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गुणस्तर, अनुसन्धान तथा विकास केन्द्र
त्राकुपाट, नवलपरासी

प. सं: ०८१/०८२
च. नं. ३९४

मिति: २०८१/०७/०९

श्री सबै महाशाखा/ संघीय सडक सुपरीवेक्षण तथा अनुगमन कार्यालय/आयोजना
निर्देशनालय/आयोजना/योजना/कार्यालय
सडक विभाग

बिषय : आकस्मिक मर्मत सम्भारमा प्रयोग Equipment को Guideline for Estimating
Emergency Maintenance Equipment Ownership and Operating Costs-2081
सम्बन्धमा |

उपरोक्त बिषयमा, मिति २०८१/०७/०८ को विभागीय निर्णय बमोजिम आकस्मिक मर्मत सम्भारको
लागि प्रयोग गरिने Equipment (Excavator/Loader/ Truck flat body/Trailer) को Hire Rate को
लागि Guideline for Estimating Emergency Maintenance Equipment Ownership and
Operating Costs-2081 स्वीकृत भएको व्यहोरा अनुरोध छ |

ई. प्रभात कुमार झा
निर्देशक

बोधार्थ:

श्री सडक बिभाग, बबरमहल

Guideline for Estimating Emergency Maintenance Equipment Ownership and Operating Costs-2081

Fuel/Electricity Rate		
Fuel (L/hr)	Electricity (Units/hr)	Fuel Oil (Heating) (L/hr)

Input Cell : Yellow Cell only

SN	Equipments	Activity/ Usages	Ownership Cost (NRs/Hr)	Servicing (NRs/Hr)	Maintenance (NRs/Hr)	Fuel/Electricity Demand			Fuel/Electricity (NRs/Hr)	Crew, per day	Assistant, per day	Crew, per hr	Assistant, per hr	Crew, hr	Assistant, hr	Crew & Assistant (NRs/Hr)	Total Hire rate (NRs/Hr)
						Fuel (L/hr)	Electricity (Units/hr)	Fuel Oil (Heating) (L/hr)		Skilled	Helper/Unskilled	Skilled	Helper/Unskilled	Skilled	Helper/Unskilled		
1	Excavator	Emergency Maintenance	2,160	248	413	14.40								1.000	1.000		
2	Loader	Emergency Maintenance	1,293	205	341	9.79								1.000	1.000		
3	Truck flat body/Trailer	Transport	1,064	56	111	10.80								1.000	1.000		

Method to calculate Excavator or Loader Hire Rate per hour for Emergency Maintenance

A) For Excavator

Assumed Working Hour	H	(Input)
Truck flat body/Trailer Speed, Km/hr	25	
Excavator Transportation distance, Km	d	(Input)
Use Hr of Truck flat	$(d/25)+1=T$	(1hr for Loading/Unloading)
Cost of Truck Flat (C)		T x Per hr hire rate of Truck Flat/Trailer
Cost of Truck Flat per hr of Excavator Uses (CT)	C/H	
Excavator Hire Rate (Per Hr)	CT + Total Hire Rate of Excavator (per hour)	

B) For Loader

Assumed Working Hour	H	(Input)
Truck flat body/Trailer Speed, Km/hr	25	
Loader Transportation distance, Km	d	(Input)
Use Hr of Truck flat	$(d/25)+1=T$	(1hr for Loading/Unloading)
Cost of Truck Flat (C)		T x Per hr hire rate of Truck Flat/Trailer
Cost of Truck Flat per hr of Loader Uses (CT)	C/H	
Loader Hire Rate (Per Hr)	CT + Total Hire Rate of Loader (per hour)	

Note :

- District Rate Crew/hr = 30x Daily Rate/(8*26)*
- District Rate Assistant/hr = 30x Daily Rate/(8*26)*
- Fuel Cost = Fuel Demand x Fuel Cost per liter at site / 1.13*
- Electricity Cost = Electricity Demand x Electricity Unit Cost*
- Crew/Assistant Cost = (Crew, hr x District Rate of Crew/hr) + (Assistant, hr x District Rate of Assistant/hr)*
- Rate of Equipment & Machinery = Ownership Cost + Operational Cost (Servicing Cost + Maintenance Cost + Crew/Assistant Cost + Fuel/Electricity Cost)*