

Worksite: _____ Instructor: _____ Date/Time: _____

Topic C040: Drill Use

Introduction: Portable electric drills are an important component in many workers' power tool collection. Drills come in a wide range of types and sizes and equipped with the correct bit are used to bore or drill holes into virtually any material (except hardened steel). The drill's size designation is determined by the chuck capacity. Bits designed for use in portable electric drills are determined by the material being drilled. Most drilling or boring related injuries involve the hands, fingers, eyes, and face. Follow these safety guidelines and procedures prior to commencing power drilling or boring operations:

- Do not allow anyone to use an electric drill that has not been properly trained in the processes of safe portable drilling operations.
- Operate only properly maintained equipment. Before use, carefully inspect the machine for obvious defects that could cause malfunctions. Ensure the tool's power cord is secure and intact, the trigger switch functions properly, and that all fasteners and attachments are tight and correctly fitted. When possible, operate the tool using both hands and follow the manufacturer's operating instructions.
- Be familiar with the power drill being used. When using a new or unfamiliar tool, take time to "test-run" it and get a feel for its performance.
- Eye protection is extremely important and must always be worn when doing overhead operations. When operations present potential eye injuries, appropriate protection must be selected. Depending on the task, use a face shield, protective goggles, or approved safety glasses.
- Wear clothing appropriate for drilling or boring; avoid long, loose shirtsleeves, neckwear, or untied long hair.
- Check that the electrical circuit to be used is of the proper rating and that cords, plugs, and fittings are intact and secure.
- Use only extension cords that are free of splices, taps, bare wires, or frayed and deteriorated insulation. Use 3-prong adaptors.
- Select the correct drill and bit for the job and mount it securely in the chuck. Avoid using bits that are dull or bent.
- When possible, always secure your work on a stable platform using clamps or vices. The work-piece must be secured so it does not move.
- Prior to beginning drilling operations, inspect each work piece for nails, knots, or flaws that could cause the tool to buck or jump.
- Turn on the switch for a moment to see if the bit is properly centered and running true.
- With the switch off, place the point of the bit in the punched layout or pilot hole.
- Hold the drill firmly in one or both hands and at the correct drilling angle.
- Turn on the switch and feed the drill into the work-piece. The pressure required will vary with the size of the drill, the diameter of the drill bit, and the kind of material being drilled.
- During operation, keep the drill aligned with the direction of the hole. Keep your free hand away from point of operation.
- If any operational problems are noted, remove the drill from service and get it repaired immediately.
- When repairing tools or changing bits, always disconnect the power source.
- Unsafe practices and inadequate housekeeping create potentially dangerous work-zones; keep the work area free of trip hazards such as tangled power cords, cluttered material, scraps, stones, bricks, or other obstacles and obstructions.
- Be aware of your surroundings and always on the lookout for hazards. Avoid using electric drills in a wet environment.

If any operational problems are noted, removed the drill from service and get it repaired immediately.

Conclusion: Many manufacturing processes require the use of electric drills to bore holes in various materials and are essential for completing some jobs. However, if power drills are operated in a careless or unsafe manner, they can cause serious injury. Ensure the selected drill and bits are appropriate for the task at hand and that they are in proper operating condition. Follow these guidelines for safe power drilling and boring operations.

Employee Attendance: (Names or signatures of personnel who are attending this meeting)

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These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.