

The Purpose of Investigation



Mistaken Evaluations are cleared up by Proper Investigation!

The first thing to do when you are asked about a problem that you intend to fix is to investigate. Before you ever pick up a tool, go and see what is going on! It is very hard to troubleshoot long distance. When you are on the scene things tend to clear up. Many times, what you think is causing the problem has nothing to do with it. I have been mistaken often in thinking I know what is causing the problem before I ever investigated it.

This is serious. My wife had an ankle problem and we started treating it. Much later, after much wasted money and time, we found out she had rheumatoid arthritis. By the time we discovered it, she was in bad shape. I contracted a fungal infection one time and it took the doctors a long time to find out what was wrong. Except for God's intervention, I almost died.

Investigation is the second step in being able to fix things.

After you have evaluated it, and determined that it needs fixing, you must investigate to determine the actual problem. Once you know the actual problem, you can begin repairing it! Don't skip the investigation phase. If you start trying to repair it before you know the actual cause, you will waste much time, energy, and money in repairing something that is not broken.

When you do it this wrong way, the only thing useful you will do is gain knowledge of what not to do the next time! Take your time with the investigation and find out all you can about what is causing the problem. In the long run, you will save time, health, and money by spending the investigation time wisely. You also may learn things that will help you in the future!

Secondhand information.

Don't just take other's words for what is happening. It is important to get their take on what is happening, but they many times have only a partial understanding. I came upon a wreck one time and later I was asked about what I thought had happened. I was completely wrong on the cause. As a technician it is sometimes helpful to duplicate what may have caused the problem. Do it again if needed to see what happens.

Many times, in fact all the time, you need to get God's take on this. I am still learning how to get Him involved. I know He wants to help me, and in fact, has my best interest at heart. However, I many times forget to include Him and ask Him for help until I am well into the repairing phase and things have gotten worse. The time to pray is before things go bad!

Do what you tell children to do at crosswalks: Stop, look, and listen! Do it in that order! The expression is »Fools.rush.in.where.angels.fear.to.tread*«

In the investigation process you must decide if the thing is worth fixing or should it be replaced. Once you have investigated you need to again evaluated the problem.

Sometimes the fix is not sufficient and then the thing needs to be replaced. Take a used car for example. It may have bad brakes that need to be replaced. If the engine and transmission are also bad, replacing the brakes is a waste of resources. What is needed is for the whole car to be replaced!

Look at the Big picture.

Sometimes it is good to back off and look at the big picture. How does this problem affect the operation of the equipment, building, or business? There may be something small that can be replaced that will keep it going longer. Unfortunately, many of the problems a maintenance tech faces are the result of shoddy installation! Many times the installer is never involved in the long term use of the things that they put in and have no idea how the thing is actually used.

One of the mistakes of large projects is that inexperienced people are installing things. When one person does something wrong, he usually does it again and again throughout the whole building. He may never know of the multitudinous errors he is producing.

Look at the pictures on the next page. It is a faulty plumbing connection. The copper pipe is supposed to be inserted into the fitting all of the way, about $\frac{3}{4}$ of an inch, then soldered. Notice that it was only inserted about $\frac{1}{8}$ of an inch. When the water pressure increased over time. The connection failed. We found this one on the ninth floor of one of our residence halls. It ended up flooding the whole building costing much money and much manpower to clean it up and repair. I am sure there are other joints done this way and we are waiting for another one to fail!



It is just a small thing. I am sure the plumber was in a hurry and did not think it would make a difference. I am sure because of the angle it was hard to get it in place right.

Also, it lasted several years, but eventually, it failed! I am sure he thought that no one would notice. I am also sure that there are more plumbing joints this way, not only throughout the building but all over campus! Usually one bad decision, if not corrected quickly, turns into a bad habit, that in turn, turns into a bad character trait that becomes a career long mistake!

I remember Dr. Ruckman telling us one time that it was important to have an open mind. However, he said when you find the truth, the thing to do is to latch upon that and close your mind to that part. He said the problem with an open mind was that someone was always coming along and pouring some trash in it. One of the reasons people can't find the truth is that they keep pouring trash into their mind and the truth slips out or is muddled by the mixed-up jumble of things in the mind. A clean mind is not an empty mind. It is a prepared mind to receive the truth. The good maintenance tech strives to keep a clean mind so that he can quickly investigate the problem to find the cause. Once the correct cause is determined the solution is right around the corner. One of the problems with having many vertical spaces in a home or shop is that stuff gets piled up on them. They turn into shelves and if not kept neat and organized become a jumbled mess. One of the mistakes fix-it guys make that prevents them from being successful is having too much disorganized stuff, not only in their shop, but in their mind.

The investigation phase is an integral part of the spiritual life of a Christian also. How do I know that the King James Bible is God's preserved word? I have investigated it and found out it is true. Not only by studying history, but by applying its principles to great success! How do I know that being an active part of a local church is beneficial? By spending my entire adult life in church, raising my children in church, finding my lovely wife in church, finding good friends in church, and having God reveal His perfect will for my life in church! How do I know sin

is a killer? By investigating it and watching its effects on me and others!
How do I know God is real? By walking with Him daily for over 40 years!

It is the same with problems. When you find the source of the problem, you can find the solution to the problem. When you start by trying to fix the symptom, without knowing the cause, you end up frustrated, worn out, and unsatisfied.

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