DEWALT DWE43144N

DEWALT DWE43144N 6-Inch Angle Grinder Instruction Manual

Model: DWE43144N

1. Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your DEWALT DWE43144N 6-inch Angle Grinder. This high-performance tool features a 13-amp motor, delivering 9,000 RPM for various metal grinding and cutting applications. It incorporates advanced safety features such as the PERFORM & PROTECT product line's Anti-Rotation E-CLUTCH System and Dust Ejection System technology.



Image 1.1: Overview of the DEWALT DWE43144N 6-inch Angle Grinder. The tool is yellow and black, featuring a paddle switch and a side handle.

2. Safety Information

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury when using power tools. Read and understand all instructions before operating this tool.

General Power Tool Safety Warnings:

- **Work Area Safety:** Keep your 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.
- **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. Avoid body contact with earthed or grounded surfaces.
- **Personal Safety:** Always wear eye protection. Use hearing protection when operating for extended periods. Wear a dust mask in dusty conditions. Dress properly; avoid loose clothing or jewelry.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Specific Grinder Safety:** Always use the correct guard for the accessory being used. Ensure the accessory is properly mounted and tightened before operation. Be aware of kickback and how to control it.

3. Package Contents

Verify that all items listed below are present in your package. If any parts are missing or damaged, contact your retailer or DEWALT service center.



Image 3.1: Visual representation of the included components for the DEWALT DWE43144N angle grinder.

- DEWALT DWE43144N 6-inch High-Performance Paddle Switch Grinder
- 6-inch Type 27 Guard
- 6-inch Type 1 Guard
- Side Handle
- Hex Key
- Inner and Outer Flange

4. Product Features

The DEWALT DWE43144N angle grinder is engineered with several features to enhance performance and user safety.



Image 4.1: Diagram highlighting key features of the DEWALT DWE43144N, including the 13 Amp motor, 2.3 HP, 9,000 RPM, and Dust Ejection System.

- **13 Amp Motor:** Provides robust power for demanding grinding and cutting tasks.
- **9,000 RPM:** High rotational speed for efficient material removal.
- **Paddle Switch with No Lock-On:** Designed for user comfort and safety, requiring continuous pressure to operate, which helps prevent accidental starts.
- **Anti-Rotation E-CLUTCH System:** This safety feature activates in less than a tenth of a second when a pinch or stall is detected, shutting down the motor to reduce the risk of kickback.
- **Dust Ejection System Technology:** Ejects damaging dust and debris particles that enter through the air intake vents, extending tool life.
- **Power Loss Reset:** Helps prevent accidental restarts after a power disruption if the tool is left in the "on" position.
- **Brake System:** Quickly brings the grinding wheel to a stop when the paddle switch is released, enhancing safety.

5. Setup

Proper setup is crucial for safe and effective operation. Follow these steps before using your angle grinder.

Attaching the Side Handle:

1. The side handle can be installed on either side of the gear case for left or right-handed operation.
2. Thread the side handle clockwise into the desired mounting hole until it is securely tightened.

Attaching the Guard:

Always use the appropriate guard for your application (Type 27 for grinding, Type 1 for cutting).

1. Ensure the tool is unplugged from the power source.
2. Align the guard with the gear case.
3. Secure the guard using the provided fasteners or clamping mechanism, ensuring it is firmly in place and oriented to deflect sparks away from the operator.

Mounting the Grinding/Cutting Wheel:

1. Ensure the tool is unplugged.
2. Place the inner flange onto the spindle.
3. Position the grinding or cutting wheel onto the spindle, ensuring it sits flush against the inner flange.
4. Thread the outer flange onto the spindle and tighten it securely using the hex key.
5. Verify that the wheel is centered and securely fastened before operation.

6. Operating Instructions

Follow these guidelines for safe and effective operation of your DEWALT DWE43144N angle grinder.



Image 6.1: A user operating the DEWALT DWE43144N angle grinder, demonstrating its use for metal grinding with sparks visible.

Powering On/Off:

- To turn the tool ON, depress the paddle switch.
- To turn the tool OFF, release the paddle switch. The brake system will quickly stop the wheel.

Grinding and Cutting Techniques:

- **Grinding:** Hold the grinder firmly with both hands. Position the wheel at a slight angle (15-30 degrees) to the workpiece. Apply moderate, even pressure and move the grinder smoothly across the surface.
- **Cutting:** Use a Type 1 cutting guard. Hold the grinder firmly. Position the cutting wheel perpendicular to the workpiece. Allow the wheel to reach full speed before making contact. Apply light, consistent pressure, letting the tool do the work. Avoid twisting or binding the wheel.

Safety Features in Action:



Image 6.2: Illustration of the E-CLUTCH system quickly shutting down the motor during a bind-up situation, enhancing user safety.

- **E-CLUTCH System:** If the wheel binds or stalls, the E-CLUTCH system will automatically shut down the motor to prevent kickback. Release the paddle switch, clear the obstruction, and then restart the tool.
- **Power Loss Reset:** In the event of a power interruption, the tool will not restart automatically when power is restored, even if the paddle switch is still depressed. You must release and re-engage the paddle switch to restart.

7. Maintenance

Regular maintenance ensures optimal performance and extends the life of your DEWALT DWE43144N angle grinder.



Image 7.1: Close-up view of the Dust Ejection System, designed to prevent tool damage by expelling debris.

- **Cleaning:** Keep the tool's air vents clean and free of debris. Use compressed air to clear dust from the motor housing regularly.
- **Dust Ejection System:** Periodically inspect the dust ejection ports to ensure they are not blocked. A clean system helps prevent internal damage from abrasive particles.
- **Cord Inspection:** Regularly inspect the power cord for damage. Do not use the tool if the cord is frayed or cut.
- **Accessory Inspection:** Before each use, inspect grinding and cutting wheels for cracks, chips, or excessive wear. Replace damaged accessories immediately.
- **Brush Replacement:** Carbon brushes may need replacement over time. Refer to a qualified service technician for brush inspection and replacement.

8. Troubleshooting

This section addresses common issues you might encounter with your angle grinder.

Problem	Possible Cause	Solution
Tool does not start	No power supply; Power Loss Reset activated; Faulty paddle switch	Check power outlet and circuit breaker. Release and re-engage paddle switch. If problem persists, seek professional service.

Problem	Possible Cause	Solution
Tool stops during operation	E-CLUTCH System activated (bind-up); Overload; Power interruption	Release paddle switch, clear obstruction, reduce load. Check power supply.
Excessive vibration	Damaged or unbalanced wheel; Loose flanges; Worn bearings	Replace wheel. Ensure flanges are tightened. Seek professional service for bearing inspection.
Reduced performance/power	Worn carbon brushes; Motor overheating; Clogged air vents	Have brushes inspected/replaced. Allow tool to cool. Clean air vents.

9. Specifications

Technical specifications for the DEWALT DWE43144N 6-inch Angle Grinder.



Image 9.1: Diagram illustrating the dimensions of the DEWALT DWE43144N angle grinder.

Specification	Value
Model Number	DWE43144N
Brand	DEWALT
Power Source	Corded Electric
Voltage	120V
Amperage	13 Amp
Wattage	1700 watts
Maximum Rotational Speed	9000 RPM

Specification	Value
Horsepower	2.30 HP
Disc Diameter	6 inches
Item Weight	6.2 pounds
Product Dimensions	13 x 7 x 5 inches

10. Warranty and Support

Warranty Information:

This DEWALT DWE43144N angle grinder comes with a**3-year limited warranty**. This warranty covers defects in materials or workmanship. For specific terms and conditions, please refer to the warranty card included with your product or visit the official DEWALT website.

Customer Support:

For technical assistance, service, or replacement parts, please contact DEWALT customer support. Contact information can typically be found on the DEWALT official website or in the product packaging.

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