

DEWALT®

DW331 VS Orbital Jig Saw

Definitions: Safety Guidelines


The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.

▲ DANGER: Indicates an imminently hazardous situation which, if not avoided, **will** result in **death or serious injury**.


▲ WARNING: Indicates a potentially hazardous situation which, if not avoided, **could** result in **death or serious injury**.

▲ CAUTION: Indicates a potentially hazardous situation which, if not avoided, **may** result in **minor or moderate injury**.

NOTICE: Indicates a practice **not related to personal injury** which, if not avoided, **may** result in **property damage**.

 **WARNING:** To reduce the risk of injury, read the instruction manual.

General Power Tool Safety Warnings

 **WARNING!** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

- Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

3) PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

4) POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5) SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Additional Specific Safety Instructions for Jig Saws

- Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- Allow the motor to come to a complete stop before withdrawing the blade from the kerf (the slot created by cutting).** A moving blade may impact the workpiece causing a broken blade, workpiece damage or loss of control and possible personal injury.
- Keep handles dry, clean, free from oil and grease.** This will enable better control of the tool.
- Keep blades sharp.** Dull blades may cause the saw to swerve or stall under pressure.
- Clean out your tool often, especially after heavy use.** Dust and grit containing metal particles often accumulate on interior surfaces and could create an electric shock hazard.
- Do not operate this tool for long periods of time.** Vibration caused by the operating action of this tool may cause permanent injury to fingers, hands, and arms. Use gloves to provide extra cushion, take frequent rest periods, and limit daily time of use.
- Air vents often cover moving parts and should be avoided.** Loose clothes, jewelry or long hair can be caught in moving parts.
- An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety.** The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

		Minimum Gauge for Cord Sets				
		Volts	Total Length of Cord in Feet (meters)			
Ampere Rating		120V	25 (7.6)	50 (15.2)	100 (30.5)	150 (45.7)
		240V	50 (15.2)	100 (30.5)	200 (61.0)	300 (91.4)
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

▲ WARNING: ALWAYS use safety glasses. Everyday eyeglasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:

- ANSI Z87.1 eye protection (CAN/CSA Z94.3),
- ANSI S12.6 (S3.19) hearing protection,
- NIOSH/OSHA/MSHA respiratory protection.

▲ WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

▲ Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.

▲ WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury. Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

▲ WARNING: Always wear proper personal hearing protection that conforms to ANSI S12.6 (S3.19) during use. Under some conditions and duration of use, noise from this product may contribute to hearing loss.

- The label on your tool may include the following symbols. The symbols and their definitions are as follows:

V.....volts	A.....amperes
Hz.....hertz	W.....watts
minminutes	~ or AC.....alternating current
=== or DC.....direct current	⎓ or AC/DC.....alternating or direct current
⚠.....Class I Construction (grounded)	n ₀no load speed
□.....Class II Construction (double insulated)	n.....rated speed
	⊕.....earthing terminal
	▲.....safety alert symbol

FIG. 1

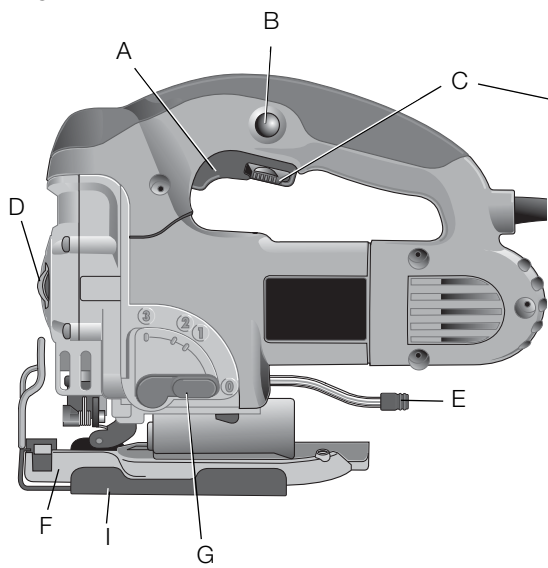


FIG. 2

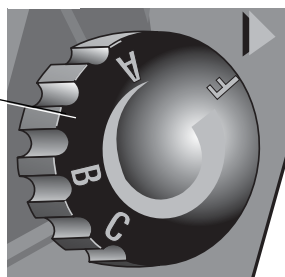


FIG. 3

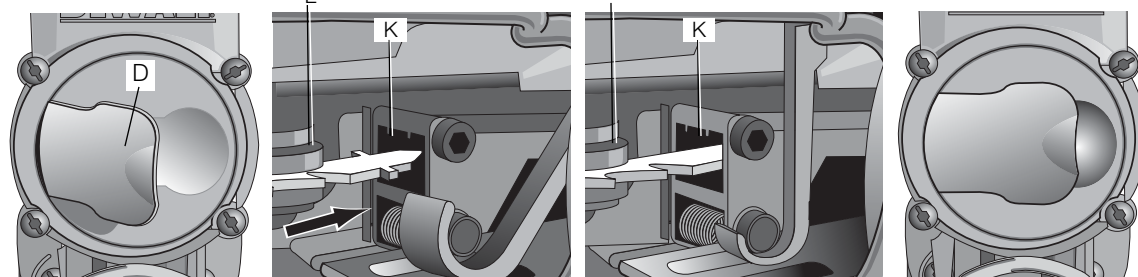


FIG. 4

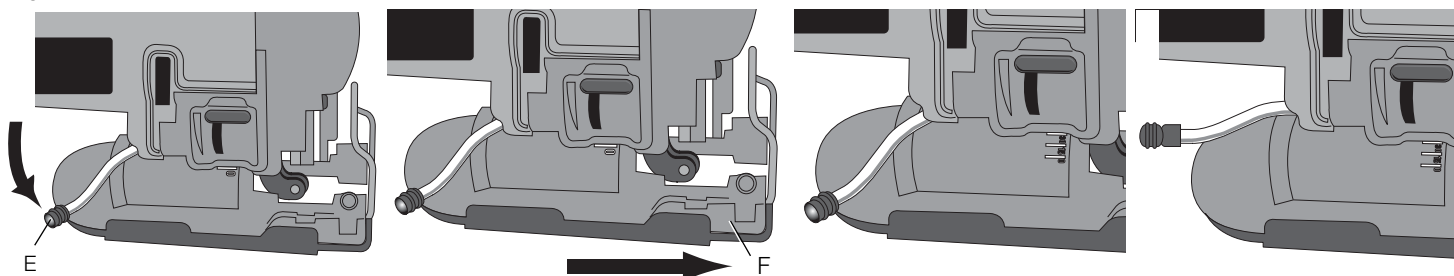


FIG. 5

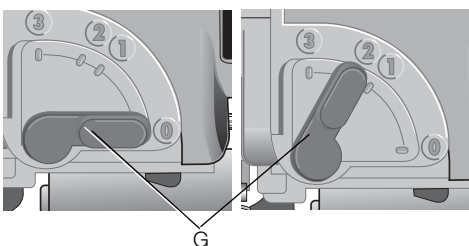


FIG. 6

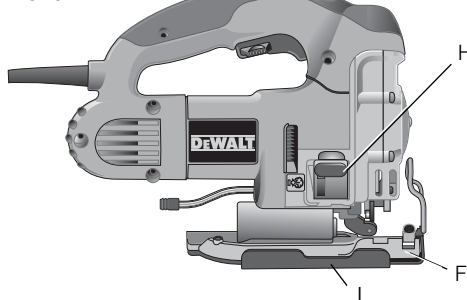


FIG. 7

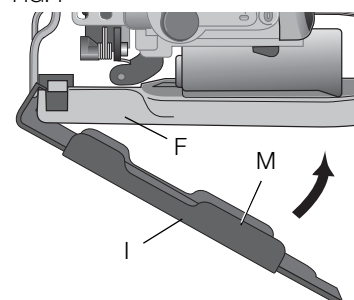
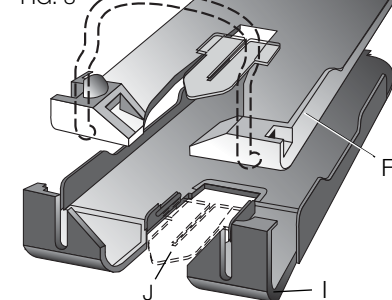


FIG. 8



.../minper minute

IPM.....impacts per minute

SPM.....strokes per minute

BPM.....beats per minute

RPM.....revolutions per minute

sfpm.....surface feet per minute

SAVE THESE INSTRUCTIONS FOR FUTURE USE

Motor

Be sure your power supply agrees with the nameplate marking. Voltage decrease of more than 10% will cause loss of power and overheating. Volts 50/60 Hz or "AC only" means your tool must be operated only with alternating current and **never** with direct current. Volts DC-60 Hz or AC/DC means your tool may be operated with either alternating or direct current. DEWALT tools are factory tested; if this tool does not operate, check power supply.

COMPONENTS

- | | |
|-----------------------|-------------------------|
| A. Trigger switch | F. Shoe |
| B. Lock button | G. Cutting action lever |
| C. Speed control dial | H. Dust blower control |
| D. Blade lever | I. No-mar shoe cover |
| E. Bevel lever | J. Anti-splinter insert |

Trigger Switch (Fig. 1)

To start the jig saw, squeeze the trigger switch (A).

To slow and stop the jig saw, release the trigger switch.

For continuous operation, squeeze the trigger switch then depress the lock button (B). Once lock button is depressed, release the trigger switch.

To release from continuous operation, squeeze the trigger and the lock will disengage.

Variable Speed Switch (Fig. 1, 2)

The variable speed is controlled in two ways: speed control dial (C) and the trigger switch (A).

SPEED CONTROL DIAL

By rotating the speed control dial (C) in either direction, the maximum speed or strokes-per-minute at which the blade will cut is adjusted. The speed control dial adjusts the speed that the blade will cut from approximately 500 SPM on speed A to approximately 3,100 SPM on speed F.

TRIGGER SWITCH

As the trigger switch is pressed in, the strokes-per-minute continue to increase, but not to exceed the maximum setting on the speed control dial. As the trigger is released, the blade strokes-per-minute reduce.

ASSEMBLY AND ADJUSTMENTS

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

Blade Installation and Removal (Fig. 3)

⚠ CAUTION: Turn off and unplug the tool before making any adjustments or removing/installing attachments or accessories.

TO INSTALL A BLADE

NOTE: This jig saw uses only T-shank jig saw blades.

NOTE: The DT2074 flush cutting blade is for use with DEWALT DW331 and DC330 jig saws only.

NOTE: When installing flush cutting blades (DT2074), the anti-splinter insert must be removed and the shoe must be in the 0° positive stop position.

1. Lift the keyless blade lever (D).
2. Insert the T-shank blade into the clamp mechanism (K) while guiding the back of the blade into the groove of the guide rollers (L).
3. The T-shank should be completely inside the clamp mechanism as shown in Figure 3.
4. Release the keyless blade lever.

TO REMOVE A BLADE

1. Lift the keyless blade lever (D).
2. With a slight shake the blade will drop out.

⚠ CAUTION: Do not touch used blades, they may be hot. Personal injury may result.

Beveling the Shoe (Fig. 4)

To unlock the shoe, pull the keyless bevel lever (E) to the side.

To lock the shoe, push the keyless bevel lever back under the body of the jig saw.

TO BEVEL THE SHOE

1. Unlock the shoe.
2. Slide the shoe (F) forward to release it from the 0° positive stop position.
3. The shoe can be beveled to the left or to the right and has detents at 15°, 30° and 45°. The shoe can be manually stopped at any degree between 0° and 45°.
4. Once the desired bevel angle is achieved, lock the shoe into place.

TO SET SHOE BACK TO 0°

1. Unlock the shoe.
2. Rotate the shoe back to 0°.
3. Slide the shoe back into the 0° positive stop position.
4. Lock the shoe.

FIG. 9

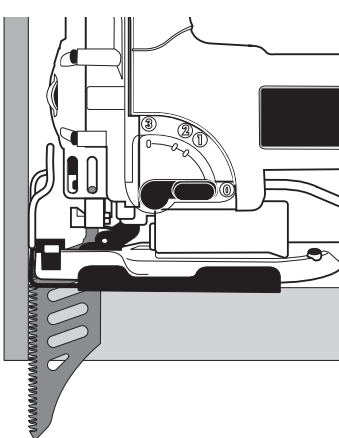


FIG. 10

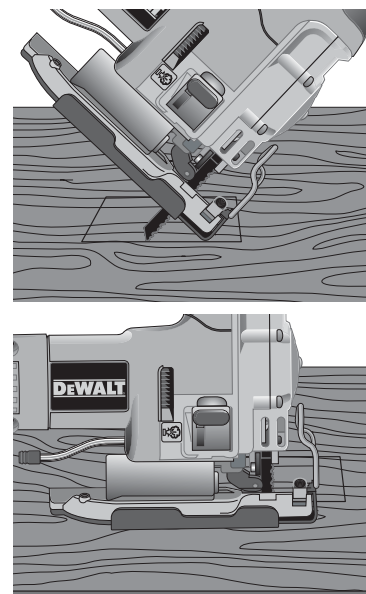
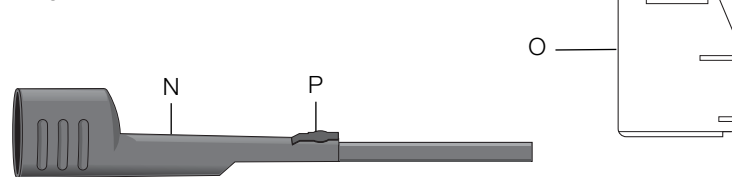


FIG. 11



Cutting Action – Orbital or Straight (Fig. 5)

⚠ CAUTION: Check that the tool is not locked ON before connecting it to a power supply. If the trigger switch is locked ON when the tool is connected to the power supply, it will start immediately. Damage to your tool or personal injury may result.

This jig saw is equipped with four cutting actions, three orbital and one straight. Orbital action has a more aggressive blade motion and is designed for cutting in soft materials like wood or plastic. Orbital action provides a faster cut, but with a less smooth cut across the material. In orbital action, the blade moves forward during the cutting stroke in addition to the up and down motion.

NOTE: Metal or hardwoods should never be cut in orbital action.

To adjust the cutting action, move the cutting action lever (G) between the four cutting positions: 0, 1, 2, and 3. Position 0 is straight cutting. Positions 1, 2, and 3 are orbital cutting. The aggressiveness of the cut increase as the lever is adjusted from one to three, with three being the most aggressive cut.

Dust Blower (Fig. 6)

The dust blower helps clear the cutting area of debris created from the blade.

NOTE: When cutting metal, turn the dust blower off so cutting fluids are not blown away from the blade.

To turn the dust blower on, slide the dust blower control (H) all the way to the top.

To turn the dust blower off, slide the dust blower control all the way to the bottom.

Removable No-Mar Shoe Cover (Fig. 7)

The no-mar shoe cover (I) should be used when cutting surfaces that scratch easily, such as laminate, veneer, or paint.

To attach no-mar shoe cover, place the front of the aluminum shoe (F) into the front of the no-mar shoe cover (I) and lower the jig saw. The no-mar shoe will click securely onto the rear of aluminum shoe.

To remove no-mar shoe cover, grasp the no-mar shoe cover from the bottom; holding onto the two rear tabs (M) remove the no-mar shoe cover.

Anti-Splinter Insert (Fig. 8)

NOTE: Do not use the anti-splinter insert with the flush cutting blade.

The anti-splinter insert (J) should be used when trying to minimize tear-out, especially when cutting veneer, laminate, or finished surfaces, such as paint. The anti-splinter insert should be installed into the no-mar shoe cover (I). If the no-mar cover is not used, install anti-splinter insert into shoe (F).

OPERATION

⚠ WARNING: To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.

Cutting

⚠ WARNING: The jig saw should not be operated with the shoe removed or serious personal injury may result.

POCKET CUTTING (FIG. 10)

A pocket cut is an easy method of making an inside cut. The saw can be inserted directly into a panel or board without first drilling a lead or pilot hole. In pocket cutting, measure the surface to be cut and mark clearly with a pencil. Next tip the saw forward until the front end of the shoe sits firmly on the work surface and the blade clears the work through its full stroke. Switch the tool on and allow it to attain maximum speed. Grip the saw firmly and lower the back edge of tool slowly until the blade reaches its complete depth. Hold the shoe flat against the wood and begin cutting. Do not remove blade from cut while it is still moving. Blade must come to a complete stop.

FLUSH CUTTING (FIG. 9)

A flush cut is necessary when finishing off cuts up to a wall or an obstacle, such as back-splash. One of the easiest ways to accomplish the flush cut is to use a flush cutting blade (DT2074). The flush cutting blade provides the reach necessary to cut right up to the front edge of the jig saw shoe. Remove the anti-splinter insert and return the shoe to the 0° positive stop position before installing and using the flush cutting blade. For the best cut quality the flush cutting blade should be used in the 0 or 1 orbital position. The flush cutting blade should not be used to start the cut because the flush cutting blade prevents the shoe from being supported by the work surface. Use wood cutting practices explained below.

WOOD CUTTING

Support the workpiece adequately at all times. Use the higher speed setting for cutting wood. Do not attempt to turn the tool on when blade is against material to be cut. This could stall the motor. Place the front of shoe on the material to be cut and hold the jig saw shoe firmly against the wood while cutting. Don't force the tool; let the blade cut at its own speed. When the cut is complete, turn the jig saw off. Let blade come to a complete stop and then lay the saw aside before loosening the work.

METAL CUTTING

In cutting thin gauge sheet metals, it is best to clamp wood to the bottom of sheet metal; this will insure a clean cut without the risk of vibration or tearing of metal. Always remember to use a finer blade for ferrous metals (for those that have a high iron content); and use a coarser blade for non-ferrous metals (those that do not have an iron content). Use a high speed setting for cutting soft metals (aluminum, copper, brass, mild steel, galvanized pipe, conduit sheet metal, etc.). Use lower speed to cut plastics, tile, laminate, hard metals, and cast iron.

MAINTENANCE

⚠ WARNING: *To reduce the risk of injury, turn unit off and disconnect it from power source before installing and removing accessories, before adjusting or when making repairs. An accidental start-up can cause injury.*

Cleaning

⚠ WARNING: *Blow dirt and dust out of all air vents with clean, dry air at least once a week. To minimize the risk of eye injury, always wear ANSI Z87.1 approved eye protection when performing this.*

⚠ WARNING: *Never use solvents or other harsh chemicals for cleaning the non-metallic parts of the tool. These chemicals may weaken the plastic materials used in these parts. Use a cloth dampened only with water and mild soap. Never let any liquid get inside the tool; never immerse any part of the tool into a liquid.*

Lubrication

NOTE: NEVER spray or in any other way apply lubricants or cleaning solvents inside the tool. This can seriously affect the life and performance of the tool.

DEWALT tools are properly lubricated at the factory and are ready for use. However, it is recommended that, once a year, you take or send the tool to a certified service center for a thorough cleaning and inspection.