Chapter 20: Job Order Costing

DO IT! 1 Accumulating Manufacturing Costs

During the current month, Ringling Company incurs the following manufacturing costs:

(a) Raw material purchases of $4,200 on account.
(b) Factory labor of $18,000. Of that amount, $15,000 relates to wages payable and $3,000 relates to payroll taxes payable.
(c) Factory utilities of $2,200 are payable, prepaid factory insurance of $1,800 has expired, and depreciation on the factory building is $3,500.

Prepare journal entries for each type of manufacturing cost.

Solution

(a) Raw Materials Inventory 4,200
   Accounts Payable 4,200
   (Purchases of raw materials on account)

(b) Factory Labor 18,000
   Factory Wages Payable 15,000
   Employer Payroll Taxes Payable 3,000
   (To record factory labor costs)

(c) Manufacturing Overhead 7,500
   Utilities Payable 2,200
   Prepaid Insurance 1,800
   Accumulated Depreciation 3,500
   (To record overhead costs)

Action Plan

✔ In accumulating manufacturing costs, debit at least one of three accounts: Raw Materials Inventory, Factory Labor, and Manufacturing Overhead.

✔ Manufacturing overhead costs may be recognized daily. Or, manufacturing overhead may be recorded periodically through a summary entry.

Work in Process

Danielle Company is working on two job orders. The job cost sheets show the following:

Direct materials—Job 120 $6,000; Job 121 $3,600
Direct labor—Job 120 $4,000; Job 121 $2,000
Manufacturing overhead—Job 120 $5,000; Job 121 $2,500

Prepare the three summary entries to record the assignment of costs to Work in Process from the data on the job cost sheets.

### Solution

The three summary entries are:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in Process Inventory ($6,000 + $3,600) To assign materials to jobs</td>
<td>9,600</td>
</tr>
<tr>
<td>Raw Materials Inventory</td>
<td>9,600</td>
</tr>
<tr>
<td>Work in Process Inventory ($4,000 + $2,000) To assign labor to jobs</td>
<td>6,000</td>
</tr>
<tr>
<td>Factory Labor</td>
<td>6,000</td>
</tr>
<tr>
<td>Work in Process Inventory ($5,000 + $2,500) To assign overhead to jobs</td>
<td>7,500</td>
</tr>
<tr>
<td>Manufacturing Overhead</td>
<td>7,500</td>
</tr>
</tbody>
</table>

Related exercise material: **BE20-3, BE20-4, BE20-5, E20-2, E20-7, E20-8, and DO IT! 20-2.**

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Predetermined Overhead Rate

Stanley Company produces specialized safety devices. For the year, manufacturing overhead costs are expected to be $160,000. Expected machine usage is 40,000 hours. The company assigns overhead based on machine hours. Job No. 302 used 2,000 machine hours.

Compute the predetermined overhead rate, determine the amount of overhead to allocate to Job No. 302, and prepare the entry to assign overhead to Job No. 302 on March 31.

### Solution

Predetermined overhead rate = $160,000 / 40,000 hours = $4.00 per machine hour

Amount of overhead assigned to Job No. 302 = 2,000 hours × $4.00 = $8,000

The entry to record the assignment of overhead to Job No. 302 on March 31 is:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in Process Inventory</td>
<td>8,000</td>
</tr>
<tr>
<td>Manufacturing Overhead</td>
<td>8,000</td>
</tr>
</tbody>
</table>

(Assigned overhead to jobs)

Related exercise material: **BE20-6, BE20-7, E20-5, E20-6, and DO IT! 20-3.**
**DO IT! 4 Completion and Sale of Jobs**

During the current month, Onyx Corporation completed Job 109 and Job 112. Job 109 cost $19,000 and Job 112 cost $27,000. Job 112 was sold on account for $42,000. Journalize the entries for the completion of the two jobs and the sale of Job 112.

**Solution**

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished Goods Inventory</td>
<td>46,000</td>
<td></td>
</tr>
<tr>
<td>Work in Process Inventory</td>
<td></td>
<td>46,000</td>
</tr>
<tr>
<td>(To record completion of Job 109, costing $19,000 and Job 112, costing $27,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>42,000</td>
<td></td>
</tr>
<tr>
<td>Sales Revenue</td>
<td></td>
<td>42,000</td>
</tr>
<tr>
<td>(To record sale of Job 112)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>27,000</td>
<td></td>
</tr>
<tr>
<td>Finished Goods Inventory</td>
<td></td>
<td>27,000</td>
</tr>
<tr>
<td>(To record cost of goods sold for Job 112)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Action Plan**

- Debit Finished Goods Inventory for the cost of completed jobs.
- Debit Cost of Goods Sold for the cost of jobs sold.


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**DO IT! 5 Applied Manufacturing Overhead**

For Karr Company, the predetermined overhead rate is 140% of direct labor cost. During the month, Karr incurred $90,000 of factory labor costs, of which $80,000 is direct labor and $10,000 is indirect labor. Actual overhead incurred was $119,000.

Compute the amount of manufacturing overhead applied during the month. Determine the amount of under- or overapplied manufacturing overhead.

**Solution**

Manufacturing overhead applied = (140% \times $80,000) = $112,000

Underapplied manufacturing overhead = ($119,000 - $112,000) = $7,000

**Action Plan**

- Calculate the amount of overhead applied by multiplying the predetermined overhead rate by actual activity.
- If actual manufacturing overhead is greater than applied, manufacturing overhead is underapplied.
- If actual manufacturing overhead is less than applied, manufacturing overhead is overapplied.

DO IT! Exercises

**Prepare journal entries for manufacturing costs.**

*(LO 1)*

**DO IT! 20-1** During the current month, Wacholz Company incurs the following manufacturing costs.

(a) Purchased raw materials of $18,000 on account.
(b) Incurred factory labor of $40,000. Of that amount, $31,000 relates to wages payable and $9,000 relates to payroll taxes payable.
(c) Factory utilities of $3,100 are payable, prepaid factory property taxes of $2,700 have expired, and depreciation on the factory building is $9,500.

Prepare journal entries for each type of manufacturing cost. (Use a summary entry to record manufacturing overhead.)

**Assign costs to work in process.**

*(LO 2)*

**DO IT! 20-2** Milner Company is working on two job orders. The job cost sheets show the following.

<table>
<thead>
<tr>
<th></th>
<th>Job 201</th>
<th>Job 202</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>$7,200</td>
<td>$9,000</td>
</tr>
<tr>
<td>Direct labor</td>
<td>4,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Manufacturing overhead</td>
<td>5,200</td>
<td>9,800</td>
</tr>
</tbody>
</table>

Prepare the three summary entries to record the assignment of costs to Work in Process from the data on the job cost sheets.

**Compute and apply the predetermined overhead rate.**

*(LO 3)*

**DO IT! 20-3** Washburn Company produces earbuds. During the year, manufacturing overhead costs are expected to be $200,000. Expected machine usage is 2,500 hours. The company assigns overhead based on machine hours. Job No. 551 used 90 machine hours. Compute the predetermined overhead rate, determine the amount of overhead to allocate to Job No. 551, and prepare the entry to assign overhead to Job No. 551 on January 15.

**Prepare entries for completion and sale of jobs.**

*(LO 4)*

**DO IT! 20-4** During the current month, Standard Corporation completed Job 310 and Job 312. Job 310 cost $70,000 and Job 312 cost $50,000. Job 312 was sold on account for $90,000. Journalize the entries for the completion of the two jobs and the sale of Job 312.

**Apply manufacturing overhead and determine under- or overapplication.**

*(LO 5)*

**DO IT! 20-5** For Eckstein Company, the predetermined overhead rate is 130% of direct labor cost. During the month, Eckstein incurred $100,000 of factory labor costs, of which $85,000 is direct labor and $15,000 is indirect labor. Actual overhead incurred was $115,000. Compute the amount of manufacturing overhead applied during the month. Determine the amount of under- or overapplied manufacturing overhead.
CONTINUING PROBLEMS

CURRENT DESIGNS

**CD20** Huegel Hollow Resort has ordered 20 rotomolded kayaks from **Current Designs**. Each kayak will be formed in the rotomolded oven, cooled, and then the excess plastic trimmed away. Then, the hatches, seat, ropes, and bungees will be attached to the kayak.

Dave Thill, the kayak plant manager, knows that manufacturing each kayak requires 54 pounds of polyethylene powder and a finishing kit (rope, seat, hardware, etc.). The polyethylene powder used in these kayaks costs $1.50 per pound, and the finishing kits cost $170 each. Each kayak will use two kinds of labor: 2 hours of more-skilled type I labor from people who run the oven and trim the plastic, and 3 hours of less-skilled type II labor from people who attach the hatches and seat and other hardware. The type I employees are paid $15 per hour, and the type II employees are paid $12 per hour. For purposes of this problem, assume that overhead is allocated to all jobs at a rate of 150% of direct labor costs.

**Instructions**

Determine the total cost of the Huegel Hollow order and the cost of each individual kayak in the order. Identify costs as direct materials, direct labor, or manufacturing overhead.

WATERWAYS

*(Note: This is a continuation of the Waterways problem from Chapter 19.)*

**WP20** Waterways has two major public-park projects to provide with comprehensive irrigation in one of its service locations this month. Job J57 and Job K52 involve 15 acres of landscaped terrain that will require special-order sprinkler heads to meet the specifications of the project. This problem asks you to help Waterways use a job order cost system to account for production of these parts.

*Go to the book’s companion website, at [www.wiley.com/college/weygandt](http://www.wiley.com/college/weygandt), to find the completion of this problem.*