# Justify Yourself

*How do you explain all the waste, lost time, and inconsistent runs?*

## *How many decades before the Repeater™ Valve earns its keep, hmm?*

Well, your precise results will depend on your exact conditions, of course—here's a worksheet to try it out for yourself, with an example to help you along…

| ITEM | VARIABLE | SAMPLE DATA | | YOUR DATA |
|---|---|---|---|---|
| **A** | Material Cost | **$1.35 / lb** (Polycarbonate) | | _____ |
| **B** | Cycle time per part | **8 min.** | | _____ |
| **C** | Part Size | **7.25 lbs** (116oz) | | _____ |
| **D** | Parts scrapped per shift | **5** | | _____ |
| **E** | Machine value ($/hr) | **$35** | | _____ |
| **F** | Labor value ($/hr) | **$12** | | _____ |
| **G** | Repeater™ Valve | **$2500** | | _____ |
| | *Here's where you start calculating…* | | | |
| **H** | Material lost per shift | **36.25 lbs** | C×D: | _____ |
| **I** | Cost of scrap per shift | **$48.93** | A×H: | _____ |
| **J** | Time lost per shift | **40 min** | B×D: | _____ |
| **K** | Machine cost per shift | **$23.33** | E×J÷60: | _____ |
| **L** | Employee cost | **$16.00** | F×J÷60×2*: | _____ |
| | (*×2, because it took 40 minutes to produce the bad parts, then another 40 to produce the good parts) | | | |
| **M** | Total cost per shift | **$88.26** | I+K+L: | _____ |
| **N** | **Shifts** required for the Repeater™ Valve to pay for itself | **29 shifts** | G÷M: | _____ |
| **O** | **Days** required | **10 days** | P÷(shifts/day) | _____ |

In our example, with three shifts a day, the valve pays for itself in ten days. Looking into the future, in the course of a year, we'd save $88.26 per shift for 660 shifts (220 working days) coming to **a savings of $58,251.60** per year.

*Note: The above worksheet ignores the savings to be found in the following areas:*
*1) The cost of regrinding material.*
*2) The lost machine production time that could never be recovered.*
*3) The cost of electricity that would be used to produce the bad parts.*
*So the $58,251.60 savings is a conservative estimate for our example.*

**Less than ten days, in this example…**

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