

Milwaukee Tool
Heavy Duty, Reversing, 1/2" D-Handle Drill
Model Numbers: 3107-6 (kit)

Operating Instructions

ASSEMBLY



WARNING!

To reduce the risk of injury, always unplug tool before attaching or removing accessories. Use only specifically recommended accessories. Others may be hazardous.

Removing and Replacing Quik-Lok® Cords (Fig. 1)

MILWAUKEE'S exclusive Quik-Lok® cords provide instant field replacement or substitution.

Fig. 1



1. To remove the Quik-Lok® cord, turn the cord nut 1/4 turn to the left and pull it out.
2. To replace the Quik-Lok® cord, align the connector keyways and push the connector in as far as it will go. Turn the cord nut 1/4 turn to the right to lock.

Installing Side Handle



WARNING!

To reduce the risk of injury, always use a side handle when using this tool. This tool operates with high torque. Always brace or hold the tool securely.

MILWAUKEE D-Handle Drills are supplied with a side handle that can be installed on either side of the tool for right or left handed use. To install the side handle, attach the side handle to the extension. Thread it into the socket on the

desired side of the tool and tighten it securely. Because of the high torque of this drill, the side handle must always be used when operating the drill.



WARNING!

When using the D-Handle drill without the right angle drive unit, do not clamp the ring clamp with attached side handle to the front of the gear case; use the side handle instead.

Do not use the extension when using the ring clamp.

Ring Clamp Side Handle For Right Angle Drive Unit

For D-handle drill with Right Angle Drive unit:

A ring clamp, extension and side handle are supplied with the Right Angle Drive Unit. When using a right angle drive unit, attach the side handle to the ring clamp. Do not use the extension when using the ring clamp. The ring clamp with attached side handle clamps onto the right angle drive unit and can swivel 360° and locked tight in any position.

For D-handle drill without Right Angle Drive Unit:

When using the D-handle drill without the right angle drive unit, remove the ring clamp with attached side handle, then remove the side handle from the ring clamp. Attach the side handle to the extension. The side handle can be installed on either side of the tool for right or left handed use. To install the extension with attached side handle, thread it into the socket on the desired side of the tool (for right or left-handed use) and tighten securely.

NOTE: If you have an extra ring clamp with attached side handle and extension with attached side handle, do not use the extension with attached side handle when using the right angle drive unit. Remove it from the tool.

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Operating Instructions (continued)

Installing Bits into Keyed Chucks (Fig. 2)



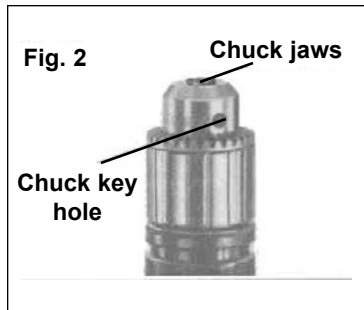
WARNING!

To prevent personal injury, always remove the chuck key from the chuck after each use.

Be sure that the shank of the bit and the chuck jaws are clean. Dirt particles may cause the bit to line up improperly. Do not use bits larger than the maximum recommended capacity of the drill because gear damage or motor overloading may result. For best performance, be sure that the bits are properly sharpened before use.

1. Unplug the tool.

2. Open the chuck jaws wide enough to insert a bit. Allow the bit to strike the bottom of the chuck. Center the bit in the chuck jaws and tighten the jaws by hand to align the bit.



3. Place the chuck key into each of the three holes in the chuck, turning it clockwise to tighten the chuck securely.

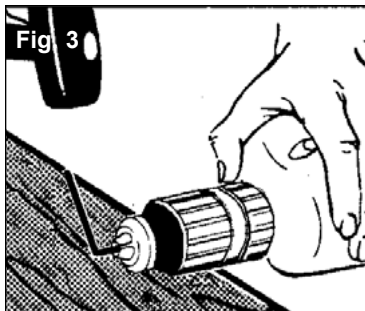
NOTE: Never use a wrench or means other than a chuck key to tighten or loosen the chuck.

4. To remove the bit, insert the chuck key into one of the holes in the chuck and turn it counterclockwise.

Removing the Chuck from the Drill (Fig. 3)

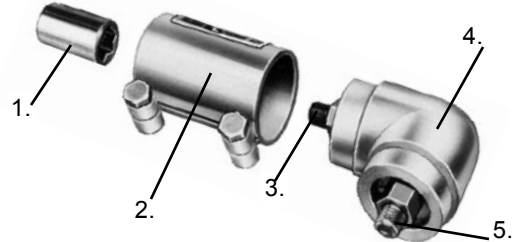
1. To remove the left-hand screw inside the chuck, unplug the tool and open the chuck jaws. Insert a T-handle hex key into the screw inside the chuck. Turn the T-handle hex key and remove the screw. Save the screw for installing your new chuck.

2. To remove chuck; tighten a large hex key into the chuck. Place the chuck on a workbench as shown: Strike the hex key with a soft-headed mallet to loosen the chuck. Remove the chuck by hand.



Attaching Right Angle Drive to Drill (Fig. 4)

Fig. 4



1. Remove the chuck from the drill following instructions (See “Removing the Chuck From the Drill”). Slip the double hex coupling (1) over the hex on the drill spindle.

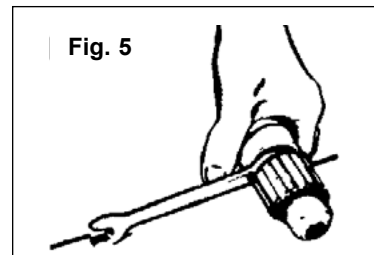
Loosen the clamping screws on the clamping sleeve (2) and slip the sleeve onto the drill collar.

2. Slide the Right Angle Drive head (4) into the other side of the sleeve and turn the drive head slightly in either direction so the hexagonal hole in the coupling (1) engages the hexagonal portion of the spindle (3).

NOTE: Attaching the drill chuck to the side marked “LOW” reduces the speed by 1/3, or 33%. Attaching the drill chuck to the opposite side increases the speed by 50%.

3. When assembled, turn the Right Angle Drive head to the desired position and tighten the clamping screws to secure the unit. Thread the chuck onto the Right Angle Drive spindle (5). **INSTALL CHUCK LOCKING SCREW.**

Removing the Chuck From Right Angle Drive Unit (Fig. 5)



The chuck can be removed from the Right Angle Drive Unit in the same manner it is removed from the drill; however, **ALWAYS REMOVE RIGHT ANGLE DRIVE FROM THE DRILL BEFORE ATTEMPTING TO LOOSEN THE CHUCK.** This will prevent damaging the drill’s gearing. Use the open end wrench provided to hold the Right Angle Drive spindle before attempting to loosen the chuck.

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Operating Instructions (continued)

APPLICATIONS

Selecting Bits

When selecting a bit, use the right type for your job. For best performance, always use sharp bits.

Drilling in Wood Composition Materials and Plastic

When drilling in wood, composition materials and plastic, start the drill slowly, gradually increasing speed as you drill. Use low speeds for plastics with a low melting point.

NOTE: Keep the speed low enough to prevent burning the bit.

Drilling in Metal

When drilling in metal, use high speed steel twist drills or hole saws. Use a center punch to start the hole. Lubricate drill bits with cutting oil when drilling in iron or steel. Use a coolant when drilling in nonferrous metals such as copper, brass or aluminum. Back the material to prevent binding and distortion on breakthrough.

Drilling in Masonry

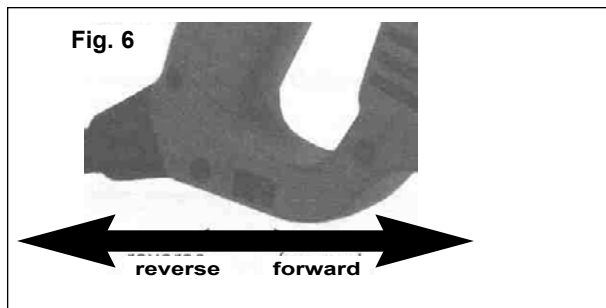
When drilling in masonry, use high speed carbide-tipped bits. Drilling soft masonry materials such as cinder block requires little pressure. Hard materials like concrete require more pressure. A smooth, even flow of dust indicates the proper drilling rate. Do not let the bit spin in the hole without cutting. Do not use water to settle dust or to cool bit. Do not attempt to drill through steel reinforcing rods. Both actions will damage the carbide.

OPERATION



To reduce the risk of injury, wear safety goggles or glasses with side shields.

Using Forward/Reverse Switch (Fig. 6)



1. For **forward** (clockwise) rotation, push the forward/reverse switch to FWD as shown.

Check the direction of rotation before use.

2. For **reverse** (counterclockwise) rotation, push the forward/reverse switch to REV as shown.

Check the direction of rotation before use.

Although an interlock prevents reversing the tool while the motor is running, allow the motor to come to a full stop before reversing.

Starting, Stopping and Controlling Speed



To reduce the risk of injury, keep hands and cord away from the bit and all moving parts.

1. To **start** the tool, pull trigger.
2. To **stop** the tool, release the trigger.
3. To vary the speed, increase or decrease pressure to the trigger. The further the trigger is pulled, the greater the speed.

Drilling



To reduce the risk of explosion, electric shock and property damage, always check the work area for hidden pipes and wires before drilling

1. Before drilling, be sure the workpiece is clamped securely. Use backing material to prevent damage to the workpiece during breakthrough.
2. When starting a hole, place the drill bit on the work surface and apply firm pressure. Begin drilling at a slow speed, gradually increasing the speed as you drill.
3. Always apply pressure in line with the bit. Use enough pressure to keep the drill biting, but do not push hard enough to stall the motor.
4. Reduce pressure and ease the bit through the last part of the hole. While the tool is still running, pull the bit out of the hole to prevent jamming.

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Operating Instructions (continued)

Stalling

If the tool seems as if it is about to stall, maintain a firm grip and reduce pressure slightly to allow the bit to regain speed. If the tool does stall, release the trigger immediately. Reverse the motor, remove the bit from the work and start again. Do not pull the trigger on and off in an attempt to start a stalled drill. This can damage the drill.



To reduce the risk of personal injury, hold the tool securely. Brace tools with side handles as shown (Fig. 7, 8 & 9). If the bit binds, the tool will be forced in the opposite direction. Bits may bind if they are misaligned or when breaking through a hole. Wood boring bits can also bind if they run into nails or knots.

