
2200.5.

No. RM-21 (3)/75

Dated the 4th June, 1976

To

The Secretaries dealing with the Roads in the States of : Andhra Pradesh/Assam/Bihar/Gujarat/Haryana/Himachal Pradesh/Jammu and Kashmir/Kerala/Karnataka/Madhya Pradesh/Maharashtra/Manipur/Meghalaya/Nagaland/Orissa/Punjab/Rajasthan/Tamil Nadu/Tripura/Uttar Pradesh/West Bengal/and Sikkim

Subject : Calculation of hire charges for Central machinery allotted to the states and procedure of accounting for the same

I am directed to say that this Ministry vide letter No. IDA/W. 25 (10)/63, dated the 8th October, 1964 and 28th September, 1965, and vide letter No. LRM. 1 (4)/67, dated the 20th December, 1966 and LRM. 1 (4)/65 dated the 30th April, 1968, intimated to the States about the procedure to be followed, for working out the hire charges for use of Central machinery, and for its accounting. According to this procedure, *the*

hire charges of machinery were to be calculated and debited to the works on which they were engaged, commensurate with their utilisation on those works, so that the expenditure for the usage of machinery was duly reflected in the cost of execution of central works. The State Public Works Departments accordingly had to make provisions for the same, in the works estimates before getting the same sanctioned by the Ministry.

2. It was also intimated that the hire charges of an equipment would cover the following elements :

- (i) Ownership charges
- (ii) Operational charges
- (iii) Running charges
- (iv) Over head charges

After debiting the works with the hire charges of each equipment, to the extent of utilisation of that equipment on that particular work; the ownership charges element of the hire charges were to be recovered from works and credited to the Capital Account Head "Deduct Receipt and Recoveries on Capital Account", Subordinate to Major Head "103 Capital Outlay on Public Works" adjustable by Accountant General, Commerce, Works and Miscellaneous, New Delhi in his books. Similarly Operational Charges element of hire charges were to be recovered from the works and credited to a reserve which was to be specifically earmarked for repairs etc.

3. The Road Building Machinery Committee, set up by the Government of India, examined the existing procedure, and suggested a number of modifications, both for calculating the amount of hire charges, and their accounting. Ministry examined the same, in consultation with the Ministry of Finance, and decisions arrived at, were communicated to you vide Ministry's letter No. RM. 21 (1) 75, dated the 20th June, 1975 for your information and for taking further necessary/implementation/follow-up action. The important modifications suggested by this Committee and accepted by the Ministry for calculating the hire charges, pertain to the quantum of salvage value, and economic life of the machines to be adopted. With regard to accounting, it has been decided that the procedure of crediting the operational charges element of hire charges to a reserve fund for the purpose of meeting the repair and maintenance charges of the machinery should be dispensed with. These are to be treated revenue receipts and accordingly credited to the account head "059-Public Works Hire Charges of Machinery & Equipment." The expenditure on maintenance and repairs of Central machinery will be met by making requisite provisions for the same in the Budget, in the normal course, as a revenue charges, the receipts representing operational charges being credited to the head referred above.

4. Taking the above into consideration, the economic life now to be adopted for calculation of hire charges is enclosed in Appendix I. An example, illustrating as to how revised hire charges for Central machinery are now to be worked out is given in Appendix II, for one particular machine namely Bull-Dozer. It is requested that the hire charges may please be immediately worked out for each Central machine allotted to you. The details of calculations may please be sent to the Ministry, with a copy to the Ministry's Regional Offices. As some bituminous pavement construction equipments have recently been supplied to you and may perhaps be given to Contractors by you in the State, the usage charges of these equipments may please be worked out on priority and recoveries made from the contractors on that basis. Revised hire charges for the other machines supplied earlier may also kindly be worked out at an early date. As already suggested, the amount of recovery of hire charges for tools and Plants specially those issued to contractors, may be kept both in the Divisional and Subdivisional offices in a register, in the proforma enclosed with Ministry's letter No. LRM. 1 (4)/67, dated the 20th December, 1966.

5. The hire charges may please be reviewed periodically, with the concurrence of the Ministry on basis of the actual expenses incurred during the previous years, and also taking into account the prevalent rates of P.O.L. etc.

6. Action detailed below may also kindly be taken :

- (a) In respect of vehicles like trucks, tippers etc. the Hire charges may be worked out on kilometer basis.
- (b) Minimum of 1/8th of the expected annual depreciation of machinery should be charged to the central works towards hire charges, if equipment is used for less than 1/8 of expected working hours in any particular year.

As per the recommendation No. 4.9.20 of R.B.M.C., a maximum of 1500 working hours per annum may be considered for this purpose.

- (c) In the case of equipment lent to contractor, the conditions for issuing machinery to them for use on National Highway and other Central works may be stipulated, and agreement executed with them, as suggested in Ministry's letter No. LRM-1 (4)/67, dated the 20th December, 1966. In this case of equipment lent to contractors, minimum number of hours for which the hire charges will be recovered irrespective of hours actually used, may be stipulated in the tender conditions. These minimum working hours for which recoveries are to be made from contractors are to be worked out by the State and sent to the Ministry for approval before adoption. Ministry has already requested the State to do the needful vide letter No. RM-21 (1)/75, dated the 20th June, 1975;

- (d) For accounting of the quantum of hire charges towards idle depreciation, for use on works other than Central or Centrally sponsored works, the formula prescribed by the Ministry earlier, namely $1/4$ depreciation per hour + wages of work charged staff per hour + over head at 5% of the total charges per hour, may be continued to be adopted.

(e) *Accounting of Hire Charges : Ownership Charges :*

At present capital head of account for T & P has been changed to "537 — AA Capital outlay on roads and bridges AA—National Highways, AA. 1 (2) — Tools and Plants". Therefore, the states may kindly credit the ownership charges element of the hire charges recovered from the works, to this new head of account, instead of the one indicated in Ministry's letter No. RM. 1 (4)/65, dated the 30th April, 1968.

It is understood that some State Public Works Departments did not calculate the ownership charges correctly, as total capital cost of equipment paid by Pay and Accounts Officer, Directorate General of Supplies and Disposals was intimated to them quite late. Some States also appear to have calculated the hire charges as per the State Government's Rules, since the machinery were put to use in a number of cases, prior to the communication of the procedure of working out of hire charges by the Ministry. Some States did not levy hire charges for minor equipments such as vibrators, pumps etc. A number of States have directly credited the ownership charges recovered, to the State Revenues. Some of the amounts recovered from works in this connection has also been kept under "Deposit or Suspense Head of Accounts".

It is requested that all the amounts kept under "Deposit or Suspense Head of Account" may kindly be transferred immediately to the correct head of account. Wherever, the credits were given to the State Revenues, etc. action may kindly be taken to transfer the same to the Capital Head of Central Account indicated now. The States may intimate the machinewise details of ownership charge credits already passed to Central Head of Account, the details of credits kept under "Deposit or Suspense Head of Account" and are likely to be transferred to the Central Head of Account shortly, and action proposed to be taken with regard to the credits not given to the Central head of Account or directly credited to the State Revenues.

OPERATIONAL CHARGES :

Similar action may also kindly be taken regarding credit of the Operational Charges element of hire charges. The Credits accrued in this connection may be given to the Head "059 — Public Works Hire Charges of Machinery and Equipment" adjustable by the Accountant General, Commerce, Works and Miscellaneous, New Delhi. The past credits, if kept in "suspense or deposit account" may also kindly be credited to this head of account. Action may also kindly be taken for transferring the credits to Central Head now indicated, in case they were credited to State Revenues etc. The detailed account of Operational Charges earned by each machine from the time of its receipt, may kindly be sent to Ministry.

MAINTENANCE AND REPAIR OF MACHINERY :

7. The State Public Works Departments may continue to submit maintenance and repairs estimates of Central Machinery, as per the prescribed procedure indicated in Ministry's letter No. RM. 1 (4)/70, dated the 21st July, 1972, for issuing technical sanction. The expenditure for the same would be met out of the Budget provisions made in the normal course as revenue charge and will be debitable to the sub-head 'A' — Roads and Bridges, —A—2—National Highways, A. 2 (1) (3) Machinery, subordinate to the Major Head "337 — Maintenance and Repairs of National Highways" under — Demand number 76 — Roads, and could be met from the allotment placed at your disposal from time to time.

8. This issues with the concurrence of the Ministry of Finance (Department of Economic Affairs) vide their U.O. No. 792 — E (AC)/76, dated the 24th May, 1976 and Ministry of Finance (Expenditure) vide their U.O. No. 1773-TFSII/76, dated the 26th May, 1976.

APPENDIX I

S. No.	Name of machine	Working life in hours
1.	Road Rollers (Britania-Road Marshal) 8-10 Tons capacity	18,000
2.	Truck mounted water tankers of 1000 gallons capacity	1,00,000 miles
3.	Tractor (40-50 H.P.)	12,000
4.	Air Compressors 315 C.F.M.	
5.	—do— 210 C.F.M.	10,000
6.	Tandem Road Rollers 4-6 Tons Capacity	18,000
7.	Trucks upto 5 Tons Capacity	1,50,000 miles
	Trucks above 5 Tons Capacity	2,00,000 miles
8.	Diesel driven pumping set 5 H.P.	10,000
9.	Bitumen Boilers 250/300 gal. Cap.	(Directly charged to works)
10.	Diesel generating set 15 KW	12,000
11.	Ordinary Vibrator (Immersion)	8,000
		(Charged to works)

12.	Diesel driven pumping set 10 H.P. and above	12,000
13.	Diesel winches 3-5 tons Capacity	15,000
14.	Concrete Mixers 10/7 Cft	8,000
		(Charged to works)
15.	Stone crushers 16"X9" size, 10/12 Tons/hr. capacity	
16.	Granulator 12"X7" size, 4/5 tons per hr. capacity	10,000
		(Charged to works)
17.	Diamond core drilling machine	12,000
18.	Road Rollers (Agrind Moore) 8-10 Tons	18,000
19.	Tractor Dozer, Rubber — Tyred. 140 HP and above	12,000
20.	Motor Grader, 12 ft. and above	15,000
21.	Grab dredging crane, Diesel operated (¾ cyd. and 1½ cyd.)	15,000
22.	Mobile Crane (5 ton)	10,000
	—do— (10 tons and above)	12,000
23.	Motorised scraper 9-13 cyd.	12,000
24.	Towed Scraper 9-12 cyd.	15,000
25.	Pusher (crawler tractor) 108 HP	12,000
26.	Soil Stabilisers 4' to 7 ft.	12,000
27.	Bituminous Hot Mix Plant, 25 tons hour capacity	15,000
28.	Paver Finisher, 100 ton hr. capacity	15,000
29.	Chip spreaders capable of spreading 3/8" to ¾" size chips	15,000
30.	Bitumen Pressure Distributors (10000 Gallons)	15,000
31.	Rear Dumpers 9/11 cyd.	10,000
32.	Bitumen Mixers 8-10 Tons cap.	10,000
33.	Mechanical brooms	10,000
34.	Pile driving equipment	15,000

LIFE OF SMALL ITEMS COST OF WHICH IS TO BE CHARGED TO WORKS (Only when used departmentally on central works)

1.	Air Compressors 160 CFM and below	8,000 Hrs.
2.	Sheep foot Rollers	16,000 Hrs.
3.	Compression testing machine	40,000 Hrs.
4.	Bitumen storage tank	15,000 Hrs.

(RM-21 (3)/75 dt. 5.6.76)

APPENDIX II

EXAMPLES TO ILLUSTRATE CALCULATION OF HIRE CHARGES TAKING INTO ACCOUNT THE MODIFICATIONS FINALISED ON THE BASIS OF RECOMMENDATIONS OF RBMC.

1.	Name of the equipment	— Tractor Dozer
2.	Cost per unit as per A/T	— Rs 1,02,300 (c.i.f.)—in case of imported equipments only.
3.	Ownership Charges :	
I.	Depreciation :	
(A)	Total investment at site of work including A/T Cost, sales tax, excise and other duties, transport expenses consisting of freight, insurance, loading/unloading charges and erection & commissioning on receipt	= Rs. 2,40,000.00
	<i>Note : In case of imported machines the Import duty, ocean freight, insurance, clearance and other charges incurred in port is also to be taken into account.</i>	
(B)	Deduct salvage value = 15% of (A)	
	$\frac{15 \times 2,40,000}{100}$	= Rs. 36,000.00
(C)	Total investment to be depreciated = (A-B) = Rs. 2,40,000-36,000	= Rs. 2,04,000.00
(D)	Economic life of the machine in hrs. (adopted as per RBMC recommendations)=12,000 hrs. (see Appendix I)	
(E)	Depreciation per hour $\frac{C}{D} = \frac{2,04,000}{12,000}$	= Rs. 17.00

- (F) Storage charges per hr. (1% of (C)
spread over the economic life)

$$= \frac{1 \times 2,04,000}{100 \times 12,000} = \text{Rs. } 0.17$$

Total ownership charges (I+II) Rs. 17.17

4. **Operational charges :**

- (G) Repair charges per hr. including maintenance and replacement of tyres (150% of (C) Spread over economic life $1.5 \times 2,04,000$
= $\frac{\quad}{12,000}$ Rs. 25.50

5. **Running charges :**

I. **Operating Staff/labour & wages :**

Designation	No.	Wages/month
(i) Operator	—	—
(ii) Helper	—	—
(iii) Cleaners	—	—
(iv) Misc. expenses	—	—
(v) Overtime etc.	—	—

TOTAL

- (H) Wages per Hr. = Rs. 5.20 (Also refer (d) of note below)

II. **Servicing charges :**

Designation	No	Expenditure/month
(i) Mechanic	—	—
(ii) Cleaner	—	—
(iii) POL	—	—

TOTAL

- (J) Servicing charges per hr. = Rs. 2.80

III. **Fuel lubricants etc.**

Consumption/hr.	Rate/Lit.	Cost/hr.
(i) Fuel *—	—	—
(ii) Lubricant —	—	—
(iii) Grease	—	—
(iv) Hyd. Oil	—	—
(v) Gear Oil, cotton waste, etc.	—	—
(vi) Furnace oil etc. (in case of hot mix plants etc.)	—	—

TOTAL

- (K) Cost of Lub. Oil, fuel etc./Hr. Rs. 55.90

- (L) Total running charges per hour = I+II+III = Rs. 63.90

6. **Overhead charges @ 5% of the total charge per hour**

$$= \frac{5}{100} (E+F+G+H+J+K)$$

$$= \frac{5}{100} (17.00+0.17+25.50+5.20+2.80+55.90)$$

$$= \frac{5}{100} (106.57)$$

$$= \text{Say Rs } 5.33$$

Summing up :

- Ownership charges (as in (3)) = (E+F) = 17,000 + 0.17 = Rs 17.17
 Operational charges (as in (4)) = G = Rs 25.50
 Running charges (as in (5)) = L = 63.90
 Overhead charges (as in (6)) = Rs 5.33

Hire charges per hour = A 111.90 or say Rs. 112.00

Note : While the hire charges should be calculated on the basis of actual expenditure incurred on each machine, on various items indicated above, as soon as any machine is received, provisional hire charges can be fixed assuming the following :

(a) **For Imported equipments only :**

- (i) c.i.f. cost = (F.A.S. or F.O.B. Cost) + 10% cost of machine for ocean freight.

- (ii) Custom duty and clearance charges = 50% of c.i.f. value (35% custom duty + 10% regulatory duty + 3% clearance charges)
- (b) (i) Diesel consumption = B.H.P. \times Load Factor (60%) \times Lbs. of fuel per H.P. hour (0.4)
- (ii) Lubricating oil consumption = $\frac{\text{H.P.} \times 0.6 \times 0.006}{7.4} \times t$

Where C = Crank case capacity 0.06 \times HP in gallons

t = time for changing oil = 100 hours.

- (c) the other lubricants, grease, Hyd. oil, gear oil, cotton waste etc., may be assumed to cost twice the cost of lubricant oil in case of heavy machinery. In case of rest, it is to cost same as lubricant oil.
- (d) Wages of operating staff : Although the staff will be paid for the whole year, the actual working hours is to be assumed as 1500 hours. per year. The hourly wages, may, therefore, be calculated accordingly.
- (e) *For equipments given to contractors & outside agencies :*

When the machines are issued to contractors, interest and insurance charges @ 10% of average investment will be calculated as under and added.

$$(M) = \frac{2,40,000}{1,500} \times \frac{60}{100} \times \frac{10}{100} = \text{Rs } 9.60$$

Therefore the total charges in that case would be as follows :

Ownership charges (E+F+M) = 17.00 + 1.17 + 9.60 = Rs 26.77

Operational charges G (as in 4) = Rs 25.50

Running charges (as in 5) = L = Rs 63.90

Overhead charges @ 5%
of the total charges per hr.

$$= \frac{5}{100} (E+F+G+H+J+K+M)$$

$$= \frac{5}{100} (17.00 + 1.17 + 25.50 + 5.20 + 2.80 + 55.90 + 9.60)$$

$$= \frac{5}{100} (116.17)$$

Say = Rs 5.81

Hence hire charges per hour = Rs 120.54

Say = Rs 121.00