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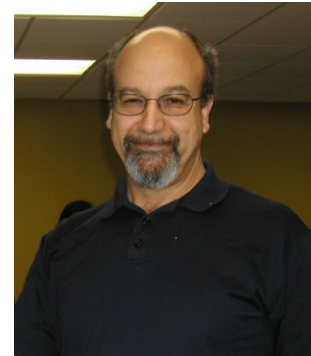
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Working with Work Orders (Buildings)

What the work order does is complicated. It serves as everything from a data entry document to a legal document in the case of a catastrophe. You want to satisfy the legal requirements, data entry requirements, cost collections, and possibly training requirements.

The primary use of the work order is to give instructions to the technician about what to do and where to do it. Verbal directions will result in too much of your work getting lost because people will be doing the wrong thing to the wrong asset in the wrong way because they didn't have it in writing.



In large sites, it is recommended that all the fax machines on the site be coded. The worker can then be told to go to a particular fax machine by number, and the work order comes -- the written document with an address or location, what's been described, what the problem is, and any other information off the file tickets. The work order will also serve as authorization for the job and an entry document for some situations.

Maintenance Write-Up Forms

There are several elements of information to include on a work order; however, you want to lay it out. On *MWU*, there are spaces for building, location, description, asset number, manager to contact for access, priority, and Reason for the write-up.

There is an order to remove and replace an updraft furnace (80,000 BTUs); remove and replace the gas lines, the electric, the ducts, and the flue; and get the city permit since it's a licensed job. In Philadelphia, a heater must be replaced by a *licensed* tradesperson, not just any tradesperson. In this case, it's been estimated to be an eight-hour job for two people.

This form has many elements you might have, or yours might need space for more complicated costing or charge-back information. It would be best to capture what happens, when it happens, how much was spent, etc.

Next is a similar kind of work order that's been changed slightly to be more convenient for certain operations, particularly for use in housing. It's the same; there's space on the sheet for people to clock in and out on jobs, put in descriptions, prices, numbers of parts, etc. There's also a place on

the bottom for notes coming back from the mechanic, just in case the mechanic has some comments.

Under “Unscheduled,” “V” is for vandalism, “D” is for damage, “C” is for customer complaint, and “OB” is for other breakdown. “Vandalism” is where no one takes responsibility for damage. “Damage” is where somebody calls up and says, “My kid broke the window with a softball,” or something like that. As you can imagine, in housing, you get many more calls for “vandalism” than “damages.”

Short Form Write-Up & Maintenance Log Sheet

These could be small jobs -- like installing or checking smoke detectors -- or doing some checks at ten different locations. Be as flexible as possible about the information on the forms to capture everything you need to retain as cheaply as possible and not miss any data.

One of the most used forms is a maintenance log sheet for short jobs. What do you do about small jobs that the mechanic could grab and do – how should they be accounted for? It is vital to account for these small jobs. It’s equally critical to provide an excellent service to your users. When the user has a 10- to 20-minute job, you can give the mechanic the choice to do it.

Frequently, grabbing a mechanic to do a small job, like replacing an outlet cover (if he has the materials with him), is the most efficient way to get the job done. Those little nuisance jobs are crucial to track. They have lots of information about how your systems are breaking down.

A lot of times, before a major breakdown, there will be minor breakdowns with their information, which can easily be lost. You also have a situation where, in a production environment, minor stoppages require slight adjustments. At the end of the month, nobody knows about them if the mechanic just climbed up and screwed this in and pulled that out and cleaned this off, and the thing’s back in operation.

You wouldn’t want mechanics to write work orders for something like that; it would create too much paperwork. The alternative is to have them carry log sheets. Log sheets are very simple. Just write a line for all those little jobs with no work orders. For example, if the mechanic has the part to replace a pressure-temperature relief valve on a water heater for a domestic hot water tank, how long does it take? If it takes half an hour, you have somebody who does not move quickly.

Of course, the unexpected sometimes happens. The water shutoff valve could break off in your hand, and everything you touch could fall apart, taking you seven hours. For that, you’d need a work order.

However, in a routine job, you would turn off the water coming into the boiler and the outgoing water so the thing is isolated; pop it off, and water will squirt out (or maybe dump it). Whatever you must do won’t take more than 15 minutes unless something goes wrong. The point is that mechanics may be on the property to do other things, which could be one of the things they do, but it may not be on the work order. They may have intended to make this replacement, or maybe they saw it dripping and did the job on the spot.

Routine Jobs

Some places have routine jobs to be done but also have a radio to contact the employees with any “do-it-now” calls. That’s an excellent way to service customers if it’s affordable for your facility. There would need to be a worker on a light schedule or where workers have jobs they can drop.

One condition for servicing customers in this way is that it is a public relations-oriented job. It would help if you had somebody good with people in that job. The maintenance department's view is frequently based on how that person presents himself. If the wrong person is in that job, everybody will get annoyed. However, it is an excellent way to indoctrinate a new employee into the facility.

Standing Work Order

The Standing Work Order is used when you want to track the routine job. Routine work is of known quantity and duration. For this, you will not want to make up a work order every week. That would be a waste of time. An example of a routine job might be the Monday morning cleanup of the weekend mess on the grounds (broken glass, burned-out bulbs, graffiti, etc.). Maybe it’s traditionally been a two-hour job. Of course, if there’s a worse-than-usual graffiti problem, you could be out there for three hours, or if it’s an easy day or it’s raining, you might only be out there an hour and a half.

The point is it’s a known and understood job. You can make up one work order for that particular job for a month or more. It can be recapped and filed after whatever criteria you have set: time, work accomplished, form spaces used up, etc. A lot of people have no work orders for these routine tasks. They just let them happen, and they use up tremendous amounts of time without being able to say what happened. For your custodial accounts, work orders can be made up and given to the workers, who will sign off when they’ve done the work and show what was done and who was there.

Work Order Information Overview

All work order types have some types of information in common:

- *Address, Date, Location.* The building and the location of the work should be included in all work requests. Location is where the unit that requires the work is located. The date should be when the manager/landlord or tenant/user wrote the form.
- *Tenant/User, Phone, Keys.* Unnecessary hours are spent each year trying to access equipment, rental units, and locked rooms. All work requested needs an access person or keys to be included in the package.
- *System.* This describes in more detail what will be worked on. Information about system codes will be on the asset detail sheet under "sub-components." System codes help the manager/landlord look for root causes. Some examples are a circulating pump on a boiler, a gutter on a roof, and a hydraulic pump on a trash compactor. Include manufacturer, model, and serial number where available and relevant.

- *Priority.* Priority helps assign work where there is more work than people. It ensures vital work is not overlooked in the rush of urgent but less critical jobs. Priority systems have a habit of being abused so tenants/users can get their work done faster (if they write up their work orders.)

Some typical priority codes in descending order:

1. Fire, Safety, Health I -A clear and present danger with automatic overtime authorized until the hazard is removed.
2. Fire, Safety, Health II - potential danger to tenant/user, public, employees, or environment.
3. Statute or Code Violation
4. Core Damage or Loss – all types of minor leads, decay, and breakage that will worsen.
5. PM Activity, OBJTV – the organization's objective, for example, apartment preparation.
6. Efficiency Improvement – energy or any other efficiency improvement.
7. Comfort, Change Use – improve space usage, improve comfort.
8. Cosmetics – improve the look of space

WORK ORDER CODES

All work orders are initiated by a reason, which needs to be noted on each work order. Below are some possible reasons to initiate a work order with suggested codes:

Code Description

Scheduled Activity (was known about at least one day in advance and planned)

- (1) PM Preventive Maintenance activity (inspection, lube, adjustment) and Survey (the initial PM inspection)
- (2) CM Corrective Maintenance (when the PM inspector finds a problem)
- (3) RM Routine Maintenance or standing work order (known work done every week)
- | | | | |
|-----|------|----------------------|---------------------------------|
| (4) | MD-O | Management Decision, | Other (not in the list below) |
| | MD-R | Management Decision, | Rehabilitate |
| | MD-I | Management Decision, | Implement new idea, Improvement |
| | MD-E | Management Decision, | Energy efficiency |
- (5) CL Cleaning and janitorial work, interior
- (6) GN Grounds, including cleaning, mowing, exterior, etc.

Unscheduled Activity (breaks into scheduled work)

- (7) V Vandalism (unreported damage)
- (8) D Damage (reported)
- (9) C Complaint (problem found by user/tenant)
- (10) OB Other Breakdown, including code violations
- (11) O Other reason for work order

As shown, priority one should always be "a clear and present fire danger" or other very intense danger. Priority two should be a safety problem or potential health problem. Priority three might be

vital work, or for some people, it might be a housing code or OSHA violations (which could also be priority four for some people).

After that, priorities vary according to the person's mission. A lower priority could be core damage or loss; the building will be damaged if repairs are not made, or the organization will suffer a loss. You would need to evaluate each of the different areas. Energy efficiency or work that would improve the efficiency of the building might be a lower priority. Changing rooms, buildings, for cosmetics are all low priorities.

Some may feel that energy efficiency is a higher priority because it can return cash flow. Try to decide what your missions are and what you need to accomplish. Make sure your priority system is set up to respond appropriately. Defining priorities helps prevent the system's abuse by people who want to get their jobs done more quickly. This way, when there is a real danger, it will be dealt with promptly and won't fall through the cracks.

Reasons for Write-Ups

Reasons for write-ups cover both scheduled and unscheduled work. In almost every case, the planned and scheduled version of the job is cheaper than the unscheduled version. For example, if a water heater is replaced on a scheduled basis, it will be less expensive than if there is an emergency call and water damage.

PM inspections, surveys, routine work, corrective work, or management decision work are the scheduled jobs. Customer complaints, breakdowns, vandalism, or damage are unscheduled or more expensive jobs. Minimize the unscheduled jobs and maximize the scheduled jobs to get the most for your money.

Recap Sheets

If you have a computerized maintenance information system, recap reports are generated by the computer. If you're running with a manual work order system, before you file your work orders, you need to recap them on two other sheets: the *Recap of Jobs* sheet and the *Reason for Repair Recap* sheet.

The *Recap of Jobs* sheet recaps information by property, floor, or area. Short summaries of each work order or log are entered on the one sheet. Recapping allows a review to detect trends such as mechanic incompetence, underlying mechanical problems, or tenant/user problems. For example, in a hospital, if you have outpatient surgery, outpatient radiology, and an outpatient lab, you might separate them by functional area. All the work done in an area gets recapped to the *Recap of Jobs* sheet by address or section.

You might want to review all the jobs in a particular area to see whether they are related, such as overloads and seemingly unrelated wiring problems in other parts of the facility. In a multi-skilled area, you might want to assign a job to somebody best qualified to deal with the particular kind of work that occurs most often there, which would be information available on the *Recap of Jobs* sheet.

You could also find out if abuse happened in a particular facility area. You might overlook this situation by looking at work orders; however, when you read a recap of each location, you can see whether there is abuse from the number and type of service calls you get in that area.

For example, one bathroom area is being abused because of a security problem. Maybe you would need to change the security in that area. The point is the area recap sheet is an excellent way to see what is going on. Information required for the *Recap of Jobs* sheet includes:

- Date of the job
- Name of the mechanic who worked on the job
- Originating work order number and system
- Name of tenant or department involved
- Short description of work requested/work completed
- Reason for repair and priority (codes used here)
- Charge-back (if there is one)
- Hours
- Materials
- Total cost.

You would take totals of those columns weekly, monthly, quarterly, or however you have scheduled.

The *Reason for Repair Recap* form is filled out for every work order. Locate the column with the code for the Reason for the repair and enter the total dollar amount. Under "Comments," you can write short comments or refer to the attached notes.

Remember, each work order was initiated for a reason. Investigation of those reasons will uncover the sources of your work and may recommend solutions that would reduce your workload.

Across the top of the *Reason for Repair Recap* sheet are the repair reason codes listed below:

- PM (Preventive Maintenance)
- CM (Corrective Maintenance)
- MD (Management Decision)
- R (Rehab)
- I (Good Idea)
- E (Efficiency)
- CL (Cleaning)
- GN (Grounds)
- V (Vandalism)
- D (Reported Damage)
- C (Tenant Complaint)

OB (Other Breakdown)

OT (Other)

Once the jobs are recapped, you can see how much work is being generated by each category at the end of the year. If you're computerized, you will create a report whenever you want. If you keep records manually, keep at least these two recap forms for analysis purposes. You can do more if you wish.

Record Keeping

Management requires that mechanics put in eight hours a day. What are your options if you receive four work orders with two hours on them and know they were not working precisely two hours for each job? Would there be a penalty if you found out somebody was falsifying a payroll record? Would there be a penalty if you found out somebody was falsifying an expense account record? Why wouldn't there be a penalty for falsifying a work order?

Organizations rarely have the will to require maintenance records to be kept at the same level of accuracy as other records that run the organization. Management needs to be willing to stand behind record keeping. They need to say, "Recording records is part of the job; it's in your job description, and if you do it wrong, it's a disciplinary action, and we'd better not catch you doing it twice," just as if this were a payroll, expense, or work hours record.

People must account for idle and travel time and know how to do that. Once the work order is started, whatever travel is done to get the tools and materials should be noted on the work order. Otherwise, there would be lost time associated with that work order. As soon as the job is done, the employee must clock off that one and clock on the next one; if it takes 20 minutes to find the supervisor to find out about the next job, that's ok. There's no problem with that if that's what happened. But it should be noted on the work order.

In some industries, there is a pervasive problem. This problem is when they don't take maintenance seriously and treat record keeping like children playing. There could be an attitude of, "Who cares what the maintenance people do? We don't know what they do anyway; half of them can't write," or some other derogatory opinion. Well, that's not going to fly. The records have to be done right. If you find yourself in that situation, ask, "Will management back me if I'm making a serious offense?"

For many companies, all it takes to help the maintenance people is for the supervisor to organize classes on keeping records. They could work with little workbooks and examples of work orders. Information could be presented as, "Here's the situation, here are the common problems, here's what to do about them."

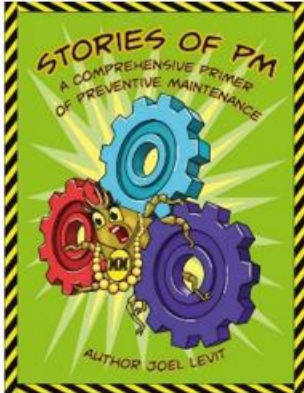
Many blame the workers for not completing their work orders correctly or completely. Then, when you ask if there was any formal training about the standards, they say, "Well, no, but they ought to know." Why should they know? All this stuff is arbitrary. How could somebody know? You make it up as you go along. That's the way it's done. Along the way, you must establish the standard, make up a training booklet, and ensure everybody goes through the training. Perhaps you could get your video

camera out, tape yourself explaining record keeping, and have somebody zoom in as you point to forms or other relevant visuals. If it won't be a classic film, it might be enough to get people started filling out paperwork correctly.

In a lot of cases, people don't understand. Instead of saying, "I don't understand this," they get an attitude, and then you get inadequate records. So, take the time to train people on how and why they need to use work orders. The proper and consistent use of work orders benefits both management and employees by helping them understand the sources of the work and obtaining knowledge that allows for better control over that work.

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Preventive Maintenance



Defect Elimination



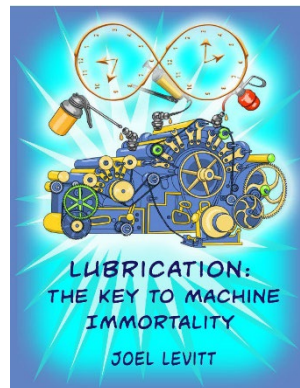
Reliability and fundamentals



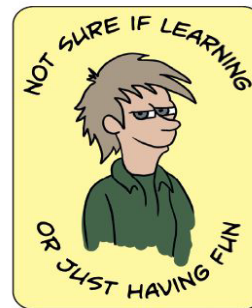
Maintenance quality



Maintenance Planning



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