

Maintenance Tech Orientation & Training



Job Description



Ocean Partners Hospitality Job Description

Job Title: Maintenance Tech
Department: Maintenance
Reports To: Chief Engineer
FLSA Status: Non-exempt
Prepared By: Human Resources
Prepared Date: June 15, 2013

SUMMARY

Performs general guest room and commercial area maintenance and repairs on HVAC; plumbing and electrical equipment. Completes preventive maintenance checklists and other maintenance reports. Performs general carpentry; tiling; painting and wall surface repairs.

ESSENTIAL DUTIES AND RESPONSIBILITIES

- Responds in a courteous manner to guest questions, complaints and requests.
- Locates and corrects in-room heating, ventilation, air conditioning (HVAC) malfunctions, and adjusting HV AC units to include systems control checks.
- Making systematic checks on all guest room electrical appliances, circuits; being able to repair most in-room defects.
- Handling all in-house repairs in regards to removing and replacing bathroom tile, painting, repairing wallboard, wall vinyl, carpentry, etc.
- Checks electrical systems such as refrigeration controls, television sets, and lighting systems, and makes minor repairs.
- Does elementary painting and finishing of furniture and structure.
- Checks and makes minor repairs on general plumbing systems, and fixtures such as pipe lines, toilets and sinks.
- Utilizing basic hand and power tools required for general maintenance.
- Maintaining tools, work spaces and equipment.
- Completing preventive maintenance checklists and other maintenance records.
- Performs all other duties as assigned by Management.

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE

Less than high school education; one year or more of related experience or training. Ability to work flexible working hours, 5-6 days per week, including holidays and weekends.

COMMUNICATION SKILLS

Individual must possess excellent interpersonal skills and ability to effectively converse with guest and other employees.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to stand; walk; use hands to finger, handle, or feel; and reach with hands and arms. The employee frequently is required to climb or balance; stoop, kneel, crouch, or crawl; and talk or hear. The employee must frequently lift and/or move up to 60 pounds. This job occasionally requires long working hours.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to outside weather conditions. The employee is occasionally exposed to fumes or airborne particles. The noise level in the work environment is usually moderate.

RECEIPT OF ACKNOWLEDGEMENT

I have read the above job description and am capable of performing in a reasonable manner the activities involved in the job or occupation for which I have been employed. I understand this job description does not constitute a contract or employment agreement.

Signature and Date Signed

Employee Printed Name

New Hire Orientation



New Hire Orientation

Part One –Orientation and completion of New Hire Paperwork

<i>Trainee Initials</i>	<i>Trainer Initials</i>	<i>Date Reviewed</i>	<i>Task Reviewed</i>
			Completion on all New Hire Paperwork <ul style="list-style-type: none"> • Application • Background Check Authorization Form • I-9 • W-4 • Employee Handbook Receipt of Acknowledgment • Uniform Contract *<i>Uniform Issued</i> • Direct Deposit
			Review of Job Description-Signed and Dated
			Review of the Employee Handbook
			Explanation of Employee Benefits: <ul style="list-style-type: none"> • Health Insurance • Life Insurance • Paid Holidays (review of qualifying holidays) • Paid Vacation Guidelines
			Review of upcoming training-what to expect
			Satisfying your Customers <ol style="list-style-type: none"> 1. The Hotel Guest 2. Your Fellow Employees 3. Your Management Staff
			Recap and Review-Question and Answer session

Part 2: Management Staff & Orientation to Property

<i>Trainee Initials</i>	<i>Trainer Initials</i>	<i>Date Reviewed</i>	<i>Task Reviewed</i>
			<p>Meet Management Staff</p> <ul style="list-style-type: none"> • General Manager • Assistant General Manager • Department Heads • Supervisors
			<p>Tour of Property:</p> <ul style="list-style-type: none"> • Front of House • Back of House • Laundry/Housekeeping • Meeting Space and Restaurant/Lounge (if applicable) • Fitness Center/Pool/Recreational Facilities • Tour of Guestrooms • Employee Break Room
			<p>Time Clock and Payroll</p> <ul style="list-style-type: none"> • Location of Time Clock • Review punch in/out procedures • Review meal break options • Employee Lunches (if applicable) • Pay Periods and Pay Dates • Overtime Policy • Policy for Calling Off

Training



Maintenance Tech Training Schedule

Day One: Department Orientation

<i>Trainee Initials</i>	<i>Trainer Initials</i>	<i>Date Reviewed</i>	<i>Task Reviewed</i>
			New Employee Orientation (BWI – Internal) I Care Training (BWI) Service Pro (Online) Bed Bug – (must be done within 90 days of hire) Maintenance Tech Training (BWI) Maintenance Training Schedule Review: <ul style="list-style-type: none"> ◦ Provide Training Packet or Manual ◦ Provide Skill Breakdowns ◦ Introduction ◦ What is a Maintenance Employee? ◦ Quality Guest Services ◦ Discuss SOP's on SOP website
			Department Overview & Communication Tools: <ul style="list-style-type: none"> ◦ Maintenance Shop, Tools & Supplies ◦ Department Keys ◦ Golf Carts ◦ Storage Rooms ◦ Electrical Rooms ◦ Bulletin Boards ◦ Strategy / daily information boards ◦ Employee Mail box ◦ Scheduling – Request off Procedures ◦ Time Clock ◦ Log Book
			Receive User Login & Password information for all systems *Hotel Service Pro _____
			Review Uniform & Appearance Standards

Notes:

Maintenance Tech Training Schedule

Day Five & Six: Guest Room Preventative Maintenance, Daily Work Orders and, General Maintenance Tasks

<i>Trainee Initials</i>	<i>Trainer Initials</i>	<i>Date Reviewed</i>	<i>Task Reviewed</i>
			Preparing your PM Cart
			Using the PM Binder and Checklists
			How to enter a guest room
			When you need to leave a guest room to handle another task?
			Observe the preventative maintenance of a guest room
			Perform the preventative maintenance of a guest room
			Understanding Work Order Form
			What to do with the work order form when you are completed?
			Where work orders are retrieved?
			How to perform basic work order requests: <ul style="list-style-type: none"> ◦ Service clogged or running toilets ◦ Service plugged and slow drains ◦ Replace Light Bulbs ◦ Service or Replace TV's & Remotes
			How to perform lockout / tagout procedures during all repairs
			Painting Walls & Other Surfaces
			Replace caulking around bathroom fixtures
			Carpet Repair and Care
			Floor Care
			Repairing small and large holes in drywall
			Working on and Repairing Electronic key system and door handles

Notes:

Life Safety



Golf Cart Safety

Because golf carts operate at relatively slow speeds, it's easy to overlook safety procedures. But golf cart accidents can cause serious injury and death.

Many carts lack safety features such as seat belts and air bags. That's why it's even more crucial to establish and follow safety rules.

In this section we will discuss: Golf Cart Operating Rules

In order to operate a golf cart, you must be trained and certified by management.

Golf Cart Operating Rules:

Managers should enforce the following rules and communicate proper operating procedures to all employees to ensure safe operation of golf carts:

- Limit cart use to authorized employees who have a valid driver's license.
- Provide cart operation safety training to all new employees.
- Never operate a cart under the influence of drugs or alcohol.
- Limit capacity of golf cart to specified design and restrictions (i.e. two passenger, four passenger, etc).
- Operate cart from driver side only.
- Keep hands and feet within cart at all times
- Remain seated at all times when driving the cart – and make sure passengers stay seated at all times
- Lock brake before exiting cart.
- Ensure that cart is at a complete stop before getting in and out.
- Operate carts in designated areas only.
- Drive over steep or uneven terrain with caution.
- Approach steep or uneven terrain vertically to avoid tipping over and sliding of cart.
- Avoid driving over wet or muddy surfaces.
- Slow down when approaching corners or speed bumps and on public roads.
- Slow down when driving on hills.
- Always turn to see behind cart while reversing and never try to go in reverse downhill.
- Drive defensively! Always be aware of your surroundings and keep your eyes on the path ahead of you.

Following these operating rules will help you avoid or minimize golf cart accidents. Use a written policy to communicate these rules to all employees - and make sure they understand the rationale for each guideline.

Entering the Guest Room

It is important that you following these steps when entering the guestroom:

1. Knock twice announcing “maintenance” after each knock. Do not knock with anything but your hands.
2. As you open the door announce “maintenance” one last time. This gives the guest three announcements of who is at the door. If no one is in the room apply your wedge or sandbag to the bottom of the door. If someone is in the guestroom see the next section.
3. Pull your PM cart up to the door frame as close as possible. You will do this for the following reasons: blocks intruders from entering the room while you are cleaning, lets guests know you are cleaning the room, allows for easier traffic in the hallway around your cart and, allows easier and quicker access to your supplies.
4. If necessary record what time you entered the room and began working
5. Be sure your keys are secured to your uniform or in your pocket. Your room assignments should be kept in an inconspicuous place on your cart or kept in the guestroom.

If a guest is in the room after you have knocked twice and announced yourself three times:

1. Apologize and ask the guest if they would like their specific maintenance issue taken care of later?
2. Show the guest where the Do Not Disturb sign (DND) is located in the room so that they are not disturbed again in the future.
3. Fulfill the guest’s request either coming back later or proceeding with your normal routine. Keep the door and windows open if you stay and work in the room with the guest in the room.
4. Note on your room assignment sheet if you need to come back later or if the DND was placed on the door.

Code Red Procedures



Our Business operates twenty-four hours a day, seven days a week. The Code Red procedures include the very basic general information necessary in the event of most emergencies at your hotel. The hotels Emergency Handbook has more complete and detailed instructions for you to follow in the case of an emergency. It is important that these procedures be thoroughly understood to ensure competent performance regardless of the nature of the emergency with which you and/or other employees are responsible for.

There is a Code Red stand in each department at the hotel. The stand contains ten different emergencies cards that can happen and the steps that you need to take. Please review each of the cards with your department head so you understand the steps completely.

Key Control for Maintenance

The maintenance department has access to many restricted areas at the hotel. For their own safety and the safety of guests, it is important that all staff understand the appropriate policies and procedures for all keys used in the department. The items listed below are basic procedures that take place at almost every hotel.

- When staff start work each day they should be assigned a key with a number or code on it. They should always sign their name, key number and the time they checked-out the key on a key sign out sheet. At the end of their shift all keys should be returned to the manager and employees need to sign their name and time stating what time the key was returned. Keys should never be taken home. Keys should never be labeled with the location or description of the area they open. If the keys are dropped and found by guests, then guests have access to restricted areas.
- While employees are working through out the hotel all keys should be kept in their uniform pocket and or attached to their uniform. Having keys attached to the uniform is the best way to ensure the keys are not left in the open and keys are not lost. Keys should never be left on work carts.
- What to do if a guest states they are locked out of there room? Even if a person claims to be a guest and is walking around the hallways trying to get into a room you should never let them into any restricted areas especially guest rooms. Tell them that for their safety they need to go to the front office to verify their identification before receiving another guest room key. This may make the guest irritable and frustrated so you must apologize for the inconvenience and reinforce that they must go to the front office for their safety.
- What to do if a person approaches the room you are working in and says it is there room? You must not allow the person to enter the room. You do not know if they really are the guest occupying that room. You must ask the guest for their key and open the door using their key. If the key works then they may be allowed to enter the room.
- What to do if a person, such as visitor, approaches you in the hallway and needs to enter a guest room? You should never ever let people into any restricted areas of the hotel. You must tell the person that they need to go to the front office and be announced as a visitor.

Other Key procedures for Maintenance Management:

- Key rings should have only the minimum keys required for that employee to use. Do not give employees access to places that they do not need to enter when working.
- All keys should be on a lanyard or key extender ring. These two options allow the keys to be on the employee's person and are more likely not left on maid's carts or in rooms. It is also helpful especially for room attendants that the uniforms have pockets to keep keys on their person.
- Keys should never leave the property. All keys should be inventoried and locked in a secure place at the end of each day. It is important that a manager or supervisor inventory the locked box for all of the keys in your department. To do this a Key Audit sheet must be created which is a list of all of the keys used in the department and a date column so you have a record that the keys were inventoried each day. The list should be typed. If any of the keys are missing they must be found immediately or locks must be re-keyed or changed completely.
- A new key sign out sheet should be used daily. The sign out sheets should be filed by date for one month and kept in an immediate area such as the maintenance office. After one month the key sign out sheets should be removed and stored with other hotel records for that month.

Guest Room Keys & Guest Security

Control of guestroom keys is one of the cornerstones of what hotels should do in order to provide the safety our guests have a right to expect. We, as innkeepers, have an obligation to take reasonable care that our guests will be safe in their rooms from intrusions by people who may have room keys. The following list of policies forms the basis of a good key and lock control system:

- Room keys should not have any form of key tag which identifies the hotel or is unique to the hotel among the surrounding area's hotels. No key tag at all would probably be best.
- Room keys should not have the room number on them. Metal keys (as opposed to key cards) should be engraved with a four character numeric code. That code cannot, in any way, directly correspond to the building or room numbers
- Hotel employees who find keys in guest rooms or elsewhere should place them in their pockets, not on their carts where they are accessible to others, and subsequently give them to their supervisor to be returned to the front desk.
- All section masters, room masters, grand masters and emergency masters, (normally kept in a safety box) should be signed out each time they are taken and their return noted. All of the above keys should be stamped "DO NOT DUPLICATE" if they are metal keys. Persons who carry these keys permanently should be spot checked to insure they have them on their person and that the inspection is logged in the front office log.
- In any case of a lost metal key, the maintenance staff should exchange room locks around within a housekeeping section in order to save the expense of re-keying the lock or to re-key the lock if it has been moved numerous times. A log should be kept of all lock swaps and re-keyings.
- If they are using metal keys, Maintenance should keep a record of how many keys it makes for each room and when they are made. This record should be reviewed on at least a weekly basis by the General Manager. The General Manager should initial and date the key making record each time s/he reviews it.
- Numbers on metal keys should be adjusted accordingly and over stamped or ground until the old number is illegible and the new number stamped nearby if locks are swapped in a section. As a standard practice, it is recommended that all locks in a section be moved at least quarterly.
- If a section master is lost under circumstances which may result in guests being at risk the section should be re-keyed. If a section must be re-keyed, consider also re-keying to a new grandmaster and emergency master so that you are in effect beginning a phased re-keying of the entire hotel.

- If a master key or emergency key is lost under any circumstances it should be reported to the Support Office immediately by the General Manager. After the circumstances are discussed, a decision should be made as to whether the hotel should be re-keyed.
- As an additional step, the General Manager, or somebody s/he delegates the responsibility to, should cross index all incidents of theft, missing property, damage, etc. as follows:
 - Room Number or Location. (Watch out for locks that have been moved.)
 - Names of potentially implicated employees (usually more than one). You may discover that room thefts never occur when so and so is off or regardless of the room number so and so was on as Maintenance or Room Attendant.

Remember, whenever key and security issues are being considered, you must take "reasonable and prudent care", which is not usually the least expensive option

Service



Guest Service for Maintenance:

All positions at the hotel need to offer excellent service to all guests. Your appearance and interactions with the guest could be the first or last our guest has with the property. You should always make sure you look, act and, talk professionally. You are a representative of our business and we trust you to follow through on these key items:

- Always acknowledge guests when you encounter them.
- Be polite and answer questions to the best of your ability. Use appropriate language.
- Welcome them to the hotel and area location. Tell them something about the area that they may not know such as a historic district or major attraction.
- Two things every guest wants to see are eyes & teeth. Make sure you look at them when you are talking to them and smile.
- Take Pride in your Work Area! The most likely place for you to interact with a guest will be over or near your PM cart or in the guest room. This means you must keep an exceptionally tidy cart. The cleanliness of our cart is a reflection of you and hotel management

All employees need to be in the appropriate uniform and follow all personal appearance standards of the company. Those standards are:

- All employees wear the approved uniform with a nametag and closed toe shoes. The uniform needs to be clean, neat & ironed; No modifications added.
- Hair is groomed and neat, unnaturally colored hair and extreme hairstyles are not appropriate or professional. Mustaches and beards must be clean and well trimmed.
- Excessive makeup is not permitted. Perfume, cologne and aftershave is used in moderation or avoided altogether.
- Offensive body odor and poor personal hygiene are not permitted
- Jewelry should not be functionally restrictive, dangerous to job performance, or excessive.
- Facial Jewelry such as, eyebrow rings, nose rings, lip rings and tongue studs are not allowed. Torso body piercing with visible jewelry or jewelry that can be seen through or under clothing must not be worn during business hours.
- Visible excessive tattoos and similar body art must be covered during business hours.

Staff Appearance:

All of the employees that work at this hotel are representatives of the management staff, franchise and owners. The business needs to be represented well physically inside and out. The property and you should always be clean and look fresh. One reason you were chosen to work at this property was because we knew you would represent it well. You can show guests you care about yourself and the property by keeping a clean professional appearance. The first thing your manager will review each day when you come to work is your appearance from top to bottom. If you do not comply with the items on the list below you will not be allowed to work until the issue is resolved. This may result in you being sent home for the day. Your manager will be checking for the following:

- All employees are wearing the approved uniform with a nametag and closed toe shoes. Their uniform needs to be clean, neat & ironed; No modifications added.
- Hair is groomed and neat, unnaturally colored hair and extreme hairstyles are not appropriate or professional. Mustaches and beards (if permitted) must be clean and well trimmed.
- Excessive makeup is not permitted. Perfume, cologne and aftershave is used in moderation or avoided altogether.
- Offensive body odor and poor personal hygiene are not permitted
- Jewelry should not be functionally restrictive, dangerous to job performance, or excessive.
- Facial Jewelry such as, eyebrow rings, nose rings, lip rings and tongue studs are not allowed. Torso body piercings with visible jewelry or jewelry that can be seen through or under clothing must not be worn during business hours.
- Visible excessive tattoos and similar body art must be covered during business hours.

Also remember that cleanliness comes from:

- Bathing or showering every day before work
- Using deodorant / antiperspirant every day before work
- Brushing your teeth every day before work
- Shampooing your hair often
- Keeping nails and hands clean by washing after bathroom breaks, cigarette breaks and sneezing or coughing.

Phone Etiquette

The kind of service that our guests receive over the phone is as important as the service they get in person at your hotel. It is important that every phone interaction reflect high standards of friendliness and efficiency and be a positive impact on the guest perception of the quality of service at your hotel. Not only does it make a positive impression, it helps business because guests who feel positive about your service will select your hotel to stay at.

Techniques

- All phones are to be answered within three rings.
- When the phone is answered, you should speak clearly and slowly, and have a welcoming upbeat tone to your voice. Remember you want them to feel like they are getting service. Smile when you talk. A smile helps you sound more relaxed and pleasant
- Always speak clearly into the receiver
- Always tell the caller your name and try to get theirs, then use it throughout the call
- Answer using the appropriate greeting appointed by your hotel management. It may be something like “It’s a beautiful day at the (Name + Location of your hotel), how may I assist you?”
- If you have to transfer the call to a room, or to an in-house extension, you should always confirm where you are transferring them and use the following line: “ I am transferring you to Room 425, it is my pleasure to connect you”
- If you are answering an in-house line from a guest in the room, use the guest name if your system shows the room number and name along with the following greeting: “Good evening/morning Mr. Smith, this is (your name) in Maintenance How may I assist you?”
- If you have to place a call on hold, make sure you inform them and ask them if it is OK. When you take them off of hold, you must thank them. The exchange should go like this: “Mr. Smith I will need to put you on hold just for a minute, will that be OK with you?” Then when coming back “Mr. Smith thank you very much for holding, here is the information you asked for....”
- Always take the time to give proper phone service, even if you are really busy. The guests on the phone expect it, and the actual physical time it takes to do it right is only the matter of a few seconds. Do it right every time. Talk to only the person on the phone, not to anyone else around you. If you absolutely have to speak to someone else in the room ask permission to place the caller on hold.
- Do not use slang or lazy vocabulary like, “Huh? Yeah,” etc.
- Do not use technical terms or hospitality words that callers may not understand
- Do not argue with guest. Transfer them to the MOD using the same protocol defined above.
- If you are on a call and another call comes in, you must “stack” the calls. This is done by placing the caller you are with on hold, and answering the incoming call. You must immediately transfer the call (remember the script above!) or get their callback information and offer to call them back. You then go back to your original call and complete that call. It is never OK to not answer every call within three rings.

- Someone must man the phone at all times. During breaks, and busy times, no matter what. If you feel can not give great service on the phone then ask your manager for assistance.
- Closing a call is just as important as the opening and greeting of the call. Always say thank you or you are welcome. Try to use the callers name whenever possible and say “good bye” not “bye-bye” or “buh-bye”

Radio Etiquette

Each property and department is staffed with a radio. This allows each department throughout the properties to communicate with each other. Using radios at a hotel should be done in a professional and discreet manner. Please remember the following:

- Each hotel should create and use their own form of radio terminology
- Each radio should be equipped with an earpiece for the employee to wear in order to keep hotel communications silenced from guests and other clients that are visiting. If ear pieces are not available then all radios should be kept at medium volume.
- Radio's should be numbered and signed out, just like any other piece of hotel equipment
- Don't forget to charge your radio at the end of your shift.
- If there is something that you don't think should be said over radio communication then ask the appropriate manager to call you back on a land line.

Radio Terminology

Radio Codes:

- * CODE 0 – ARMED ROBBERY
- * CODE 1 – TOILET OVERFLOW
- * CODE 2 – INTOXICATED PERSON
- * CODE 3 – ELEVATOR
- * CODE 5 – BUGS
- * CODE 6 – BED BUGS
- * CODE 9 – EMPLOYEE HURT
- * CODE 11 – TRESPASSING ISSUE
- * CODE WHITE – MEDICAL EMERGENCY
- * CODE RED – CALL FIRE DEPARTMENT
- * CODE BLUE – CALL POLICE DEPARTMENT
- * CODE YELLOW – AMBULANCE
- * CODE GREEN – EMERGENCY ACCIDENT AT POOL
- * CODE ADAM – MISSING CHILD
- * CODE FOX TROT – CHILD WITH NO PARENT

Department names:

- Maintenance for Days Inn – 103
- Maintenance for Best Western – 203
- Front Desk for Days Inn – 101
- Front Desk for Best Western – 201
- Housekeeping for Days Inn – 102
- Housekeeping for Best Western – 202
- Managers – Unit #'s Chief Engineer Unit 10

Words not to be said over the radio: (When ever there is a situation that is sensitive to guest's ears, please ask the department to give you a land line)

- Toilet
- Toilet Paper – instead say TP
- Bad Language
- Bugs, Insects, Roaches, etc
- Elevator not working jammed, etc.

Maintenance Program



WHAT IS PREVENTIVE MAINTENANCE?

All hotels, whether old or new, need a preventive maintenance program which will identify problems before they become serious, and help the property "age a bit more gracefully". Preventive maintenance is a proactive approach to scheduling inspections which results in constant vigilance and maintenance of systems before problems occur. This is really the only way to ensure the defect-free kind of lodging environment some guests demand. Preventive maintenance program is based on Quality Control principles. It requires systematic planning, scheduling, inspection, and maintenance of guest rooms, public areas, and all mechanical and electrical systems. Following this program will help ensure that the various property "systems" are being monitored and maintained in a timely manner, and that maintenance is being performed efficiently and correctly. All of this provides "payoffs" in guest safety and satisfaction. Preventive maintenance planning will only be effective if management takes part in its development and design, stresses the importance of the program with maintenance personnel, and reviews its effectiveness periodically. A team approach to eliminating quality problems will create a better environment for guests.

Like most programs, the success of this one depends heavily upon having a qualified and conscientious person in charge, with appropriate tools, initiating the right kinds of actions at the correct time.

How might you benefit from a good preventive maintenance program?

EVERYBODY BENEFITS

Employees benefit in several ways:

1. Since the preventive maintenance schedule is carefully thought out, and scheduled into the daily work of maintenance employees, the employee knows what is expected, and can perform clearly defined tasks, and can do it and do it well.
2. Scheduled preventive maintenance decreases work orders. Problems are often solved before they occur.
3. No one enjoys spending a lot of their time "putting out fires". Scheduled PM allows you to control your time rather than having it controlled by un-expected events.

Managers also experience benefits:

1. Some properties report a 50% decrease in work orders once a preventive maintenance program is put in place. There is also an accompanying decrease in repair expenses.
2. As a result of the planning and tight scheduling of this kind of program, managers report being able to plan and carry off more major projects.
3. Lastly, managers spend more time at managerial tasks as a result of spending less time responding to emergencies.

The Company benefits on the bottom line. Its benefits include:

1. Reduced operating costs. Small problems will be kept from becoming large ones. For example, a small seam separation in a carpet may cost \$50 to repair if caught early rather than having to replace the entire section of carpet if ignored.
2. Increased life of guest rooms and public areas.
3. Increased equipment life, and reduced downtime, energy consumption, and maintenance.
4. Improved property value, appearance, and aesthetic value.
5. Decrease in guest complaints, leading to repeat business and increased profits.

The Guest benefits by experiencing a more enjoyable stay:

1. They are more satisfied and report fewer negative experiences.
2. They enjoy greater safety.
3. They experience cleaner, better kept accommodations.

CRITICAL ELEMENTS OF A SUCCESSFUL PREVENTIVE MAINTENANCE PROGRAM

Typically your property will employ a single person to direct and also implement their preventive maintenance (PM) program. Maintaining a 'smooth-running, zero-defect operation is so important to the overall success of the property. This responsibility is much more critical than the size of the department would suggest. Careful scrutiny must be given to this function by management. The critical elements of a successful PM program are listed below:

Elements of a successful PM program

1. **Attitude**. The most important element of a preventive maintenance program is the attitude individuals hold. Everyone in the organization must "buy-into" the concept of preventing "breakdowns". The entire property staff should attempt to offer the guest a defect-free experience, with no problems with mechanical or electrical systems, and freedom from other preventable problems. With the proper attitude and a well planned preventive maintenance program, complete with scheduled inspections and maintenance, and audits of the program to ensure quality, all of the property's staff will become a team supporting the program.
2. **A Plan**. The second most important element for a successful program is the formulation of a quality plan for a preventive maintenance program. Four categories of planning should be considered.
 - a. **Preventive Maintenance**. All dynamic systems, mechanical or electrical, eventually break down. However, problems can be anticipated, so scheduled inspection and maintenance on these types of systems before they break down often eliminates that problem, or at least increases efficiency and/or extends the life of equipment. Reviewing equipment manuals will show which needs periodic attention, how to provide this attention, and what frequency of attention is necessary. This information can then be "programmed" into a schedule of inspections and equipment service which will eliminate many unexpected malfunctions. Preventive maintenance principles can also be applied to static systems, such as grout between the shower tiles, the carpet, paint on the walls, drapes, bedspreads, and SQ op. These too can receive scheduled inspection and preventive service so that a guest never encounters deficiencies in these, more intimate, accessories of their property environment. Any preventive maintenance plan should consider scheduling the inspection and maintenance of all of these systems.
 - b. **Routine Maintenance**. Each and every day, certain maintenance must be performed. Routinely, this work must be done. Changing light bulbs, cleaning the pool, repairing vinyl tile, tightening door knobs, and so on. This day-to-day work must be included in scheduled activities.
 - c. **Guest Calls--Emergencies**. The preventive maintenance plan will certainly

reduce emergency situations that require immediate action--but not eliminate them. The overall plan must consider contingencies for responding to a guest's call to fix a jammed door, adjust the television, still a noisy toilet, etc. A creative plan will attempt to eliminate the incident of these emergencies.

- d. **Projects.** Any work that is not routine, is not included in the preventive maintenance schedule, and does not constitute an emergency, is considered a project. Projects are normally large scale efforts which require considerable effort and time. Repairing broken curbing, resurfacing the parking lot, painting the second floor, re-carpeting the entrance; all of these represent projects that must be fitted into the over-all schedule.
3. **Appropriate tools.** A maintenance department requires appropriate tools, operating supplies and material, and critical spare parts. These are high cost items which management sometimes finds difficult to approve. Even so, they are important to have on the premises. When they are needed, they are needed ever so badly. Lack of appropriate tools and supplies often results in shoddy, "make-do" repairs, resulting in un-professional results. The Maintenance Supervisor is responsible to ensure that the proper tools, supplies, and parts are on hand and in the right quantity. Section Two contains a detailed list of equipment, supplies, spare parts, etc. that are required for a quality program. Also listed are procedures for creating an equipment inventory, managing the issuing and returning of items, their proper storage and use, and ordering and replacement.
4. **A Schedule.** The best of philosophies, procedures, and formal plans are no better than the vehicle used to implement them. Preventive maintenance lives and dies on how well its scheduled events are implemented. Careful planning, and a practical schedule of daily, weekly, monthly, on 16 week intervals, semi-annual, and annual events are the mainstay of Best Western's preventive maintenance program. Dedicated implementation of these scheduled inspections and maintenance events will result in the reduction of work orders, decrease in repairs, and increase in the safety and satisfaction of guests who visit and experience a defect-free, quality-controlled environment. Detailed procedures for creating a preventive maintenance schedule are presented in Section Two.
ALWAYS CALL FRONT DESK TO PUT ROOM OUT OF ORDER WHEN DOING PM's.

Implementing the Maintenance Plan

CONDUCTING AN INSPECTION

How do you actually conduct an inspection? You may be thinking, “Well, all you do is follow the checklist”. That’s partially correct. You do follow the checklist, but more is required.

How To Inspect

You want to look at the Guest Room and Public areas from the guest’s point of view. Do things a guest would do. For example, sit on the bed and look around, sit on the chairs, go to the window and look out, open the closet, step into the shower. Doing the inspection from these additional points of view will help detect a program (defect) before the guest does.

Complete Item Inspections

For many items on the checklists, there is more than one area to inspect. For example, on the Guest Room Inspection Checklist is the telephone. To check the telephone you have to check the following:

- Appearance, secure, no visible damage?
- Clean (does it look clean? Is it clean?)
- Functions (does it work? good volume? rings in and out?)
- Are dialing instructions posted?
- Is the cord adequate in length, no damage, secure?
- Repair if property owned, contact vendor if leased.

While all the actions combined take less than a minute, they must all be done before inspection on that one item is complete.

CORRECTION OF GUEST ROOM AND PUBLIC AREA DEFICIENCIES

Scheduled, detailed inspections are performed to identify any feature of the property, no matter how small, that deviates from the standard. Deficiencies, when they are found, must be immediately corrected.

The Maintenance Engineer should be responsible for the timely and efficient correction of these problems when they are found. He or she needs to prepare a tool box or tool cart equipped with appropriate tools to perform maintenance or repairs. A tool box or cart should contain all of the tools and supplies (including replacement parts) needed to repair the common problems in the Guest Rooms and Public areas. Efficiency would dictate that tools and supplies be on hand as the room is inspected, so that maintenance or repairs can be completed in one visit. This maximizes productivity, as there is no running back and forth to the Shop. Both tools and supplies need to be included.

The kit or cart should have tools in one section and supplies and parts in another. Since it must be moved from room to room and from floor to floor, it should be designed to be portable and must fit in elevators and through Guest Room doors. In some properties with no elevators, the kit must be carried up flights of stairs.

TOOLS SUGGESTED FOR MAINTENANCE AND REPAIRS

At some properties, the tools are already in the Shop. At others, additional tools must be purchased. If you have to purchase most of the parts, tools and other supplies needed to stock up a tool kit or cart, set a priority list from the following page and buy according to your budget.

On the following pages is a list of the recommended tools and supplies that should be provided. It costs approximately \$75.00 a month to maintain the supplies and part after the maintenance program has been in place for a year. The exact cost will depend on the size and condition of your property.

It is recommended that supplies and parts be restocked at least once a week. All tools must be stored in a secured area when not in use.

MAINTENANCE TOOLS SUGGESTED GUIDELINES

The following tools should be permanently assigned for use in preventative maintenance:

1. 6" vise, permanently mounted to cart
2. 3/8" variable speed, reversible cordless drill
3. Complete set of power drill bits, 1/32" to 3/8"
4. Complete set of carbide tipped masonry drill bits, 3/16" to 1/2"
5. Complete set of butterfly wood bits, 3/8" to 1"
6. Countersink drill bit tool
7. Power sander for use on doors and drawers
8. 25' extension cord
9. Electrical extension light
10. Flashlight
11. 16 oz. Carpenter's claw hammer
12. Assorted sandpaper and block
13. Mechanic's pliers
14. Channel lock pliers
15. "Dust Buster" type of portable vacuum
16. Crescent wrench, 6"
17. Crescent wrench, 10"
18. Combination wrench set, 3/8" to 3/4"
19. 3/8" drive ratchet set with sockets
20. Allen wrench set, 3/32" to 3/8"
21. Assorted screw drivers, straight-blade and Phillips head, including AWL and screw starters
22. Plumber's hand-held 25' snake
23. 6" flat bastard file with handle
24. Hack saw with fine and coarse blades
25. Electrical continuity tester/volt meter
26. Tape; electrical, plastic, cloth and duct
27. Smooth jaw pipe wrench for chrome pipes
28. Safety goggles
29. Plastic tarp
30. Dust mask
31. Cleaning rags
32. Staple gun
33. Gloves
34. Carpet kicker
35. Paper and stencil
36. Caulking gun
37. Small tapered reamer
38. Putty knife
39. Nut drivers set
40. 10" pipe wrench

41. 6" rat-tail file
42. 14" pipe wrench
43. Utility knife
44. 24" aluminum level
45. Mechanic's hammer
46. Plumber's tape
47. Key hole saw
48. 18" pry bar
49. Wallpaper seam press
50. Electrician's pliers
51. Razor paint scraper
52. Wire cutters/strippers
53. Vise grips
54. 25' tape measure
55. Assorted paint brushes

SUGGESTED MAINTENANCE SUPPLIES

The following supplies should be stocked to quantity daily in each tool kit or cart.

<u>DESCRIPTION</u>	<u>QUANTITY</u>
1) Color coordinated wall switch plates and matching screws	6 each
2) Color coordinated outlet cover plates and matching screws	6 each
3) Single throw switches	6 each
4) Three-way throw switches	3 each
5) Outlet receptacles	6 each
6) Light bulbs, complete sets/each wattage	4 each
7) Florescent tubes, complete sets/each wattage	*
8) Electrical lamp cord	*
9) UL approved lamp plugs	4 each
10) Electrical lamp sockets and switches	1 each
11) Caulking compound	1 each
12) Small can spackling	1 each
13) Small can wood putty	1 each
14) Vinyl adhesive	1 each
15) Fast-drying cement	1 each
16) Vinyl repair kit	1 each
17) Wax sticks for scratch touch-up	*
18) Lubricating spray (silicone)	1 each
19) Assorted screws, nuts, bolts and nails	*

20) Lead and plastic wall anchors	*
21) Electrical tape roll	1 each
22) Picture hook, eyes and wire	*
23) Assorted toggle bolts	*
24) Door stops	2 each
25) Weather stripping	*
26) Mirror clips	6 each
27) Assorted touch-up paints and stains	*
28) Furniture polish, small can	1 each
29) Empty can (brush/parts cleaning)	1 each
30) Wall vinyl covering	*
31) Tube of graphite	1 each
32) Plastic notice cover for door	2 each
33) Shop towels	6 each

BATH AND LAVATORY AREA

1) Toilet seat	*
2) Toilet seat bumpers	4 each
3) Toilet flush mechanism, complete	1 each
4) Complete flushometer	*
5) Assorted flushometer parts	*
6) Bathtub faucet assembly, complete	*
7) Bathtub faucet washers, stems, packing and Washer screws	*
8) Lavatory faucet assembly, complete	*
9) Lavatory faucet washers, stems, aerator Packing and washer screws	*
10) Shower head (Water Pik, Super Saver or equivalent)	1 each
11) Towel bar and shelf (shelf 8"x24", bar 24")	2 each
12) Color coordinated shower curtain hooks	6 each
13) Color coordinated bathtub no-slip trips	*
14) Mildew resistant caulking compound	1 each

REPAIRING EQUIPMENT

Making the Decision to Repair or Replace

Nothing lasts forever. Equipment breaks or malfunctions. Suddenly everyone turns to you to decide or recommend whether to repair or replace it. Often you don't have enough information to make a decision – but you have to make one anyway and quickly.

The Repair vs. Replace Decision

You consider the situation and come to a decision. Repairing vs. replacing is only part of the decision. There can be many other choices, depending on your management's philosophy, for example:

- 1) Your department repairs the item
- 2) You have an outside vendor repair the item
- 3) Your department installs the replacement item
- 4) You have an outside vendor install the item

You should consider what each option will cost and what you'll have when you're done. Compare the cost and value of each option. For each option, the cost is the new money that option will require. The value is what the item will be worth under each option. The option that offers the highest value after costs have been subtracted, is the best option.

There are a number of things to consider:

Purchase date: The date (or at least the year) the item was installed.

Purchase price: The purchase price of the item, including tax, etc.

Service life: The number of years the item is estimated to provide service.

Remaining service life: The years or months of estimated service life that should remain. For example, if a four year old ice machine has an estimated service life of six years, this amounts to two years remaining service life. If the service life has passed, enter "0". If you don't know the service life, make your best professional guess. Don't confuse the depreciation schedule with service life. The depreciation schedule is used for writing off the costs of a capital purchase on the tax return. It may or may not be the same as service life.

Remaining Service Value: The dollar value of the remaining service life. For example, if the original cost of the ice machine was \$1,200, the remaining value is \$400 ($\$1,200 \text{ cost} \div 6 \text{ year service life} = \200 per year), the unit has 2 year remaining service life multiplied by \$200 per year equals \$400.

Preliminary questions. The purpose of these preliminary questions is to prevent you from wasting your time on a decision you can't make anyway.

Do customer service considerations allow you a choice? If the malfunction is causing significant customer problems, you may not have a choice. You may have to do whatever corrects the problem the quickest.

Do you have (or can you get) the funds for either choice? This is a tricky question. For example, if you don't have the funds to replace the ice machine and your General Manager wants you to keep this expense as low as possible, there's no sense in considering replacing the machine. However, your intuition may tell you that replacement may be cheapest in the long run. If that is true, you want to be sure the GM knows that. So you would complete the decision aid to show your GM the comparative cost/value. The GM may still opt for the option that is cheapest right now, but at least he/she would have the facts and full responsibility for the decision.

Calculate the cost. Use the known or estimated costs.

- 1) **Net cost of repair or replacement.** Use the net cost of each option. Include tax. Deduct any trade-in allowance.
- 2) **Cost of future routine maintenance items required.** Use the cost of enough routine maintenance items (filters and lubricants, etc.) not purchased with new equipment to last the expected service life of the equipment.
- 3) **Vendor delivery and installation costs.** Use the cost of having the vendor deliver and install the repaired equipment or replacement equipment.
- 4) **Labor costs over regular hours for repair or replacement.** This is labor costs for your department over and above regular payroll. For example, if a repair can be squeezed into regular working hours, there is no cost to enter.
In calculating labor costs, include preparation and clean-up time, if appropriate.
- 5) **Other costs of repair or replacement.** Include things like special tools you might have to rent, wiring, conduit, drop cloths, etc.
- 6) **Lost property income or customer refund.** If repair and/or replacement will effect property income, enter the costs. For example, if replacing a heat pump means not being able to rent a suite, enter the lost income multiplied by the percentage probability that the suite would be rented.
- 7) **Cost of spares on hand made obsolete by replacement.** If installing new equipment made certain spares obsolete, enter the cost. For example, if installing new heat pumps made all your old spare filters useless, enter their cost.
- 8) **Estimated cost of future repairs.** If an item has been replaced, you should expect reduced downtime and repairs because the item is new and it will be maintained under your supervision and to your standards. A repaired item will be more likely to break down sooner in the future. A warranty should sharply reduce repair costs for a while. However, an item that malfunctions under warranty can still soak up your time, diagnosing the problem, calling for service, escorting the repair person, checking that the item was actually repaired, etc.
We understand this entry will be difficult to estimate, but the differences in the probability of a breakdown – and the subsequent repair costs – must be considered. So, make your best estimate of the comparative costs over the estimated remaining life of the item.
- 9) **Total the costs.** Add all the cost entries (Items 1 through 8) for each column being considered.
- 10) **Consider the remaining value of the items.** A replaced item is usually worth what was paid for it. A repaired item may cost less in the short run, but be worth very

little or nothing, even though it runs. Consider whether the replacement costs might be the best option, even though they are higher, simply because the resulting fix has greater value.

PRACTICE EXERCISE

Use the following worksheet to decide what to do in this situation:

The Maintenance Engineer suspects corrosion and partial blockage of the tubes of one of his boilers. He has five identical boilers. The tubes had to be changed in one of the other boilers last year. They were badly corroded from the local water.

He installed water treatment measures, but he knows that all the tubes were corroded to varying degrees before the water treatments began. Therefore, he is sure that the tubes of this boiler will now have to be changed. When the department changed tubes on the other boiler, parts cost \$500 and took two men twelve hours to do the job. To have his staff do that repair again would involve \$200 extra labor.

The Maintenance Engineer immediately adjusts manifold valves to insulate the bad boiler and have other boilers cover property needs. Therefore, customer service considerations are tended to. Funds were available for either repair or replacement. Replacing the boiler will require strong justification, but that option has to be considered.

Checking the records, the Maintenance Engineer finds this boiler was purchased nine year ago for \$4,800. Boilers are supposed to have a service life of 12 years. In spite of the water treatment, the Maintenance Engineer thinks the local water will shorten the boiler life. He uses an estimated service life of 10 years for his boilers.

The Maintenance Engineer calls the distributor. A new boiler now costs \$5,000, including tax. They will \$1000 salvage allowance for the old boiler. The distributor will replace the tubes in the old boiler for \$1,000. A set of tubes still cost \$500.

Whether the distributor repairs the old boiler or replaces it, the Maintenance Engineer will have to assign one of his people to assist the distributor's crew. That will cost the Maintenance Department an extra \$50 in labor.

Picking up a new boiler would require renting a truck with a lift gate, a portable hoist, lifting straps, etc. For these reasons, the Maintenance Engineer is not going to consider the option of having his department pick up and install a new boiler.

Because of the water, replacing the water valves about every five years is regarded as routine maintenance. The valves in this boiler were changed in 1985 and again earlier this year. Each set of valves costs \$300.

REPAIR VS. REPLACE DECISION WORKSHEET

Purchase date _____ Purchase price _____

Service life _____

Remaining service life _____

Remaining service value _____

Do customer service considerations allow you a choice? Yes No

Do you have (or can you get) the funds for either choice? Yes No

Calculate the Cost You Repair You Replace Vendor Repair Vendor Replace

Net Cost \$ _____ \$ _____ \$ _____ \$ _____

Cost of future routine
maintenance items \$ _____ \$ _____ \$ _____ \$ _____

Delivery costs \$ _____ \$ _____ \$ _____ \$ _____

Labor costs over
regular hours \$ _____ \$ _____ \$ _____ \$ _____

Other costs \$ _____ \$ _____ \$ _____ \$ _____

Lost property
income/refund \$ _____ \$ _____ \$ _____ \$ _____

Cost of spares made
obsolete \$ _____ \$ _____ \$ _____ \$ _____

Estimated future
repairs \$ _____ \$ _____ \$ _____ \$ _____

TOTAL COSTS \$ _____ \$ _____ \$ _____ \$ _____

Does the resulting value of the repaired item justify the cost savings (if any)?
Yes No

Decision: You Repair You Replace Vendor Repair Vendor Replace

Maintenance Basic Repair Tasks



Repairing Small Holes

INTRODUCTION

Objective: To keep sheetrock walls in good repair and prevent further deterioration of damaged areas.

Note: Repair must restore to original appearance.

MATERIALS/SUPPLIES

- A. Putty knife
- B. Joint compound
- C. Utility knife
- D. Drop cloth
- E. Sandpaper, medium grade
- F. Small whisk broom
- G. Protective eyewear

ACTIONS

1. Lay the drop cloth under the area where you will be working.
2. With the putty knife, put the joint compound in the hole.
3. While the joint compound is still wet, smooth the repaired area with the putty knife so that the repair is the same level as the existing surface of the surrounding wall.
4. Repeat the process for all areas that need repair.
5. Let the joint compound dry for 24 hours.
6. Using the medium grade sandpaper, sand the repair gently until the area is smooth.
7. Dip the whisk broom into the joint compound.
8. Tap the whisk broom straight at the wall leaving small bits of joint compound on the wall so the texture matches that of the surrounding area.
9. The repair can be painted 24-48 hours later.

Helpful HINT:

Steel wool, chicken wire, cardboard or newspaper can be used as filler if the hole is too big to fill with joint compound.

Repairing Large Holes:

INTRODUCTION

Objective: To keep sheetrock walls in good repair and prevent further deterioration of damaged areas.

Note: Repair must restore to original appearance.

MATERIALS/SUPPLIES

- A. Putty knife
- B. Joint compound
- C. Plaster tape
- D. Replacement Sheetrock
- E. Utility knife
- F. Drop cloth
- G. Sandpaper, medium grade
- H. Small whisk broom
- I. Drywall screws
- J. Screwdriver
- K. Piece of board 1' by 3', cut to length needed
- L. Ruler or measuring tape
- M. Pencil
- N. Protective eyewear

ACTIONS

1. Lay the drop cloth under the area where you will be working.
2. Use the utility knife to cut a square hole around the original hole. The new hole should be 1" bigger and the edges should be angled in.
3. Lay the piece of Sheetrock from the wall on the replacement Sheetrock.
4. Trace around the piece of Sheetrock from the wall so that the exact shape is transferred to the replacement piece.
5. Cut the 1' by 3' board to a length 3" to 4" longer than the hole in the wall.
6. Use the screwdriver and insert two drywall screws 1" from the side of the hole in the wall, across from each other.
7. Insert the board behind the hole in the wall and directly behind the two screws, being careful not to drop the board behind the wall.
8. Tighten the screws through the board.
9. Use the utility knife to cut out a new piece of Sheetrock. Cut at an angle to match the angle cut around the wall.
10. Place the new piece of Sheetrock in the hole.
11. Attach two screws through the replacement Sheetrock and into the board. Tighten the screws.
12. Place joint compound around the edges of the patch.

13. While the joint compound is still wet, place plaster tape around the edge of the replacement Sheetrock, and over the joint compound.
14. Follow the standard for repairing Sheetrock.

HELPFUL HINT:

When using wood screws, rub the threads on a bar of soap before using; screws will bind less. Soap can also be used to keep credenza drawers from sticking.

Replacing Caulking around Bathroom Fixtures

INTRODUCTION

Objective: To keep all caulking moisture proof and in good condition.

Note: This procedure can be followed for caulking around windows and HVAC units. G.B. Silicone caulk is recommended.

MATERIALS/SUPPLIES

- A. Utility knife
- B. Clean rags
- C. Caulk
- D. Caulking gun
- E. Putty knife
- F. Trash can
- G. Nail
- H. Protective eyewear

ACTIONS

1. Use the utility knife to slice the old caulk at the floor level.
2. Again, using the utility knife cut the old caulk from the top side. You have cut a "V" and the caulk should be completely loose.
3. Pull the old caulk away from the area.
4. Put the old, loose caulk in the trash can.
5. Taking the putty knife, scrape any excess old caulk from the seams.
6. Throw the old caulk into the trash can.
7. Using a clean rag, wipe the area dry - caulking will not stick to a damp area so make sure the area is thoroughly dried.
8. Insert the tube of caulk into the caulking gun.
10. Cut the tip off the caulk tube at 45 degree angle.
9. Stick the nail through the tip of the tube to puncture the seal.
10. Set the nail aside.
11. Gently squeeze the handle of the caulking gun until the caulk gets to the tip.
12. Place the tip at the beginning of the area to be caulked.
13. Keeping an even pressure on the handle, apply a fine line of caulk along the area to be sealed.
14. Release the pressure on the handle when you have reached the end of the area to be caulked.
15. Set the tube aside.
16. Wet your finger in the water.
17. Rub your finger along the line of caulk with even pressure. This will form a smooth seal.
18. Clean the area in which you have been working.
19. Gather your supplies and put them back in their appropriate place.

Preventive Maintenance on Room HVAC:

INTRODUCTION

Objective: to keep each HVAC unit that can be removed from the wall clean and working efficiently.

MATERIALS/SUPPLIES

- A. Warm, soapy water
- B. Clean rags
- C. Small scrub brush
- D. Two spray bottles
- E. Rubber gloves
- F. Protective eyewear

ACTIONS

1. Lay clean rags in the bottom of the bathtub so that the unit is cushioned when you put it in the tub.
2. Unplug the HVAC unit.
3. Remove the cover.
4. Grasp the unit by the base and slide it out of the cabinet and toward you. The units weigh about 60 pounds and one side is much heavier than the other.
5. Carry the unit to the bathroom.
6. Set the unit gently on the rags in the bathtub.
7. Cover the motor with clean rags.
8. Fill one spray bottle with warm, soapy water.
9. Fill the other spray bottle with clean water from the faucet.
10. Spray the front and back coils with warm, soapy water several times.
11. Scrub the coils lightly with the brush, being careful of the fins covering the coils - they are very sharp and you could easily cut your fingers.
12. Spray clean water from the bottle to rinse the coils.
13. Allow the unit to drain for 15 minutes. During this time gather your materials and start the procedure in the next room.
14. After 15 minutes, remove the rags from the motor.
15. Gently lift the unit from the tub and wipe any remaining water off the unit.
16. Carry the unit back to the wall and slide it into place.
17. Replace the cover.
18. Plug the unit into the outlet.
19. Turn on the unit to make sure it is working.
20. Turn the unit off.
21. Wash the bathtub used for cleaning the unit.
22. Proceed to the next room.

HELPFUL HINT - This process should be done before the room attendant cleans the room.

Cleaning the Hot Water Heater:

INTRODUCTION

Objective: to keep the hot water heater clean and working efficiently.

MATERIALS/SUPPLIES

- A. Section of garden hose
- B. Phillips head screwdrivers
- C. 1/211 socket wrench
- D. Rags
- E. Bucket
- F. Heavy duty plastic spoon
- G. Instruction manual for hot water heater
- H. Protective eyewear

ACTIONS

1. If the heater is gas, turn off the pilot switch.
2. If the heater is electric, turn off the circuit breaker.
3. Hook the hose to the drain spigot.
4. Place the outer end of the hose in the floor drain.
5. Turn off the cold water pipes leading into the heater, and turn off the hot water pipes leading out of the heater.
6. Open the drain spigot.
7. Prop open the safety valve to the tank.
8. Drain all the water from the tank (this takes from 3 to 4 hours).
9. When all the water has been drained, use the screwdrivers to remove the clean-out plate.
10. Remove the fiberglass insulation from this area.
11. Taking the socket wrench, remove the bolts from the clean-out plate.
12. Remove the rubber gasket.
13. Using a heavy duty spoon, reach into the tank and remove the sludge from the bottom and place it in the bucket.
14. Replace the rubber gasket.
15. Replace the clean-out plate.
16. Turn on the cold water for 2 minutes to flush the tank.
17. Turn off the cold water.
18. Let the water drain.
19. Repeat steps 11 through 15, as often as necessary.
20. Close the drain. Make sure safety valve is in working order. Remove prop in step 7.
21. Turn on the cold water.
22. Make sure the safety valve is open when filling the tank.
23. When the tank is full, water will flow from the safety valve.
24. Close the safety valve.
25. Open the hot water valve.

26. Check the gasket for leaks.
27. Replace the fiberglass insulation.
28. Replace the clean-out plate.
29. Remove the hose from the spigot.
30. Roll the hose so that the excess water goes into the floor drain.
31. Remove the hose from the drain.
32. If the heater is electric, turn on the circuit breaker.
33. If the heater is gas, turn on the pilot switch.
34. Discard sludge in the appropriate place.
35. Replace tools used.

HELPFUL HINT

The water heaters should be cleaned every three months. Do the cleaning during a weekend or another slow period because there will be a shortage of hot water while the heater is being cleaned.

Cleaning the Ice Machine:

INTRODUCTION

Objective: to keep the ice machine clean and working efficiently.

MATERIALS/SUPPLIES

- A. Plastic bucket or plastic bags
- B. Cleaner as specified by the manufacturer
- C. Rags
- D. Warm, soapy water
- E. Bucket of clear water
- F. Screwdriver
- G. Vacuum with all attachments
- H. Rubber gloves
- I. Protective eyewear

ACTIONS

1. A day before you plan to clean the ice machine, turn the ice making switch off so the supply of ice will be low. The next day, follow steps 2-17 listed below.
2. Open the upper door of the ice bin.
3. Take the ice out of the machine and place it into plastic bucket or plastic bags and discard.
4. Pour a bottle of the cleaner into the solution tray as per manufacturer's instructions.
5. Check the grid wires for any breaks. If there is a problem, look at your owner's manual.
6. Turn the switch to "Clean".
7. Leave the switch on to allow the solution to circulate for one hour.
8. While the solution is circulating, wash the ice bin with warm, soapy water.
9. Rinse the ice bin thoroughly.
10. Wash the ice chute with warm, soapy water.
11. Rinse the ice chute thoroughly.
12. Remove the side and back vents with the screwdriver.
13. Vacuum the vents and the internal machinery.
14. Replace the vents.
15. After the solution has been circulating for one hour, turn the machine to "On". The solutions will freeze in about 20 minutes.
16. Discard the frozen solution.
17. After discarding this first batch of "ice", the machine is now ready for public use.

Helpful HINT

Mid-morning is a good time to start cleaning the ice machine. Put a sign on the machine while cleaning so that no guests use the frozen solution. To clean the sides of the chutes, which may be rusted, scrub the sides with steel wool. Then take a ball of aluminum foil and rub it against the sides to remove the scratches.

Unplugging a Clogged Toilet:

INTRODUCTION:

Objective: to prevent possible water damage caused by a clogged toilet.

MATERIALS/SUPPLIES

- A. Clean rags
- B. Mop and bucket
- C. Plunger
- D. Plumber's snake
- E. Rubber gloves
- F. Protective eyewear

ACTIONS

1. Turn off the water by the shut-off valve located at the bottom left-hand side of the toilet.
2. Lift the seat of the toilet.
3. Place the plunger over the hole in the toilet bowl.
4. Forcefully thrust the plunger downward and pull it back up several times. Flush the toilet to see if the plug has been removed.
5. Repeat steps 3 and 4 several times.
6. Turn the water back on and let the tank fill.
7. If the plug has not been removed, turn off the water again.
8. If the plug cannot be removed by plunging, set the plunger aside.
9. Put the curved end of the plumber's snake into the toilet bowl and through the hole in the bottom of the bowl.
10. Turn the handle at the top end of the snake while pushing downward with moderate force.
11. When the snake is all the way in, reverse the winding, drawing the snake back up into the bowl.
12. Set the snake aside.
13. Turn on the water.
14. Flush the toilet. The plug should be removed.
15. If this procedure did not remove the plug, call a plumber immediately.
16. When the toilet is operating normally, rinse the plunger in the toilet bowl and wipe it dry with a rag.
17. Also, wipe and dry the snake.
18. Discard the used rags.
19. Mop the bathroom floor and clean the toilet area.
20. Gather your supplies and replace them in their appropriate areas.

HELPFUL HINT

Keep a plunger in the housekeeping closet on each floor.

Replacing a Broken Toilet Handle:

INTRODUCTION

Objective: to keep toilet handles working properly.

MATERIALS/SUPPLIES

- A. New toilet handle
- B. Channel lock pliers
- C. Rags

ACTIONS

1. Remove the cover from the toilet tank.
2. Remove the chain from the float ball.
3. Taking the channel lock pliers, grasp the nut on the back of the handle inside the tank.
4. Loosen the nut.
5. Remove the nut.
6. Pull the handle out and discard it in an appropriate place outside the guest room. Take the nut off the new handle.
7. Insert the new handle in place and hand tighten the nut
8. Tighten the nut with the pliers.
9. Reconnect the chain to the float ball.
10. Flush the toilet to make sure it is working properly.
11. Replace the tank cover.
12. Wipe up any excess water from the floor or toilet surface.

Helpful HINT

If you have toilet seats that continually loosen, remove the nuts and place garden hose washers at the top and bottom of the seat bolts. Then replace the nuts.

Fixing a toilet where the water is running:

INTRODUCTION

Objective: to prevent water wastage by maintaining a properly working toilet

Material/SUPPLIES

- A. New float ball
- B. Clean rags

ACTIONS

1. Turn off water at the shut-off valve located on the bottom left-hand side of the toilet.
2. Remove the cover from the tank of the toilet.
3. Flush the toilet while holding the ball up.
4. Wait until all the water drains from the tank.
5. Remove the chain from the handle.
6. Remove the old float ball and discard it in a trash can.
7. Put the new float ball in place.
8. Hook the chain back up to the handle.
9. Turn on the water supply.
10. Flush the toilet to make sure it is working properly.
11. Put the cover back on the tank.
12. Wipe up any spilled water.

HELPFUL HINT

Toilet may only be out of adjustment.

Repairing Carpet Burns:

INTRODUCTION

Objective: to repair burned areas in a carpet that does not involve the backing in order to keep the carpet looking clean and to avoid further damage.

MATERIALS/SUPPLIES

- A. Sharp utility knife
- B. Contact adhesive
- C. Piece of matching carpet
- D. Adhesive applicator
- E. Sandpaper
- F. Protective eyewear

ACTIONS

1. Take the sandpaper and sand the burned area smooth, removing all the blackened parts.
2. Discard the burned scrapings.
3. Using the replacement carpet, cut enough fibers to cover the burn hole. The new fibers should be cut slightly longer than those surrounding the burned area.
4. Open the contact adhesive.
5. With the applicator, put contact adhesive in the burn hole and on the end of the replacement carpet fibers.
6. Wait for the adhesive to become sticky to the touch.
7. Firmly press the fibers into the burned area.
8. Trim the fibers with the sharp knife so that they match the height of the surrounding carpet.

HELPFUL HINT

If a matching piece of the carpet is not available, cut a small piece from under the bed in a guest room.

Unclogging Plugged and Slow Drains:

INTRODUCTION

Objective: to keep drains clear and working well.

MATERIALS/SUPPLIES

- A. Good grade commercial drain cleaner
- B. Clean rags
- C. Protective Eyewear
- D. Rubber Gloves

ACTIONS

1. Turn on bathroom exhaust fan.
2. Remove drain stopper.
3. Use chemical drain opener as per manufacturer's instructions.
4. Run water down the drain to be sure it is working correctly and all excess chemical drain opener is removed.
5. Wipe the area dry.
6. Replace the drain stopper.
7. Turn off the exhaust fan.

HELPFUL HINT

Be sure room attendants clean the drain stoppers daily to help prevent clogged drains. Most drains are usually clogged with hair.

Maintenance Forms



See separate Excel Spreadsheets for:

- ✓ EXTERIOR - PREVENTATIVE MAINTENANCE CHECKLIST
- ✓ CORRIDOR - PREVENTATIVE MAINTENANCE CHECKLIST
- ✓ LOBBY/FRONT DESK - PREVENTATIVE MAINTENANCE CHECKLIST
- ✓ BANQUET /MEETING ROOM- PREVENTATIVE MAINTENANCE CHECKLIST
- ✓ GUEST ROOM- PREVENTATIVE MAINTENANCE CHECKLIST

Monthly Maintenance Schedule

The following schedule provides a routine process for tracking specific maintenance needs throughout the hotel. This schedule should be kept and then incorporated into the daily assignments of the maintenance department when the scheduled item is to occur.

This allows for a regular cycle that keeps major equipment checked and routine items happening so that they do not become forgotten over a period of time.

This should also be used for budgeting and staffing purpose. When items are due then staffing has to be put in place to do the labor and the proper equipment or parts need to be purchased to insure that the assignment can be completed on time.

Finally, at the end of the month this schedule should be signed by the Chief Engineer and retained in the departmental files for future reference.

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Revised 10/2007

January

When each item is complete, draw a diagonal line through the box and have the OM initial.

	Check and clean HV A C filters Guest Rooms	Shampoo 8% of Guest Rooms	Check all emergency lighting Exit signs	Clean Front Desk key machine with cleaning card	Inspect all pool equipment	
	Test smoke detectors in Guest Rooms		P &M on 30% of Guest Rooms	Check hot water temperature in Guest Rooms 120' Not to exceed		
	Rotate mattresses Per Specs		Laundry equipment P & M	Clean lint off dryer motors and burner. area		
	Check and clean HV AC filters for all public areas		Check exterior signage/lighting		Check Exercise Room equipment	
	Test run Emergency Generator					

Revised 10/2007

February

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms	Review MSDS sheets and ensure they are properly posted		Check and clean HV A C filters in Guest Rooms		
	Clean Front Desk key machine with cleaning card		P& M on 30% of Guest Rooms	Ice Machine cleaner thru all Ice Machines		
		All employee written Fire Test		Clean lint off dryer motors and burner area		
	Check and clean Ice Machine filters					
	Test run Emergency Generator					

Revised 10/2007

March

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms		Lawn contract in place			
	Test Smoke Detectors in Guest Rooms	Clean Front Desk key machine with cleaning card	P & M on 30% of Guest Rooms		Clean all coils in all air handling units including roof top units	
	Clean Guest Room locks with cleaning card		Check and clean HV A C filters in Guest Rooms	Clean lint off dryer motors and burner area		
	Check condition of elevator equipment room		Check and clean HV AC filters for all Public Areas			
	Test run Emergency Generator					

Revised 10/2007

April

When each item is complete, draw a diagonal line through the box and have the GM initial.

Daylight Savings Time: 1st Sunday in April. Send Memo and Post by Time Clocks.	Shampoo 8% of Guest Rooms		Check all emergency lighting exit signs		Inspect all pool equipment	
	P&Mon30% of Guest Rooms	Clean Front Desk key machine with cleaning card	Wash all exterior windows	All roof units P&M	Check hot water temperature in Guest Rooms 120' Not to exceed	
Turn in quarterly readings on all closed water loop systems	Rotate mattresses Per Specs	Remove and power wash all PTAC units and check seal around the unit where they meet the sleeve	Laundry equipment P & M	Clean lint off dryers motors and burner area	Energize all lawn irrigation systems	
Clean mini-fridge coils	Check and clean ice machine filters	Check exterior lighting	P & M all rooftop exhaust units	Check Exercise Equipment	Check/Clean Laundry exhaust duct	
	Test run Emergency Generator	Dishwasher P & M				

Revised 10/2007

May

When each item is complete, draw a diagonal line through the box and have the GM initial.

When each item is complete, draw a diagonal line through the box and have the GM initial.	Check and clean HV AC filters in Guest Rooms	Shampoo 8% of Guest Rooms			Schedule Energy Audit with utility companies	
	P & Mon 30% of Guest Rooms	Test Smoke Detectors in Guest Rooms	Clean Front Desk key machine with cleaning card	Check condition of parking lot and walks		
	Walk roof, pick up debris/clear all roof drains	Stripe parking lot		Clean lint off dryer motors and burner area	Algae tablets in all roof top A/C drain trays	
			Check and clean BV AC filters for all public areas			
	Test run Emergency Generator					

Revised 10/2007

June

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms			Annual Fire Panel And Sprinkler flow test. If kitchen hood has dry chemical system, Schedule also.			
	Clean Front Desk key machine with cleaning card		P&Mon30% Guest Rooms		Ice Machine cleaner thru all ice machines		
	Check and clean HV A C filters in Guest Rooms	Flush sediment from all hot water heaters	Change out all ice machine water filters, per specs	Clean lint off dryer motors and burner area			
	Check and clean ice machine filters			Check all Emergency phones	Annual trimming of all shrubs		
	Test run Emergency Generator						

Revised 10/2007

July

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms		Check all emergency lighting Exit signs		Clean Front Desk key machine with cleaning card	
	P & M on 30% Guest Rooms	Test Smoke Detectors in Guest Rooms	Annual Fire Extinguisher inspection	Check hot water temperature in Guest Rooms 120' Not to exceed		
	Rotate mattresses Per Specs		Laundry equipment P & M	Clean lint off dryer motors and burner area		
	Clean Guest Room locks with cleaning card	Check exterior lighting Monitor cooling towers for algae	Check and clean HV AC filters for all public areas	P & M all roof exhaust units	Check Exercise Room equipment	
	Test run Emergency Generator					

Revised 10/2007

August

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Check and clean HV A C filters Guest Rooms	Shampoo 8% of Guest Rooms		Check Exterior of building for deteriorating caulking		
	Clean Front Desk key machine with Cleaning Card		Annual Testing RPZ's by licensed plumber	P &M on 30% Guest Rooms		
Turn in quarterly readings on all closed water loop systems	Rotate mattresses Per Specs	All Employee written Fire Drill		Clean lint off dryer motors and burner. area		
Clean mini-fridge coils	Check and clean Ice machine filters		Check the building exterior for bad caulking around windows and doors	Dishwasher P&M		
	Test run Emergency Generator					

Revised 10/2007

September

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms				Clean Front Desk Key Machine with cleaning card	
	Test Smoke Detectors in Guest Rooms		P&M on 30% Guest Rooms			
	Check condition of elevator equipment room			Clean lint off dryer motors and burner. area		
	Check and clean HVAC filters in Guest Rooms		Check and clean HVAC filters for all public areas		Snow removal contract in place	
	Test run Emergency Generator					

Revised 10/2007

October

When each item is complete, draw a diagonal line through the box and have the GM initial.

Fall / Winterizing List started	Shampoo 8% of Guest Rooms	Wash all exterior windows	Check all emergency lighting exit signs		Winterize all lawn irrigation systems	
	P&M on 30% Guest Rooms	Clean Front Desk key machine with cleaning card	All roof units P&M	Rotate Mattresses	Check hot water temperature in Guest Rooms	
	Walk Roof, pick up debris/ clear all roof drains	Ice Machine cleaner thru all ice machines	Laundry equipment P&M	Clean lint off dryer motors and burner. area	Check and replace all bad weather stripping exterior doors	
Daylight Savings Time: Last Sunday in October. Send Memo and Post by Time Clocks	Check and clean Laundry exhaust duct	Check and clean ice machine filters	Clean Guest Room locks with cleaning cards	Check exterior lighting	P&M all roof exhaust units	
	Check Exercise room equipment	Test run emergency generator			List Capital Improvements desired for the following year	

Revised 10/2007

November

When each item is complete, draw a diagonal line through the box and have the GM initial.

Snow Removal log sheets for sidewalks and steps ready for winter	Shampoo 8% of Guest Rooms				Clean Front desk key machine with cleaning card	
	Test Smoke detectors in Guest Rooms	P&M on 30% Guest Rooms	Check and clean all HVAC filters in Guest Rooms			
Fall / Winterize List completed				Clean lint off dryer motor and burner area		
			Check and clean HVAC filters for all public areas			
	Test Run Emergency Generator					

Revised 10/2007

December

When each item is complete, draw a diagonal line through the box and have the GM initial.

	Shampoo 8% of Guest Rooms				Clean Front Desk key machine with cleaning cards	
	Set time Guest Room Locks		P&M on 30% Guest Rooms		Update Emergency Call list	
Turn in quarterly readings on all closed water loop systems	Clean Guest Room locks with Cleaning Cards	Flush sediment from all hot water heaters	Change out ice machine water filters, per specs	Clean lint off dryer motor and burner area	Clean mini fridge coils	
	Check and clean ice machine filter			Dishwasher P&M		
	Test run emergency generator					

Equipment Maintenance and Repair Data Card

Before you can fill out this card you must establish an equipment identification code system.

- Use one or two-letter prefixes to identify specific equipment types (i.e., F is for fans, A is for an air conditioner, etc.).
- Use appropriate numbers to further identify a specific piece of equipment (i.e., F-1 is for fan #1, F-2 for fan #2, etc.).
- Maintain a separate Master List for all equipment prefix codes.

Here is a list of suggested equipment identification codes:

A=	Air Conditioners	G=	Grounds
AH=	Air Handles	K=	Kitchen
B=	Boilers	L=	Laundry
C=	Compressors	M=	Motors
CH=	Cooling Tower	O=	Others
D=	Dishwasher	R=	Refrigeration
E=	Elevators	V=	Valves
F=	Fans	X=	Emergency

Codes should be logical, using one or two letters. A master of all property-specific codes should be placed in the PM Equipment Record at each property.

Stencil the code number on each piece of equipment, and double check that the stenciled code correctly corresponds with the master listing.

Then, an Equipment Maintenance and Repair Data Card is prepared for each piece of equipment.

When filling out the Equipment Maintenance and Repair Data Cards:

- make simple, clear, and concise entries
- be specific
- use diagrams, if required
- print legibly or type the information
- use N/A, if any area is not applicable

Steps to fill out Equipment Card:

A copy of a data card is located on the next page. Refer to it now and follow along while you read how to complete it.

1. Equipment Identification Code Box: Enter the code type and number assigned to the piece of equipment.
2. Equipment Description: Enter the name of the equipment (or describe what it does).
3. Equipment Location: Enter the specific location of the equipment.
4. Equipment Service: Define the area serviced by the equipment.
5. Make: Enter the equipment manufacturer's name.
6. Model: Enter the manufacturer's model number and/or name.
7. Serial Number: Enter the manufacturer's serial number.
8. Date Purchased: Enter the date the equipment was purchased. Be specific (month, day, year).
9. Purchased Price: Enter the purchase price.
10. Supplier: Enter the name of the original equipment supplier.
11. Warranty Expiration: Enter the date the warranty expires.
12. Service Manual on File: Check appropriate box.
 - a. If the answer is YES: Print the equipment identification code on the cover of the service manual.
 - b. If the answer is NO: Contact the manufacturer, and request a manual.
13. Manufacturer: Enter the manufacturer's name, address and telephone number.
14. Vendor: Obtain and enter the local vendor(s) name, address and telephone number.
15. Motor Data: Review the service manuals and/or motor name-data plates (usually on top of the motor) to obtain the information specified here.
16. Frequently Required Replacement Parts: List the most frequently used parts and the data requested for each part. (Most service manuals provide a list of suggested replacement parts). In the column titled "stocked" enter Yes/No if the part is available on property.
17. Preventative Maintenance Requirements:
 - a. List the task numbers in sequential order.
 - b. Describe the individual tasks (be specific).
 - c. Enter estimated time to perform the maintenance (review and adjust as needed).
 - d. Enter maintenance frequency using codes at the bottom of the form.
18. The back of the form: This portion of the form is for information on major repairs. Review the completed weekly task assignments and the inspection checklists for the required information. When entering the information, be specific.

Equipment Identification Label

The **Equipment Identification Label** explains and establishes specific equipment functions, start up and shut-down procedures, along with other pertinent information.

To complete this task:

- Use the completed Equipment Maintenance and Repair Data Cards
- Write simple, clear, specific instructions
- Use specific action words
- Use diagrams as required
- Write legibly or type the information

A copy of the form follows this explanation.

Steps to Complete the Identification Label:

1. Equipment Description: Enter the name of the Equipment.
2. Equipment Service: Enter the specific area that is serviced by the equipment.
3. Equipment Identification Code: Enter type and number codes.
4. Start-up Procedure:
 - a. Cautions: Enter the cautions or dangerous circumstances that exist.
 - b. Unusual Conditions: List any unusual condition that could effect the start up task
 - c. Special Tools Required: List any specific tools required to start-up the equipment.
 - d. How to Start-Up Equipment: Be specific. Write clear, simple, step-by-step instructions with specific actions, the tools required and the measurable indicator that the task is completed. Use diagrams and/or drawings, as required.
 - e. Electrical Panel or Valve Number: Enter information.
 - f. Electrical Panel or Valve Location: Enter information.
 - g. Electrical Break Number: Enter the number of the electrical breaker.
 - h. Electrical Disconnect Location: Enter the location of the disconnect.
5. Shut-Down Procedure:
 - a. Cautions: Enter the cautions (dangerous circumstances) that exist.
 - b. Unusual Conditions: List any unusual conditions.
 - c. Special Tools Required: List any specific tools required to shut-down.
 - d. How to Shut-Down Equipment: Be specific. Write clear, simple step-by-step instructions with specific actions, the tools required and the measurable indicator that the task is completed. Use diagrams and/or drawings, as required.
 - e. Electrical Panel or Valve Number: Enter information.
 - f. Electrical Panel or Valve Number: Enter information.
 - g. Electrical Break Number: Enter the number of the electrical breaker.
 - h. Electrical Disconnect Location: Enter the location of the disconnect.
6. Once the form is completed, then do the following:
 - a. Make a copy of the form.
 - b. Place the original in the PM program notebook.
 - c. Securely fasten the copy to the piece of equipment (in an easy-to-see place but out of the sight of guests).
7. Inspect the labels semi-annually. Replace as needed. Destroy outdated labels.
8. Label all newly installed equipment before placing equipment into service.

EQUIPMENT IDENTIFICATION LABEL

Equipment Description		Equipment Identification Code	
Equipment Service		(Type)	(Number)
START-UP PROCEDURE			
Cautions		Unusual Conditions	
Special Tools Required			
How to Start-up Equipment			
Electrical Panel or Valve #	Electrical Panel or Valve Location	Electrical Breaker #	Electrical Disconnect Location
SHUT DOWN PROCEDURE			
Cautions		Unusual Conditions	
Special Tools Required			
How to Start-up Equipment			
Electrical Panel or Valve #	Electrical Panel or Valve Location	Electrical Breaker #	Electrical Disconnect Location

Electrical Breaker Inventory

The **Electrical Breaker Inventory** provides a ready inventory of all electrical breakers and switches. This ready reference helps the property function more efficiently, particularly when the information is needed during an emergency.

A master list of breaker locations and functions is prepared. The original is filed and copies are posted in a conspicuous place in the department office and maintained at the Front Office (for emergency use by the Manager On Duty).

See the next page for a copy of this form to use for making an electrical breaker inventory. Refer to it now, and follow along as you read how it is used.

Steps to complete breaker inventory form:

1. If breaker identification cards are not posted at the breakers, do this:
 - a. Obtain blank electrical panel stick-on identification cards from a local contractor or electrical supply house.
 - b. Identify each break by the number in each panel on the identification cards.
 - c. Enter a brief description of the breaker's specific function.
 - d. Check each breaker to check the accuracy in number designation and function description.
 - e. Attach the cards to the inside cover of the panel door.
2. Complete the information as requested on the form.
3. Make the copies, as needed.

Valve Inventory

See the next page for a copy of this form, refer to it now and follow along as you read about its use.

1. Use the standardized Valve Codes listed below.

S	=	Steam
G	=	Gas (natural)
P	=	Propane
FO	=	Fuel Oil
LO	=	Lubricant Oil
DHW	=	Domestic Hot Water
DCW	=	Domestic Cold Water
CW	=	Chilled Water
HW	=	Hot Water
CHL	=	Chlorine Gas
PH	=	Pneumatic
RF	=	Refrigerant
SW	=	Sewage

2. Tag all valves using permanent brass tags. Attach the tags to the valves with short links of beaded chain. The tags should be approximately 2" in diameter, inscribed with the correct code, and the letters "NO" (normally open) or "NC" (normally closed) as required.
3. Verify that each valve is tagged correctly.
4. Create a Master Valve Inventory Listing by completing the form.
5. Make copies. The original is filed and copies are posted in a conspicuous place in the department office and maintained at the Front Desk (for emergency use by the Manager On Duty).

Monthly Boiler Inspection Log Sheet:

See the next page for a copy of this form, refer to it now and follow along as you read instructions concerning its use.

1. Enter the equipment identification code in the box in the upper right corner.
2. Enter year and month in upper right corner of form in spaces provided.
3. Obtain and enter the horsepower rating in upper right corner.
4. Fill in operating pressure in pounds per square inch (psi).
5. Enter "preferred readings time" in space provided.
6. MAKE UP WATER ANALYSIS. Enter Standard Range for chemicals in make-up water (upper left corner). List the ranges in the space provided. Use the information to determine the chemical balance for optimum operating efficiency.
7. WEEKLY READINGS. Once a week perform a boiler feed water analysis. Enter the date and appropriate readings in the space provided.
8. WASH-OUT DATES. Enter:
 - a. This months wash-out date.
 - b. Last month's wash-out date (from the previous log sheet).
 - c. Projected wash-out date (30 days) for next month.
9. Check the boilers daily. Complete the appropriate readings in the spaces provided across from the date of inspection.
 - a. Enter all control readings (from prior months log or supervisor).
 - b. Record hours of operation.
 - c. Obtain and record the "blow down" data in appropriate boxes.
 - d. Record all zeolite treatment by quantity and formula base used.
 - e. Analyze water leaving softener and record in space provided.
 - f. Analyze the boiler water and enter data.
 - g. Determine the pH of the condenser water and enter data.
 - h. Enter time of inspection and your initials.
10. Use the back of the log sheet to enter by date other information/remarks.
11. At the end of the month, turn the log sheet into the supervisor. This form must be kept on file for one year.

Swimming Pool Log Sheet

This inspection is done daily with the reading taken at the same time each day. The forms must be kept on file for three years. See next page for a copy of this form, refer to it now and follow along as you read these instructions.

1. Enter the equipment identification code in upper right corner of form.
2. Enter month and year in upper right corner.
3. Enter pool gallonage in space provided.

How to Determine Pool Volume/Total Gallons			
Rectangular or Square	Multiply	Length x Width x Average Depth x 7.5	= Total Gallons
Circular		Diameter x Diameter x Average Depth x 5.9	
Oval		Long Distance x Short Distance x Average Depth x 5.9	

4. Enter the Preferred Reading Times. NOTE: Reading should always be taken during periods of maximum use. Water for the test should be taken from the pool not the recirculation system.
5. Enter all established control readings in space provided. Obtain the information from prior month's sheet or your supervisor.
6. Determine all chemical balances daily. Adjust the balance as required. (Severe pool problems can take from two days to a week to be properly corrected). Record the information in the space provided.
Check the appropriate boxes using:
 - a. A "check mark" if the item is okay.
 - b. A "/" if the item needs maintenance
 - c. A "x" if the maintenance, cleaning or repairs are completed.
7. Perform a daily audit and inspection of daily pool usage.
 - a. List total hours pool is open for use.
 - b. Estimate maximum pool usage, that is, the total number of people in the pool and on deck at the peak period of operation - Enter total.
 - c. Record estimated total swimmers at the pool during the past 24 hours.
8. Conduct daily audit and inspection of pool safety equipment (see local and state codes).
 - a. Inspect that all safety equipment is available, in the proper place, and in complete working condition.
 - b. Check the pool signs for placement, vandalism and graffiti, assuring all directions are legible.
 - c. Check that pool telephone numbers (paramedics, ambulance, fire, police, etc) are accurate and legible.
9. Perform daily inspection of pool cleanliness.
 - a. Inspect pool sides and bottom for debris. Clean as needed.
 - b. Inspect desk area for cleanliness, litter and general repair. Clean and/or repair as needed.
 - c. Skim pool daily for debris. Clean skimmer and lint baskets daily.
10. Conduct daily water treatment inspections.

- a. Determine water level, adjust as required. Enter information on log sheet. List by gallons (or inches) or water added.
- b. List in the space provided the total hours of filter operation since last inspection. NOTE: Backwash per the manufacturer's recommendation. (Caution: If cyanuric acid has been added to improve the chlorination do not backwash for at least six hours after treatment. Backwashing will defeat the acid treatment).
- c. Record flow rate from flow meter reading in gallons per minute.
- d. List the amount (pounds or gallons) of disinfectant (chlorine or bromine) added to the feeding equipment since the last inspection. (NOTE: Some state and local codes require disinfectant be applied continuously).
- e. Record the amount of algaecides added (gallons or pounds). (NOTE: Algaecides should be used only as back up if chlorination has broken down. Algae are tiny plants that range in color from green to brown to yellow to red to black. All algae are harmful to pool balance).
- f. If additional chemicals are used, record the chemical name or type and the amount (pounds or gallons).

11. Monitor water conditions.

- a. Water should be tested three times each day - prior to opening and at least twice during the day based on usage. Test water should come from the pool not the recirculation system.
- b. Determine type of disinfectant residual being tested.

Enter readings in the space provided. Item to measure	Minimum Range	If pH is 7.2-7.6 minimum	If pH is 7.6 or greater, minimum	Ideal/Normal level
chlorine	1.0 to 1.5 ppm	1.0 ppm	1.5 ppm	1.5 ppm
bromine	1.0 to 2.0 ppm	1.0 ppm	2.0 ppm	
cyanuric acid levels (if used)	Cyanuric acid is a chemical which helps prolong the life of chlorine in water. It slows down the chlorine decay due to sunlight.			25 to 50 ppm or 1.67 obs per 5000 gallons of water
alkalinity level	Alkaline levels determine the speed and ease of pH change in the water.			80-150 ppm
calcium hardness	Calcium hardness, pH, and alkalinity comprise the pool's balance. If the ranges are checked daily and adjustments made as required, most "common" pool problems can be avoided.			200-275 ppm
water temp of indoor pool*	Water temperature is important for guest comfort, energy savings, chemical breakdown, and elimination of algae growth. Check state and local codes.			>76°F and <86°F
air temp				

12. Enter the time of inspection completion and your initials. Use the reverse side to list remarks and the date.

13. Upon completion of the inspection on the last day of each month, turn in the log sheet to your supervisor.=

SWIMMING POOL INSPECTION LOG SHEET

Year: _____ Month: _____ Pool Gallonage: _____ Preferred Reading Time: _____

Ok = Needs Maintenance, Cleaning or, Repair = / Maintenance, Cleaning or, Repair Completed = X Not Applicable =

Date of Inspection	Pool Usage				Safety			Cleaning			Water Treatment					Water Conditions							Inspect											
	Control Readings	Total Hours open for use	Estimate# of People		Rescue Equip	Signage	Telephone	Pool Side Bot	Pool Deck	Skimmed	Water Added	Filters		Chemical Adds			Disinfect Residues		Disinfect Residues		Disinfect Residues			Temps		Time of Inspection	Inspector Initials	Remarks - see reverse Side						
			Maximum	Total								Hours Operated	Back Wash	Flow Rate	Disinfectant	Algaecides	Chlorine	Bromine	Chlorine	Bromine	Chlorine	Bromine	PH	Cyanuric Acid	Alkalinity				Calcium Hardness	Water	Air			
	Total	In pool								Inches or Gallons	Total Hours Operated	Back Wash	GPM	Lbs. or Gals	Lbs. or Gals	1.0 - 1.5 ppm MIN.	7.2 - 7.8 PB	25-50 ppm	80-150 ppm	200-275 ppm	°F	°F												
1					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>																										
2																																		
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Note: All swimming pool readings should be taken at the same time each day. Record all remarks on reverse side by date.

