOURLY USE RATE :

2.4.1 The hourly use rate of equipment comprises of the following elements :

a) Ownership cost :
   i) Depreciation.

b) Operational cost :
   i) Repair charges.
   ii) Operators & maintenance crew charges.
   iii) POL and energy charges.
   iv) Miscellaneous supplies.

2.4.2 The various elements as mentioned above should be evaluated as below:

2.4.2.1 Depreciation:

As indicated in Chapter-1, Clause 1.7

2.4.2.2 Operational Cost.

i) Repair Charges :

At relevant scaled provision taking into consideration the escalation of prices of spares and also severity of the job conditions over operational hours during the year.

ii) Operators & Maintenance Crew Charges :

Operators & Maintenance crew charges shall be taken as per actual annual cost over the operational hours during the year. Operation Crew charges should include the wages of operators, helpers and share of supervisory staff like Chargeman and/or Foreman, Watch and Ward, etc. Maintenance Crew charges should include wages of Mechanics, Electrician, Greaser, Helper, Welder , Fitter and share of supervisory staff like chargeman and/or Foreman etc., The wages of maintenance crew should be divided equally for the group of machines to which maintenance Crew is attending.

iii) POL & Energy Charges

The POL & Energy Charges should be taken as per actuals. However, for purpose of estimating fuel/energy charges following method may be adopted.

Electrically powered equipment :

In case of electrically operated equipment the energy charges can be obtained by estimating energy consumed in Kilowatt Hour Per hour and multiplying it by the energy rate.

$$\text{Energy Consumed} = \frac{\text{BHP} \times 746}{1000} \times C_1 \times C_2$$

Where C_1 is factor for category of equipment.
C_2 is factor for type of duty to which it is put in use.

Diesel Engine Powered equipment

Fuel consumed per hour can be estimated from the following relationship.

Fuel consumption in Liters per hour = $0.22 \times \text{F.H.P.} \times C_1 \times C_2$

Where C_1 = factor for the category of equipment.
C_2 = factor for the type of duty.

values of C_1 & C_2 are tabulated below :

Sl.No.	Category of equipment	C_1 (type factor)	C_2 Light duty	Med. duty	Heavy duty
1	2	3	4	5	6
1.	Dump Truck	0.30	0.70	1.00	1.40
2.	Motor Grader	0.40	0.67	1.00	1.33
3.	Excavator	0.50	0.80	1.00	1.20
4.	Wheel loader	0.58	0.70	1.00	1.30
5.	Motorised scraper				
	a) Twin engine	0.57	0.70	1.00	1.30
	b) Single Engine	0.62	0.70	1.00	1.30

1	2	3	4	5	6
6.	Bulldozer	0.57	0.75	1.00	1.25
7.	Dozer shovel	0.61	0.75	1.00	1.25
8.	Diesel Generating sets & Air compressors	1.00	0.75	1.00	1.25

Pneumatically Operated Equipment

The cost of compressed air in Rupees per cubicmeter per minute can first be estimated by analysing use rate of Air Compressor which can then be used for the equipment. Rated capacity of equipment may be used for obtaining energy charges.

Lubricants :

The cost of lubricants can be taken as 25 to 30% of the cost of fuel/energy depending upon type of equipment.

iv) Miscellaneous & Supplies :

The hourly miscellaneous provision may be kept at 10% of the hourly repair provision. This could be suitably increased for machines using wire ropes, cutting edges, etc. and in adverse job conditions.

CHAPTER - 3 HIRING OF EQUIPMENT TO CONTRACTORS AND OTHER PRIVATE BODIES

3.1 In the past, there were not many contractors who owned equipment for doing major construction works and the equipment purchased by Government Departments used to be given on hire charges or hire purchase basis to such contractors. This practice is neither economical nor conducive to efficient working for following reasons :

1. Whenever equipment are purchased by Government Departments simultaneously organisation for operation and maintenance is created, the actual work is done by departmental men and machines.

2. In the case of contractor's Working, the responsibility gets divided and he can always find fault with the Department on account of non-availability/break down of equipment, with the result the contractor can never be penalised for delay. On the other hand, it may lead to his preferring additional claims.

3. Hiring equipment to contractor is not conducive to good and healthy working when the departmental machines are available and organisation is geared to undertake such works.

4. Sometimes equipment procured by department for hiring to contractors are not taken by the contractor thus saddling the department with idle equipment.

In view of the above, equipment should be purchased only for works to be done departmentally. No equipment should normally be purchased for hiring to contractors.

3.2 However, circumstances may arise when the contractor needs the help of department by way of equipment e.g. in case of failure of his equipment or when some equipment are required for doing a part of the total work awarded to him for which contractor is not expected to invest in purchase of equipment or any other exigencies of short duration. Under such circumstances department may agree to hire the equipment in the overall interest of work.

Whenever such occasions arise the hire charges of equipment should be worked out. Apart from the elements which comprise use rate for departmental works, various indirect costs should also be taken into account as under:

3.2.1 Ownership Costs:

i) Depreciation : As indicated in Chapter-1.
ii) Interest on Capital investment.

The interest charges are to be related to the average annual cost of equipment based on the life of equipment in No. of years. The annual cost of equipment is determined as follows :

$$A.A.I. = C \left[\frac{n+1}{2n} \right]$$

Where C is the book value and 'n' is the number of years of life of a machine. The rate of interest per annum may be taken at the prevalent Govt. rate at the time equipment is given on hire.

NOTE : In order to take account of idle time ownership costs, the total depreciation and interest charges should be multiplied by the following factors :

Monthly basis	1.2
weekly basis	1.4
Daily basis	1.6
Hourly basis	1.7

3.2.1.2 Operational Cost :

i) Repair charges as indicated in Chapter-2

ii) Operation and Maintenance Crew

Apart from the salaries of operation & Maintenance crew, the project has to spend on their housing, leave reserve, leave salary, terminal benefits, medical facilities, etc. Therefore, for purpose of hire charges the annual cost of operation and maintenance and repair crew distributed over the cost of operational hour during the year should be increased by 50%.

iii) POL and Energy Charges :

Cost of fuel/energy should be charged as per actuals; 25% to 30% of the cost of fuel/energy should be provided for lubricants :

iv) Misc. Supplies :

As per Chapter-2.

3.2.1.3 Supervision Charges.

Supervision charges can generally be fixed by the owner of equipment and should be a minimum of 10% of the total ownership and operational cost as calculated above.

3.2.1.4 Minimum Charges

The hire charges shall be recovered in respect of production equipment based on actual hours or the following minimum hour whichever is more:

	Single Shift	Double Shift	Three Shifts
Annual basis	1200	2000	2500
Monthly basis	150	250	313
Weekly basis	36	60	75
Daily basis	6	10	12

Breakdown or non-availability of equipment continuously for one hour or more shall be accounted for and shall not be charged.

3.2.1.5 General : 1) An agreement should be signed between the Deptt. and contractor laying down conditions of hiring. Format of the agreement may be devised by the Project taking into account specified situation of hiring.

2) Operation and maintenance of equipment should not be left to the Contractors.

3) Hire charges shall be levied from the time the equipment leaves the machinery yard of the project till it is returned back to a place indicated by the project.

4) Record should be maintained for actual hours worked and physical output achieved every-day.

A model form for agreement of hiring of equipment is enclosed at Appendix - 'D'.

APPENDIX 'A'

LIFE & REPAIR PROVISION OF EQUIPMENT

Sl. No.	Equipment		Life of Equipment		Repair provision (% of cost of equipment)	Remarks
	Category	Capacity	Years	Hours		
1	2	3	4	5	6	7
1.	**Excavators**					
	Shovels & Draglines	Below 1.5 cuyds	10	12,000	150	
		1.5 to 3.0 cuyds (Diesel)	12	15,000	150	
		Above 3.0 cuyds (Diesel)	15	25,000	150	
		2.5 to 4.0 cuyds (electric)	15	25,000	150	
		Above 4.0 cuyds. (electric)	20	40,000	150	
	Walking Dragline		20	30,000	150	
	Hydraulic Excavators					
	Below 1 cum.		10	15,000	100	
	-do- 1 to 2 cum.		12	17,500	150	
	Bucket wheeled Excavators		20	40,000	150	
	Dredger in Fresh water	Hull	25	-	60	
		Machine	10	-	60	
	Barges	Hull	16	-	60	
		Machine	10	-	60	
	Tugs	Hull	16	-	60	
		Machine	10	-	60	
2.	**Dumpers**					
	Bottom Dumpers	Below 20 T	8	10,000	175	
		20 T to 50 T	10	16,000	175	
		Above 50 T	12	20,000	175	
	Rear Dumpers	Below 15 T	8	10,000	175	
		15 to 35 T	10	12,000	175	
		Above 35 T & Below 50 T	12	15,000	175	
		50 T & Above	15	20,000	175	

1	2	3	4	5	6	7
3.	Scrapers					
	A. Motorised push Loaded	Up to 10 cuyds.	8	9,000	200	
	Elevating & Self-loading	Above 10 cuyds.	10	10,000	200	
	B. Towed		10	10,000	200	
			12	15,000	100	
4.	Tractors					
	Crawler	Upto 100 H.P.	8	9,000	200	
		Above 100 to 300 HP	10	12,000	240	
		Above 300 H.P.	12	16,000	240	
	Wheeled	Upto 75 H.P.	8	12,000	200	
		Above 75 H.P.	10	15,000	200	
5.	Graders		10	12,000	200	
6.	Loaders					
	Crawler		10	12,000	200	
	Wheeled		10	15,000	200	
	Belt Loaders		16	20,000	100	
	Reclaimers & stackers.		20	30,000	100	
7.	Compactors					
	a) Self propelled Sheepsfoot rollers		10	12,000	100	
	b) Drawn Sheepsfoot rollers		8	10,000	70	
	c) Vibratory rollers					
	d) Smooth drum rollers		8	8,000	200	
	e) Smooth drum vibratory rollers		8	10,000	80	
	f) Pneumatic tyred rollers		8	8,000	200	
	g) High speed Compactors		8	10,000	100	
			10	16,000	100	

1	2	3	4	5	6
8.	Water Sprinklers All sizes		10	16,000	120
9.	Canal trimmer and lining equipment. Above 200 cuyds/Hr.		16	20,000	100
10.	Drilling Equipment				
	1. Drilling Jumbo				
		a) Pneumatic	8	12,000	100
		b) Hydraulic	10	15,000	120
	2. Rock Bolting Jumbo				
		a) Pneumatic	8	12,000	100
		b) Hydraulic	10	15,000	120
	3. Air Tracks/Drilling equipment		8	8,000	80
	4. Drills				
		a) Blast hole drills	10	10,000	80
		b) Core Drills	8	8,000	80
		c) Wagon Drills	8	8,000	80
		d) Tricone rotary Drills	10	10,000	80
11.	Air Compressors				
	A. Diesel compressors				
		i) Portable upto 300 cfm.	8	10,000	100
		ii) Portable Above 300 cfm.	10	12,000	100
	B. Electric Compressors				
		i) Portable upto 300 cfm.	10	16,000	80
		ii) Portable Above 300 cfm	12	20,000	80
		iii) Stationery	20	30,000	80
12.	Blowers		12	-	80
13.	Cooling Plants				
		i) Aggregate Cooling Plant	20	40,000	75
		ii) Ice Plant	20	40,000	75
14.	Batching and Mixing plant				
		i) Cement Handling Batching and Mixing plant	18	30,000	75
		ii) Transit Mixers/Agicating cars	10	10,000	120
		iii) Portable concrete mixers	5	6,000	80

1	2	3	4	5	6
15.	Aggregate Processing Plant				
	a) Upto 100 T capacity		10	20,000	100
	b) Above 100 T capacity		15	30,000	100
16.	Stone Crusher (Elect)		15	20,000	200
17.	Shot-crete Machines		5	6,000	100
18.	Concrete Pumps		5	8,000	100
19.	Raise Climbers		15	18,000	120
20.	Pumps				
	i) Diesel Engine driven above 10 HP		8	10,000	100
	ii) Electrical upto 40 HP		12	20,000	70
21.	Well Points		12	20,000	0 100
22.	Cranes				
	i) Mobile (Pneumatic wheeled)				
		Upto 15 tons	10	12,000	150
		Above 15 tons	12	15,000	150
	ii) Crawler Mounted				
		Upto 10 tons	10	12,000	120
		Over 10 tons	12	15,000	120
	iii) Tower cranes		20	30,000	120
	iv) Truck mounted crane		10	16,000	175
23.	Transport Equipment				
	A) Heavy Transport Vehicles				
	a) Trucks & Highway Dumpers		10	2,00,00 Kms	175
	b) Tractor Trailers				
		Upto 10 T	10	2,50,000 Kms	175
		Above 10 T	12	20,000 hrs.	175
	B) Light Transport Vehicles				
	i) Jeeps ii) Station Wagons iii) Cars iv) Ambulance Cars			1,60,000 Kms.	175
	C) Aerial Transport				
	i) Ropeways ii) Cableways		20	40,000	70
	D) Rail Transport				
	Locomotives				
	Diesel		10	16,000	120
	Electrical		22	40,000	100
	Wagons		20	30,000	70
	Rail Cars		20	30,000	70
24.	Diesel Generation Sets				
	Upto 50 KVA		10	20,000	100
	above 50 KVA		15	30,000	120

APPENDIX 'B'

FACTORS AFFECTING EARTHMOVER TYRE -LIFE

Group I-MAINTENANCE INCLUDES INFLATION	
Excellent	1.1
Average	1.0
Poor	0.7
Very bad	0.4
Group II-MAXIMUM SPEEDS	
15 KM per hour	1.2
30 KM per hour	1.0
45 KM per hour	0.8
60 KM per hour	0.5
Group III-CURVES	
None	1.1
Moderate	1.0
Severe,single wheels	0.8
Severe, dual wheels	0.7
Severe, tandem wheels	0.6
Group IV-SURFACE	
Snow packed, no road exposed earth	3.0
Hard packed earth	1.0
Soft earth or sand maintained	1.0
Gravel road, well maintained	1.0
Soft earth, some rock	0.9
Mud, ordinary	0.8
Gravel road, poorly maintained	0.7
Mud, abrasive or with rock	0.5
Blasted Rock	
Soft Coal	0.9
Soft shale or limestone	0.7
Granite, gneiss, trap, ba-salt hard shale or limestone	0.6
Slate or Schist	0.4
Lava, hard surface	0.3
Obsidian, volcanic glass flint	0.1

Black Top

Clean, wet	1.4
Cold weather	1.2
Hot weather, 75°F to 100 F	0.8
Very hot, over 100°F	0.5
Group V - LOADS	
Recommended by Tyre and Rim Assembly	
Full load	1.0
50% underload	1.2
20% underload	1.1
10% overload	1.0
20% overload	0.8
40% overload	0.5
Group VI - WHEEL POSITION	
Trailing	1.0
Front (non-driving) Driving	0.9
Rear dump	0.8
Rear dump tandem	0.7
Bottom dump	0.7
Scraper , self-propelled	0.6
Group VII - GRADES, DRIVE TYRES ONLY	
Level firm surface	1.0
6% maximum	0.9
10% maximum	0.8
15% maximum	0.7
25% maximum	0.4
LOOSE or slippery surface	
10% maximum	0.6
15% maximum	0.4
Group VIII-MISCELLANEOUS CONDITIONS AND COMBINATIONS	
Favourable, or counteracting	
NONE	1.5
Unfavourable	1.0
Very unfavourable	0.8
	0.6

Following is an example showing how the tyre life would be worked out in relation to particular factors chosen from the above table, as applicable for a particular job, where the tyred equipment may be in use :

Optimum tyre life 6000 hrs. or 1,00,000 KM.

Example

To determine the tyre life with the following condition of working.

1.	Maintenance, average	1.0
2.	Speed 45 KM (maximum)	0.8
3.	Curves, moderate	1.0
4.	Surface, soft earth, some rock	0.8
5,	Load, 20% overload	0.8
6.	Wheel position, Driving Bottom dump	0.7
7.	Grades, 10% maximum firm surface	0.8
8.	Misc. condition, none	1.0

Tyre Life : (6000 hrs. or 100000 KM) x
1.0 x 0.8 x 1.0 x 0.8 x 0.8 x 0.7 x 0.8 x 1.0 = 1720 hrs.
or 28672 Km.

APPENDIX 'C'

FORM OF AGREEMENT FOR TRANSFER OF EARTHMOVING & CONSTRUCTION EQUIPMENT AND SPARE PARTS

This agreement made this _____ day of one thousand, nine hundred and_____between_____ _____hereinafter called the seller, of the first part and_____hereinafter called the buyer, of the second part.

Whereas the owner desires to transfer the following surplus equipment and/or spare parts.

A.	Brief Particulars of Equipment	Qty.
1.		
2.		
3.		
4.		

B. Spare parts as per list enclosed.

And whereas the buyer has agreed to take the above equipment and/or spare parts.

It is hereby agreed to by the seller and buyer hereto as follows:

1. The transfer of equipment and/or spare parts shall be governed by the terms and conditions as specified in the Guide-Book on Use Rate Hire Charges and Transfer Value of Equipment and Spare Parts issued by Govt. of India, Central Water Commission.

2. The effective date of transfer of equipment and/or spare parts will be_____.

3. The seller will furnish to the buyer complete information regarding latest major repairs and replacement of parts carried out in the machine.

4. The present condition of equipment has been examined and the equipment are in good working order.

OR

The equipment are not in good working order but are economically repairable and the seller agrees to put the equipment in satisfactory working condition before actual transfer.

The machine is in economically repairable conditions and the estimated cost of repairs mutually agreed upon is Rs._____.

5. The finally agreed transfer price of equipment is as under:

Brief Particulars of Equipment	Transfer Price
1.	
2.	
3.	
4.	

Or

It has not been possible to arrive at mutually agreed transfer value of equipment and seller and buyer agree to transfer the equipment pending final settlement of transfer price of equipment. The tentative transfer value of equipment as indicated by seller is as under:

Brief Particulars of Equipment	Tentative Transfer Value
1.	
2.	
3.	
4.	

Simultaneously, it is also agreed to refer the case to Central Water Commission for a negotiated settlement and the decision given by Central Water Commission shall be final and binding on both the parties. The buyer and seller shall refer the case to CWC independently stating their case. In case of failure of either party to refer the case to CWC or provide required information to CWC, CWC will be free to take ex-parte decision.

6. The total agreed amount of transfer value i.e. Rs._____ _____will be paid by demand draft drawn in favour of_____on_____ Bank payable at_____, before taking delivery of equipment and/or Spare Parts.

Pending final settlement of transfer value, the buyer will pay 70% of the tentative transfer value of equipment before taking delivery of equipment. The amount of Rs._____ will be paid by Bank Draft in favour of_____payable at _____. The difference between the price paid and final transfer value decided after negotiated settlement shall be paid/refunded within one month of settlement of dispute by CWC.

7. Assistance in dismantaling packing and forwarding, etc. will be provided by seller on actual cost basis.

8. Delivery of equipment and/or spare parts will be taken before _____failing which the seller will be free to dispose of the equipment to its best advantage.

APPENDIX 'D'

FORM OF AGREEMENT FOR HIRING OF DEPARTMENTAL EQUIPMENT TO CONTRACTORS & OTHER DEPARTMENTS

This agreement made this _____ day of one Thousand nine hundred and _____ between the President of India/Governor of _____ hereinafter referred to as "the Govt." which expression shall unless excluded by or repugnant to the context include his successors in office and assigns of the one part and _____ hereinafter referred to as "the Hirer" which expression shall unless excluded by or repugnant to the context include his heirs, etc. of the other part.

Whereas upon the application of the Hirer, the Govt. has agreed to give on hire all and singular, the equipment more particularly described in the schedule hereunder written for the period and on the terms and condition hereafter appearing.

It is hereby agreed as follows:

1. The Government shall let and the hirer shall take on hire from Govt. all and singular the equipment as specified in the schedule hereto for use of work regarding _____ at _____ for the period of _____ days/months/years from the _____ day of _____.

2. The period of hire shall be continuous and shall commence from the day the said machinery leave the Govt. yard at _____ and continue till their return to the said yard.*

3. The hirer shall furnish a Bank Guarantee to the extent of 25% of the book value of the equipment simultaneously with the execution of this agreement as security deposit for the due and proper performance of the terms and conditions of the Agreement. The Bank Guarantee will be released by Govt. after the equipment are returned to the Govt. in good working condition.

4. The hourly hire charges of equipment shall be as under:

S.No.	Description of equipment	Hourly hire charge (Rs.)
i)		
ii)		
iii)		
iv)		

The Govt. reserves the right to revise the rate of hire charges after giving one month's notice.

5. The hire charges shall be recovered based on actual hours or the following minimum hours whichever is more.

*The Government will however, have the option to withdraw the said equipment from the hirer as and when required for other urgent/ priority works.

	Single shift	Double shift	Threeshifts
i) Yearly basis	₹200	2000	2500
ii) Monthly basis	₹50	250	3₹3
iii) Weekly basis	36	60	75
iv) Daily basis	6	₹0	₹2

Continuous breakdown or non-availability of equipment for one hour or more shall be accounted for and shall not be charged. If the machinery is required to be shifted to store or workshop, the cost of such transport will be recovered from the hirer. The Hirer will have option to terminate the contract if any equipment under repair reaches Govt. store or workshop.

6. The equipment shall be operated, maintained and repaired by the departmental crew only.

7. In case any infra facilities like temporary sheds etc. are required to be provided by the Deptt. in connection with hiring of equipment to the hirer the cost of such infra facilities will be recovered from the hirer.

8. The cost of transportation of operational & maintenance crew, POL spare parts, etc. and TA/DA, if any, payable to the operation and maintenance crew shall be recovered from the hirer.

9. If any, repairs are necessary due to any reason other than normal wear & tear, i.e. due to negligence on the part of hirer, the actual or estimated cost of repairs will be recovered from the hirer.

₹0. Any loss or damage to the machinery and equipment will be made good by the hirer at his cost.

₹₹. In case of departmental contractor, the hire charges shall be paid by the hirer every month or alternatively shall be recovered from their monthly bill of work done. However, in case of other departments/ contractors, the estimated cost of hire charges shall be deposited in advance before the equipment is taken on hire.

₹2. The authorised representative of the contractor shall counter-sign the log books every day. The contractor shall provide details of total work done by the equipment everyday to the Engineer-in-Charge.

₹3. In case of any dispute arising out of this agreement, decision of the Engineer-in-Charge shall be final and binding.

HIRER

ENGINEER-IN-CHARGE

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