William Rossell

CE 417

Homework 5

Due Date: 02-19-2018

Question: A machine cost $250,000 to purchase. Fuel, oil, grease, and minor maintenance are estimated to cost $44.00 per operating hour. A set of tires cost $12,000 to replace, and their estimated life is 3,100 use hours. A $12,000 major repair will probably be required after 6,200 hr of use. The machine is expected to last for 9,300 hr, after which it will be sold at a price (salvage value) equal to 15% of the original purchase price. A final set of new tires will not be purchased before the sale. How much should the owner of the machine charge per hour of use, if it is expected that the machine will operate 3,100 hr per year? The company’s cost of capital rate is 8.3%.



The solution is that the owner should charge approximately $76 per hour of operation.

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Homework 8

Due Date: 02-19-2018

Question: A track dozer cost $165,500 to purchase. Fuel, oil, grease, and minor maintenance are estimated to cost $35.00 per operating hour. A major engine repair costing $26,000 will probably be required after 7,200 hr of use. The expected resale price (salvage value) is 21% of the original purchase price. The machine is expected to have a useful life of 10,800 hr. How much should the owner of the machine charge per hour of use, if it is expected that the machine will operate 1,800 hr per year? The company’s cost of capital rate is 7.3%.



The solution is that the owner should charge approximately $54.50 per hour of operation.

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Homework 10

Due Date: 02-19-2018

Question: A tractor with an adjusted basis (from depreciation) of $65,000 is sold for $60,000, and a new tractor is purchased with a cash payment of $330,000. These are two separate transactions. What is the tax depreciation basis of the new tractor?

Solutions:

Due to the introduction of the third party, you must observe apparent gain and apparent loss:

Negative gain means apparent loss. This will increase the tax depreciation basis of new tractor.

The final tax depreciation basis of the new tractor is $335,000.

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Homework 11

Due Date: 02-19-2018

Question: A tractor with an adjusted basis (from depreciation) of $55,000 is traded for a new tractor that has a fair market value of $320,000. A cash payment of $225,000 is made to complete the transaction. What is the tax depreciation basis of the new tractor?

Solution:

Final Solution: $280,000