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DCA ASM18-115

DCA 4-1/2 Inch Angle Grinder User Manual

Model: ASM18-115

1. Important Safety Instructions

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

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 abuse the cord. Keep cord away from heat, oil, sharp edges, or moving parts.
- **Personal Safety:** Always wear eye protection (safety goggles). Use hearing protection when operating for extended periods. Wear a dust mask if operations create dust. Dress properly; avoid loose clothing or jewelry. Stay alert, watch what you are doing, and use common sense.
- **Power 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. Store idle power tools out of the reach of children.

Angle Grinder Specific Safety Warnings:

- **Guards:** Always use the correct guard for the type of operation. Ensure the guard is securely attached and positioned for maximum safety.
- **Accessories:** Only use accessories that are specifically designed and rated for this angle grinder. Ensure the accessory is correctly mounted and tightened before use.
- **Kickback:** Be aware of kickback, which is a sudden reaction to a pinched or snagged rotating wheel. Always maintain a firm grip on the tool with both hands.
- **Starting the Tool:** Ensure the accessory is clear of the workpiece before starting the tool.
- **Cool Down:** Do not touch the accessory immediately after use; it may be extremely hot.

2. Product Overview

The DCA 4-1/2 Inch Angle Grinder is a versatile tool designed for cutting, grinding, weld cleanup, rust removal, sharpening, and polishing. Familiarize yourself with its components for safe and effective operation.



Image 2.1: Overview of the DCA Angle Grinder with key components highlighted. This includes the auxiliary handle, 3D ventilation ports, pure copper motor, dust-proof design, spindle lock, lock-on switch, and wheel guard.

Key Components:

- **Grinder Body:** Houses the motor and gearing.
- **Auxiliary Handle:** Provides additional grip and control. Can be positioned on either side of the gear housing.
- **Spindle Lock Button:** Used to lock the spindle for easy accessory changes.
- **Lock-On Switch:** Allows continuous operation without holding the trigger.
- **Safety Guards:** Includes a grinding guard and a cutting guard for different applications.
- **Power Cord:** Connects the tool to an electrical outlet.



Image 2.2: Close-up view of the angle grinder highlighting the spindle lock button for disc replacement and the lock-on switch for continuous operation and to prevent accidental activation.

3. Technical Specifications

Refer to the following specifications for detailed information about your DCA Angle Grinder.

Feature	Specification
Brand	DCA
Model Number	ASM18-115
Power Source	Corded Electric
Motor Power	7.2 Amp (860W)
No-Load Speed	11,800 RPM

Feature	Specification
Disc Diameter	4-1/2 inches (115 mm)
Spindle Thread	5/8"-11
Arbor Size	7/8" (22.2 mm)
Product Dimensions (L x W x H)	17.3" x 5" x 5"
Item Weight	3.53 lbs (1.6 kg)
Material	Metal

4. Setup and Assembly

Before operating the angle grinder, ensure it is properly assembled and all safety components are in place.

4.1 Unpacking and Inspecting Contents:

Carefully remove all items from the packaging. Check for any damage during shipping. Ensure all listed components are present:

- DCA 4-1/2 Inch Angle Grinder
- Auxiliary Handle
- Grinding Guard
- Cutting Guard
- Clamping Plate
- Spanner Wrench
- 2 x Cutting Discs
- 1 x Type 27 Flap Disc
- 1 x Type 29 Flap Disc



Image 4.1: Visual representation of the items included in the box: the 7.2 Amp angle grinder, warranty card, auxiliary handle, carbon brushes, spanner wrench, wheel guard, and various cutting/polishing discs.

4.2 Attaching the Auxiliary Handle:

The auxiliary handle can be screwed into either the left or right side of the gear housing. Choose the position that provides the best comfort and control for your application.



Image 4.2: The 2-position auxiliary handle offers flexibility for both left- and right-handed users, enhancing maneuverability and comfort.

4.3 Attaching the Safety Guard:

Always use the appropriate safety guard for your task (grinding guard for grinding, cutting guard for cutting). The guard protects against sparks and debris.

1. Loosen the screw on the guard clamp.
2. Slide the guard onto the collar of the gear housing.
3. Rotate the guard to the desired position to deflect sparks away from you.
4. Tighten the screw securely to fix the guard in place.

4.4 Installing/Replacing Discs:

Ensure the tool is unplugged from the power source before changing discs.

1. **Step 1:** Press and hold the spindle lock button.

2. **Step 2:** Use the spanner wrench to loosen and remove the flange nut by turning it counter-clockwise. Remove the outer flange.
3. **Step 3:** Place the desired disc onto the spindle, ensuring it sits flat on the inner flange.
4. **Step 4:** Replace the outer flange and thread the flange nut onto the spindle.
5. **Step 5:** Press and hold the spindle lock button again. Use the spanner wrench to tighten the flange nut securely by turning it clockwise. Do not overtighten.

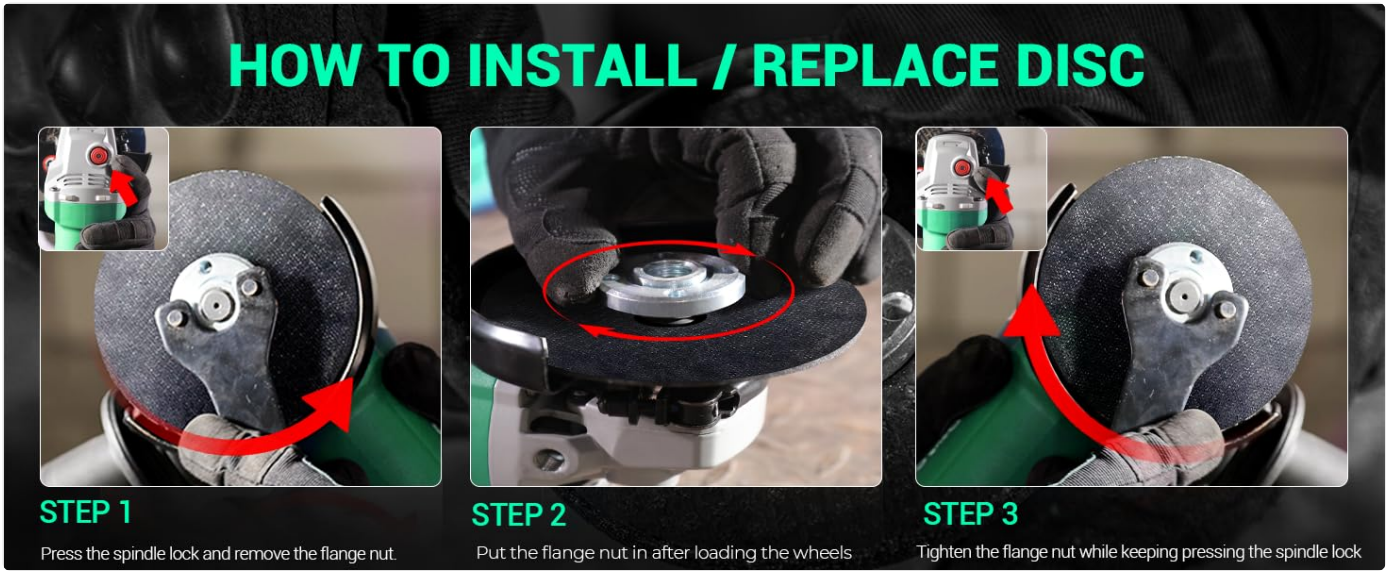


Image 4.3: Step-by-step visual guide for installing or replacing a disc: 1) Press spindle lock and remove flange nut, 2) Place disc and put flange nut back, 3) Tighten flange nut while pressing spindle lock.

4.5 Correct Disc Orientation:

Ensure discs are mounted with the correct orientation for optimal performance and safety.

- **Grinding Wheel:** Flat side up.
- **Flap Discs:** Convex side up.
- **Cutting Wheels:** Convex side up.



Image 4.4: Illustration of the correct mounting orientation for grinding wheels (flat side up), flap discs (convex side up), and cutting wheels (convex side up).

5. Operating Instructions

Always wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, and gloves.

5.1 Pre-Operation Checks:

- Ensure the correct disc and guard are installed for the task.
- Check that the disc is securely tightened and free from damage.
- Inspect the power cord for any damage.
- Ensure the workpiece is securely clamped or held.

5.2 Starting and Stopping the Grinder:

- **To Start:** Plug the tool into a suitable power outlet. Push the switch forward to the 'ON' position.
- **To Lock-On (Continuous Operation):** Push the switch forward and then press the front part of the switch down.
- **To Stop:** Push the rear part of the switch down to release the lock-on, then pull the switch back to the 'OFF' position.

5.3 Grinding Techniques:

Use a grinding disc and the grinding guard.

- Hold the grinder firmly with both hands.
- Start the grinder before making contact with the workpiece.
- Apply light, even pressure. Do not force the tool.
- Maintain an angle of approximately 15-30 degrees between the disc and the workpiece for effective material removal and control.
- Move the grinder smoothly across the surface to avoid gouging.

5.4 Cutting Techniques:

Use a cutting disc and the cutting guard.

- Hold the grinder firmly with both hands.
- Start the grinder before making contact with the workpiece.
- Position the disc at a 90-degree angle to the workpiece.
- Apply light, steady pressure. Allow the disc to do the work.
- Avoid twisting or bending the disc during cutting, as this can cause kickback or disc breakage.
- For deeper cuts, make multiple passes.

5.5 Polishing and Finishing:

Use appropriate flap discs (Type 27 for grinding/polishing/rust removal, Type 29 for weld burr removal/slope polishing) or other polishing accessories.

- Maintain a shallow angle (5-15 degrees) between the disc and the workpiece.
- Move the tool in a consistent pattern to achieve an even finish.
- Avoid excessive pressure, which can overheat the workpiece or damage the disc.

6. Maintenance

Regular maintenance ensures the longevity and safe operation of your angle grinder. Always unplug the tool before performing any maintenance.

6.1 Cleaning:

- Keep the ventilation openings clean and free of obstructions to prevent motor overheating.
- Use a soft brush or compressed air to remove dust and debris from the tool housing.
- Do not use water or chemical cleaning agents, as they can damage the tool.

6.2 Inspection:

- Regularly inspect the power cord for cuts, fraying, or damage. Replace immediately if damaged.
- Check discs and guards for wear or damage before each use. Replace worn or damaged accessories.
- Ensure all screws and fasteners are tight.

6.3 Carbon Brush Replacement:

The motor is equipped with carbon brushes that wear down over time. When the tool's performance decreases or it stops working, the brushes may need replacement. Consult a qualified service technician or refer to specific instructions for your model if you are unsure.

7. Troubleshooting

If you encounter problems with your angle grinder, refer to the following common issues and solutions.

Problem	Possible Cause	Solution
Grinder does not start	No power supply Damaged power cord Worn carbon brushes	Check power outlet and circuit breaker Inspect and replace cord if damaged Replace carbon brushes
Excessive vibration	Damaged or unbalanced disc Loose flange nut Damaged spindle	Replace disc Tighten flange nut securely Contact service for inspection
Poor cutting/grinding performance	Worn or incorrect disc Insufficient power Excessive pressure	Replace disc or use appropriate type Ensure proper voltage supply Reduce pressure, let the tool work
Overheating	Blocked ventilation Continuous heavy use Worn motor components	Clean ventilation openings Allow tool to cool down Contact service for inspection

If the problem persists after trying these solutions, please contact DCA customer support.

8. Warranty and Support

DCA products are manufactured to high-quality standards. For any questions regarding your product, operation, or service, please contact DCA customer support.

While specific warranty details are not provided in this manual, DCA is committed to customer satisfaction. If you have any questions or require assistance, please reach out to us. We are here to help.
For the latest support information and contact details, please visit the official DCA website or refer to the warranty card included with your product.

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