

The Warranty Ogre

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Part 1: More questions than answers?

What is the function of warranty?

How should it be priced on jobs?

What are the accounting transactions that track it?

How does flat rate pricing impact warranty?

What about extended warranties?

How can I reduce my warranty costs?

As a consultant, I hear these questions all the time from concerned contractors. Let's explore them together in this article.

What should warranty do?

Warranty can be defined as a promise by the contractor that if certain things go wrong with an installation during a specified period of time after that installation is completed, the contractor will fix that situation at no charge (or a clearly specified charge) to the owner. Manufacturers warrant their products (and specific components of their products) in various ways, and they usually require contractors who install their products to likewise warrant their portion of the job for a specific period of time (usually one year). Therefore, it makes sense for a contractor to build a contingency reserve into every job to defray the possible expenses that may be incurred during the warranty period.

Is warranty a function that supports sales, or is it a service function?

How you view warranty's function will dictate how you price it!

If you view warranty as a service function, you will have to compute the warranty contingency to recover what you would normally sell service for. This means at your street rate for labor plus the markup for parts (since manufacturers usually only reimburse you for the *cost* of parts). Depending on how you price service, you could be adding a large enough warranty contingency to overprice yourself in your market and lose sales.

But if you view warranty as a way to support (even to close) sales, you'll approach it differently. You will probably want only to recover the cost of your labor plus a markup on labor and parts based on the installation department's overhead, not the service department's. This will result in a smaller warranty contingency and thus lower job price, helping you get more sales.

An example of how to price it

Let's suppose you are going to install a 90% furnace, a 3-ton 16.0 SEER condensing unit, an evaporator coil, a humidifier, an electronic air cleaner, and a programmable thermostat. Further assume that the overhead in your installation division runs 24% of sales and the service overhead runs 56%. Finally, assume that your *highest paid* service tech costs the company \$36 an hour in wages and benefits. How much warranty contingency do we need?

That depends on your past experience with this type of job. You may discover that for a job like this, you normally average 1.5 warranty hours. Or, lacking a track record for jobs like this, you might think to yourself, "I'll just figure one call on this job and that it will take 2 hours." Still other contractors play the averages and

measure their cost of warranty labor as a percentage of the job costs.

Let's assume for this first example that your experience suggests to allow 1.5 hours per job, and that you view warranty as a sales support function. The warranty contingency calculations look like this:

1. Time = 1.5 hours
2. Cost = 1.5 hours x \$36 / hr = \$54.00
3. Markup to achieve a 10% net profit on 24% overhead is found by:

$$\text{MU} = \frac{1}{1 - (0.24 + 0.10)} - 1 = \frac{1}{0.66} - 1$$

$$= 1.52 - 1 = 0.52$$
4. Markup on labor = \$54.00 x 0.52 = \$28.08
5. Normal ratio of parts to labor sales in the service department is 60% parts to 40% labor, giving a ratio of 60 to 40, or 1.50 to 1.
6. Parts mark-up to allow = (\$54.00 labor + \$28.08 labor markup) x 1.50 parts to labor ratio = \$123.12
7. Total contingency = \$54.00 + \$28.08 + \$123.12 = \$205.20

Had our warranty experience shown we needed to allow 3 hours per job, here is the calculation:

1. Time = 3.0 hours
2. Cost = 3 hours x \$36 / hr = \$108.00
3. Markup = 0.52
4. Labor markup = \$108.00 x 0.52 = \$56.16

5. Parts to labor ratio = 1.50
6. Parts markup allowance = (\$108.00 labor + \$56.16 labor markup) x 1.50 = \$246.24
7. Total = \$108.00 + \$56.16 + \$246.24 = \$410.40

If you apply a percentage to job costs, you might get a calculation like this:

\$2,180 job costs x 5% warranty =
\$109.00 contingency

Warranty as a service function is different!

Suppose, however, you view warranty as a service function? How do these examples compute now?

Case 1: 1.5 hours per job

1. Time = 1.5 hours
2. Service labor "street rate" = \$90.00 / hr
3. Allowance for labor = 1.5 hrs x \$90.00 / hr = \$135.00
4. Parts sales to labor sales = 1.50
5. Parts sales would be = \$135.00 x 1.50 = \$202.50
6. Parts cost to deduct (covered by manufacturer) = ???

It looks like we just hit a brick wall! We don't know what the parts costs will be.

But we can *deduce* this figure.

Looking at our service department's costs, we note that the ratio of parts costs to labor costs is 1.25. So if labor costs us \$54.00 (1.5 hrs @ \$36 / hr), our parts cost would probably be \$54.00 x 1.25 or \$67.50. Now, back to our problem:

$$6. \text{ Parts cost to deduct} = (\$67.50)$$

$$7. \text{ Total contingency} = \$135.00 + \\ \$202.50 - \$67.50 = \underline{\$270.00}$$

Note that this is \$64.80 *higher* than the contingency we got when we viewed warranty as a sales support function. Might this difference cost us the job?

Case 2: 3 hours per job

1. Time = 3.0 hours
2. Allowance for labor = \$270.00
3. Parts sales = \$405.00
4. Less parts costs = (\$135.00)
5. Total contingency = \$270.00 + \$405.00 - \$135.00 = \$540.00

The sales support philosophy gave us a contingency of \$410.40, some \$129.60 less than this contingency.

Flat rate service pricing and warranty

How does flat rate service pricing affect warranty?

Contractors who wish to be reimbursed by factories for warranty work at their flat rates are in for a rude shock when it comes to pricing the warranty contingency.

Let's assume that your diagnostic fee is \$59.00 and that your flat rate is based on a rate of \$120.00 per hour. How would warranty-as-a-service-function pricing work out under a flat-rate system?

Case 1: 1.5 hours per job

1. Diagnostic fee = \$59.00

$$2. \text{ Labor} = 1.5 \text{ hrs}$$

$$3. \text{ Labor charge} = 1.5 \text{ hrs} \times \$120 / \text{hr} = \\ \underline{\$180.00}$$

$$4. \text{ Parts (at a parts to labor ratio of} \\ 1.50 \text{ to } 1) = \underline{\$270.00}$$

$$5. \text{ Less parts cost (assuming parts cost} \\ \text{are } 1.25 \text{ times labor costs, and labor} \\ \text{costs } \$36 \text{ per hour)} = \underline{(\$67.50)}$$

$$6. \text{ Total contingency} = \$59.00 + \\ \$180.00 + \$270.00 - \$67.50 = \\ \underline{\$441.50}$$

A lot of dealers don't think they can add \$250 for a humidifier. Do you think it would be any easier to add almost \$236.30 for warranty?

And this is only the *minimum*. The exact nature of the repair may push the flat rate allowance even higher.

It doesn't get any better with the other two cases we examined earlier. I won't even bother with the math. By now, you should have gotten the point.

I recommend....

My recommendation is that you view warranty as a sales support function and treat it differently from normal "cash" service sales. Not only is this a more competitive approach—it is also more realistic. A warranty service call is run to take care of a customer (who bought the job in the first place *partly* because of your warranty coverage) whose job you are already very familiar with (after all, you installed it!). A cash service call is run on a who-knows-what kind of job (so your risk is greater) and it is being run to fix a problem that is no longer under warranty. The customer's "grace period" has expired and he can be expected to pay a reasonable fee for the service.

Summary

How you view warranty dramatically affects how you allow for it in your job price. If you view it as a sales support function, you will use a much lower contingency allowance than if you view it as a service function. The result will be that those who use the sales function approach will end up with lower job prices (all things being equal) and have better chances of getting jobs.

Part 2: Counting Beans and X's

What are the accounting transactions for warranty?

I can't get any two accountants to totally agree on this question, so I'm not going to be able to fully answer it here.

It's all in how you view it

Your view of warranty's function should reflect how you record it on your income statement. If you are a "support sales" adherent, you'll want to record warranty as an expense to the installation division *at installation's rate*. If you are a "service function" disciple, you'll record warranty as an expense to installation *at your going service "street" rate*.

Even if you are a "support sales" contractor, you need to make a supplemental calculation for your income statement. Although you are recording warranty expenses at your going installation rate, you'll want to compute its true cost in terms of opportunity.

Let's face it— while a tech is running a warranty call, you cannot sell his or her time to a "cash" customer. The difference between your normal service "street" rate and the warranty costs you actually incur is the opportunity cost of warranty. It does *not* go on your income statement, but it *is* a calculation you should run

to sensitize everyone in the company to the true cost of warranty.

As an **example**, let's suppose that at the end of your fiscal year, you have recorded \$10,000 in warranty expenses. What would be the opportunity cost?

From our Case 1 calculations earlier, we see that a \$205.20 warranty contingency covers \$54.00 in labor costs, \$28.08 in labor markup, and \$123.12 in parts markup. Since \$10,000 is about 49 times as much as \$205.20, we could expect our warranty of \$10,000 to include 49 times \$54.00, or \$2,646 in labor costs, 49 times \$28.08, or \$1,376 in labor markup, and the balance-- \$5,978-- in parts markup.

At \$36 / hour, \$2,646 in labor is about 74 hours. If we normally sell service for \$120 / hour, warranty labor represents 74 x \$120 or \$8,880 in cash service labor sales. Parts sales, we found earlier, were 1.5 times the labor sales, so parts would have sold for \$13,320. The opportunity cost of our warranty thus comes out to \$8,888 + \$13,320 - \$10,000 = \$12,208 per year! The total costs would then be \$12,208 plus the \$10,000 actual costs, or \$22,208.

So as a rule of thumb, if you record warranty costs at your normal contracting sales rate, the cash value of warranty (at street rate) would be about twice your recorded costs.

If (heaven forbid!) you record warranty costs at only the *cost* of your labor (no markup for parts or labor), the cash value of warranty will run about five times your recorded costs.

Be careful who you charge it to

If your income statement is departmentalized and you measure each department on the bottom line performance, you must be careful how you handle warranty.

If you view warranty as a service function, then your service department will record normal revenues. Your service manager will be happy. And if you build warranty correctly into your job prices, your installation manager will be happy too. (Of course, if you build a warranty contingency at costs, then your installation

manager will get the short end of the stick for warranty when his department pays for it later and finds that the funds are inadequate to cover the costs. This fact, along with the idea that warranty as a service function makes sales prices higher than most markets will accept, is why I recommend that warranty be viewed as a sales support function.)

If you view warranty as a sales function, the costs of doing warranty should not impact the service division. To do that, you'll need to record the cost of doing warranty entirely under the installation division (after all, they collected for it when they sold the job). This also means that the cost of the service tech who ran the call and any lost parts markups get billed to the contracting division as well.

Notice this: the *time* of the tech gets charged to *installation* as part of the warranty expense account, not to service.

This has a number of effects. First, it truly imputes the cost of warranty to the division that collected for it. Second, since no service revenues are collected, there should be no service wages to go against the service department. The service department's cash performance is not diluted. Third, since I advocate allocating shared overhead costs to each division in proportion to that division's percentage of the total direct labor used, the additional hours in the installation division shift more of the shared overhead to that division and less to service.

This has two desirable effects. (1) It means that since service posted no revenues for those hours the tech was on warranty call, it bears no overhead either. (2) It makes the installation manager *very* watchful of warranty and its causes.

Now this leads to the next question on our list.

Part 3: Reducing Warranty Expenses

How can I reduce warranty expenses?

Here is a management axiom most people would accept:

If you can measure it, you can improve it.

You must be able to measure processes to improve them because the measurements establish a baseline and allow you to chart progress towards a goal.

With that in mind, let me state a management rule of thumb: warranty expenses (when figured as a sales support function), should not exceed 3% of sales. If you adhere to the service function philosophy, warranty should not exceed 8% of sales.

If you are already below these guidelines, you may not need to make warranty cost reduction a goal. But even if you are, you still may want to seek improvements. I know of some well-run shops where warranty expenses are *under 1% of sales!*

The first step in reducing warranty expenses is to know what is causing warranty. To do this, I suggest you take a note pad and write several classes of warranty call on it. A partial list might include:

- part failure
- miswired thermostat
- miswired unit
- loss of charge
- relocation of unit
- utility fault
- customer fault

(The "customer fault" category is where you can record those "nuisance" warranty calls, such as "customer did not have breaker turned on" or "customer had system switch set to cool", or "customer thought defrosting heat pump was on fire.")

Next, pull 100 warranty call tickets at random and go through them, placing a tally mark on each cause you identify, adding causes if you need to.

Now, total up the number of calls for each cause. Then rank them in decreasing frequency. This will identify your main warranty causes.

Years ago, I was the service manager for a contractor, and we decided to do this. I was shocked to see that 61% of our warranty calls were for miswired thermostats! (And I was blaming the manufacturer for our problem!)

While you're at it, don't forget to measure how much *time* your crews spend running warranty. This can be done easily with properly designed daily time tickets.

Finding a course of action

The second step in reducing warranty expenses is to analyze your frequency list and make some decisions.

In my case, the obvious course of action was *training*. I borrowed an electrical training program from our distributor and took my installers and service techs through the thermostat chapter one night after work and then we had 2 more after-work sessions over the next two weeks to actually practice wiring thermostats.

The results were encouraging. Miswired thermostats dropped from 61% of our warranty calls to under 8% in 30 days.

But sometimes, other courses of action are required. If you notice a high parts failure rate, you may need to (a) stop selling certain models, or (b) change equipment suppliers altogether.

If "customer fault" is high on your list, consider a program of customer education. This might include a post-installation visit during which the sales person explains what to expect from the new system and how it operates as well as a checklist (tip: large plenum stickers or thermostat stickers!) of things to check before calling for service. It would also include the receptionist (or whoever talks to service customers) asking a few questions over the phone that may jog the customer's memory and avert a customer-fault warranty call.

Don't give up!

The third step is to *continually* monitor the warranty call type frequency. Believe me, as soon as you conquer one warranty gremlin, another one will pop up to take its place!

Delegate, delegate!

The final step for reducing warranty expenses is to delegate the job to someone and reward them for the results. This should include responsibility to track the type and frequency, as well as the authority to train and make (or at least offer suggestions that lead to) improvements.

One contractor I know uses the approach that he will use a constant rate or percentage of job costs every year, and that the "warranty cop" gets half of what's left in the warranty account at year end with the installers getting the other half as bonuses. Although technically his warranty costs don't change from year to year, he has happier customers and employees, and he gets fewer complaints.

What about extended warranties?

I am getting more and more questions about them from contractors on flat rate pricing. They wonder why the manufacturer won't reimburse them at their flat rates on optional extended warranties. I'll try to explain why.

Manufacturers view warranties (even extended ones) as a sales support function, not a service function. If you view warranty as a service function, you'll thus take issue with what I am going to say.

Most manufacturer extended warranties are designed – and priced – to support warranty that is run as a sales function. Depending on the type of optional warranty selected, most manufacturers pay your *registered time and material street rate* for labor costs and your cost plus a markup for parts. The markup is usually adequate for a sales support warranty ap-

proach, but is short of what would be required of a service function warranty.

These programs are *not* designed to support warranty as a service function, especially for those on flat rate pricing. Were the manufacturer to offer optional warranties in such a way as to reimburse a contractor at regular *service* rates or flat rates, their cost would have to increase almost 300%. If they did that, few people would offer them, let alone sell them.

Wrap a blanket around your customer

Some progressive contractors are using manufacturer optional warranty programs as the skeletons on which they hang solid multi-year service agreements that literally weld the customer to them for as long as they care to have him as a customer.

It is done by combining a standard one-year warranty with an extended warranty, and adding an annual inspection or two for each year of the package. These inspections are priced like pre-season “clean and checks”, but with a small discount since the customer is locked in and there are no additional marketing or customer acquisition costs.

For instance, if you allow 45 minutes per inspection and a rate of \$120 per hour, you’d be looking at \$90.00 per year per inspection, for 5 years, for a total of \$450.00, which we decide to discount 10% to \$405.00. To that, we add the optional warranty which we’ll sell for, say, \$195.00, making a total of \$600.00. For only \$10.00 a month, our customer can have worry-free ownership. We’ll be out once a year to clean and check the unit, and if anything breaks down, we’ll fix it at no additional charge. (For two inspections a year, we would price the plan at \$810 + \$195 = \$1,005, or \$16.75 a month.)

The customer will benefit by having 5 years of worry-free ownership, resulting in a reliable unit that runs at peak efficiency with few (if any) breakdowns.

The company benefits by locking the customer in for 5 solid years, and enjoying the financial benefits of a prepaid service agreement.

But there is an additional benefit— if you had a customer on a clean and check agreement (one that does not cover parts or labor), and during your spring tune-up you found the condenser fan motor to be overramping, you would bring this to the customer’s attention and ask if you should replace it. The customer might give you the go-ahead, but many will prefer to leave the old motor in until it actually stops working.

Of course, the motor fails that summer— on the hottest day of the year, when you have more service calls to run than time to run them! So you have to send a tech out to replace the motor and burn up time that could have been sold to a regular cash customer. (Because, of course, you give priority scheduling and a discount on parts and labor to clean and check customers, right?)

With a full-coverage plan, if the motor is overramping during the spring inspection, just replace it. When it gets hot, it won’t fail. You’ll have that tech’s time available to take a cash call, a call that may even result in selling a new service agreement....

To Summarize

Here is what we can conclude about warranty:

- [1] It should be viewed as a sales support function, not a service revenue function.
- [2] It should be priced on an installation department’s overhead basis with markups for labor and normal parts sales.
- [3] It should be recorded as a cost of sales against installation with the service tech’s time charged to installation.
- [4] To underscore its full impact, you should know its opportunity cost.
- [5] Measure its causes to create a plan of attack to reduce it.
- [6] Treat extended warranties as a sales function, not a service function.

If you do these things consistently, you’ll generate adequate sales dollars to cover your warranty costs and produce the net profits you want to make.

Incidentally, I guarantee this article to be free of defects in spelling and punctuation for a period of one year from date of first reading or 12 months, whichever comes first.....

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