Many farmers have reduced their machinery costs by owning equipment jointly. This helps smaller operators utilize machinery more efficiently and still enjoy the convenience of owning a full line. It also helps younger operators get started with less capital tied up in machinery.

The key to successful joint ownership is for the partners to agree on when and how to use each piece of equipment. Depending on weather and crop conditions, decisions may have to be made on a day-to-day basis. The object is the completion of field work in a timely manner, while minimizing the time spent transporting machinery.

All parties should have a written agreement explaining how the joint ownership will be dissolved in case of disagreement or termination of farming by one party. The agreement also should explain how to determine the value of the machinery at the time of dissolution.

Sharing Costs
Costs of jointly owned machinery should be shared equitably. Many farmers prefer to own shared machinery on a 50-50 basis, and provide fuel and labor for use on their own acres. If each owner uses the machinery over approximately the same number of acres, this arrangement works well. Repair costs, financing payments, cash boot to trade, and income tax deductions also can be divided equally.

Unequal Use
When one owner uses a machine over more acres than the other, different arrangements are needed. For example, Al and Chris purchased a combine that will be used to harvest 600 acres for Al and 300 acres for Chris. Both will provide their own fuel and labor. The easiest arrangement is for Al to own two-thirds of the combine and Chris one-third. Al also would pay for two-thirds of the repairs and other costs.

But what if the partners use the machine in a proportion different from their ownership share? One method is for both owners to contribute to a special machinery account (Example 1). The amount contributed is equal to a typical custom rate multiplied by each person's acres. If labor and fuel are furnished by each operator, use a rate equal to about 70 to 80 percent of the custom rate. All machinery-related expenses such as fuel, repairs, and depreciation are paid from this account. Depreciation and interest should be paid to both owners in proportion to their original investments. Or, financing payments can be paid directly from the fund. At the year's end, any excess or deficit is carried over to the following year or refunded in proportion to each owner's actual use.

### Example 1.
1. Al and Chris purchase a combine for $60,000, each paying half the initial cost. They agree to each contribute $24 per acre to a special combine account.

   **Al:** $24/acre \( \times \) 600 acres = $14,400
   
   **Chris:** $24/acre \( \times \) 300 acres = $7,200
   
   $21,600

2. The following expenses are paid from the account.

   - **Fuel and lubrication:** $1,600 (paid to supplier)
   - **Repairs and maintenance:** 3,300 (paid to supplier)
   - **Labor (180 hours @ $10):** 1,800 (paid to Al)
   - **Labor (90 hours @ $10):** 900 (paid to Chris)
   - **Depreciation, interest, insurance, and housing (20% of value of combine):** 6,000 (paid to Al), 6,000 (paid to Chris)
   
   **Total:** $19,600

3. The excess funds can be carried over to the following year, or refunded in proportion to each partner’s use of the combine.

   - **Income:** $21,600
   - **Costs:** 19,600
   - **Excess:** $2,000

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Another common procedure is for the partner with the most acres to reimburse the other owner for the extra use. To calculate the amount of compensation, multiply the custom rate by the number of acres by which one owner’s share exceeds half the total. As noted above, the custom rate should be reduced by 20 to 30 percent if labor and fuel are furnished by each owner.

In Example 2, Al pays Chris $18 per acre (75 percent of a $24 custom rate) for each acre on which he uses the combine in excess of half the total. In this example, half of the 900 total acres is 450. Al’s acres exceed this by 150, so the total payment from Al to Chris would be $18 \times 150$ acres, or $2,700.

If the jointly owned implement is not self-propelled and is pulled behind each operator’s own tractor, the rental value of the tractor also should be subtracted from the custom rate. Average custom rates and tractor rental charges can be found in *Iowa Farm Custom Rate Survey*, FM 1698, available from county extension offices in Iowa. Example 3 illustrates this case.

**Example 2.**
Al and Chris purchase a used combine, each paying half of the purchase cost of $60,000.

The combine is used on 900 acres, 600 by Al and 300 by Chris.

Both furnish their own fuel and labor, and repair costs are divided equally.

1. Assume that the remaining costs, including fuel and labor, are equal to 75 percent of the custom rate of $24 per acre.
   
   $24/acre \times 75\% = $18/acre$

2. Half the total acres is 450. Al uses the combine on 150 extra acres, beyond this.

   $600\text{ acres} - 450\text{ acres} = 150\text{ acres}$

3. Al pays Chris $18 for each extra acre.

   $18/acre \times 150\text{ acres} = $2,700$

**Example 3.**
Al and Chris also purchased a no-till soybean drill for $30,000, each paying half. Al used it on 200 acres, Chris on 100 acres. Each supplied the tractor to pull it, a driver, and fuel. They agreed on a custom rate charge of $13 per acre.

1. Multiply the custom rate by 75% to exclude fuel and labor.

   $13.00 \times 75\% = $9.75\text{ per acre}$

2. They used a 140-horsepower tractor to pull the drill. The average rental rate for tractors is $0.155\text{ per horsepower-hour}$ (FM-1698, *Iowa Farm Custom Rate Survey*), so the hourly charge is:

   $140\text{ hp} \times 0.155 = $21.70\text{ per hour}$

3. At the rate of 7 acres drilled per hour, the tractor charge per acre is:

   $21.70 \div 7 = $3.10\text{ per acre}$

4. The charge for the use of the drill is:

   $9.75 - $3.10 = $6.65\text{ per acre}$

5. Half the total acres on which the drill was used is 150. Al used it on 50 acres more than this, so he pays Chris $332.50.

   $6.65 \times 50\text{ acres} = $332.50$
**Actual Costs**

In cases where some costs are divided differently than others, a complete list of actual costs and who paid them is needed.

Again, assume that Al combines 600 acres and Chris 300 acres, and they have equal ownership of the combine. They both supply their own fuel and labor, but Chris stores the combine and does all the repairs and maintenance (Example 4). At the end of the year, all costs are totaled and redivided in proportion to the number of acres on which each one used the machine. In the example, the total cost of interest, depreciation, insurance, housing, and repairs amounts to $15,300 for the year, or $17.00 per acre. Because Al used the combine on 600 acres, he should pay $17.00 per acre, or $10,200. However, the costs that he actually paid were equal to only $5,830, so he should pay Chris the difference, or $4,350.

The blank worksheet at the end of this publication can be used to perform similar calculations for other situations.

However machinery is jointly owned, good records of ownership shares, costs paid, and all other facts are necessary for business and tax purposes.
Joint Machinery Ownership Worksheet

List all costs that are not shared in the same proportion as the use of the machine. Indicate the amount paid by each owner.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Owner A</th>
<th>Owner B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investment or current value of machine</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>2.* Annual interest charge @ ____%</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>3.* Depreciation @ ____%</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>4. Insurance @ ____%</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>5. Housing @ ____%</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>6. Fuel, lubrication (annual)</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>7. Repairs and maintenance (annual)</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>8. Labor ( ____ hours @ $ ____ )</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>9. Total of costs not shared in proportion to use (sum of lines 2 through 8)</td>
<td>$__________</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>10. Annual use (acres, hours, etc.)</td>
<td>___________</td>
<td>___________</td>
<td>___________</td>
</tr>
<tr>
<td>11. Cost per acre or hour (line 9/line 10)</td>
<td>$__________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Cost to each owner (line 10 3 line 11)</td>
<td>$__________</td>
<td>$__________</td>
<td></td>
</tr>
<tr>
<td>13. **Reimbursement (line 9–line 12)</td>
<td>$__________</td>
<td>$__________</td>
<td></td>
</tr>
</tbody>
</table>

*Principal and interest payments can be substituted for depreciation and interest charges.
** The owner for which line 13 is negative pays that amount to the owner for which line 13 is positive.