HITACHI G23SS

Hitachi G23SS 9-inch Angle Grinder

INSTRUCTION MANUAL

1. Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your Hitachi G23SS 9-inch Angle Grinder. Please read this manual thoroughly before using the tool to ensure proper handling and to prevent injury or damage.

The Hitachi G23SS is a robust 15 Amp angle grinder designed for heavy-duty material removal. Its powerful 3,100-watt motor delivers a no-load speed of 6,000 RPM, making it suitable for various grinding and cutting applications on metal, concrete, and other materials. Key features include a trigger lock for continuous operation, a 3-position side handle for enhanced control, and externally accessible carbon brushes for easy maintenance.

2. Safety Instructions

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury when operating power tools.

2.1 General Power Tool Safety

- **Work Area Safety:** Keep the 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. Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges, and refrigerators.
- **Personal Safety:** Always wear eye protection (safety glasses or goggles) and hearing protection. Use a dust mask if operations create dust. Dress properly; avoid loose clothing or jewelry. Secure long hair.
- **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.

2.2 Specific Angle Grinder Safety

- **Wheel Guard:** Always use the wheel guard provided with the tool. Ensure it is securely attached and positioned to provide maximum safety.
- **Accessory Selection:** Only use grinding wheels and accessories that are rated for the speed of the grinder and are compatible with the tool's specifications.

- **Kickback Prevention:** Maintain a firm grip on the tool with both hands. Be aware of potential kickback, especially when working on edges or corners.
- **Sparks and Debris:** Grinding operations produce sparks. Ensure no flammable materials are in the vicinity. Direct sparks away from yourself and others.
- **Inspection:** Before each use, inspect the grinding wheel for cracks or damage. Do not use damaged wheels.

3. Components and Features



An image showing the Hitachi G23SS 9-inch Angle Grinder. The tool features a green motor housing, a black rear handle, and a black 3-position side handle attached near the grinding wheel. The wheel guard is also visible.

- **Motor Housing:** Durable green housing protecting the powerful 15 Amp motor.
- **Rear Handle:** Ergonomically designed for comfortable and secure grip during operation.
- **Side Handle:** Provides additional control and can be mounted in 3 different positions (left, right, or top) to suit user preference and application.

- **Wheel Guard:** Essential safety component that protects the user from sparks and debris. Must always be used.
- **Trigger Lock:** Allows for continuous operation without holding down the trigger, reducing user fatigue during extended use.
- **Spindle Lock:** Button used to lock the spindle for easy and secure attachment or removal of grinding wheels.
- **Carbon Brush Access:** Externally accessible covers allow for quick and easy replacement of carbon brushes, extending motor life.

4. Setup

Before connecting the tool to a power source, ensure all components are correctly assembled.

4.1 Attaching the Side Handle

1. Identify the three threaded holes on the gear housing of the grinder.
2. Screw the side handle firmly into the desired position (left, right, or top) for optimal control and comfort.

4.2 Mounting the Wheel Guard

1. Loosen the clamp screw on the wheel guard.
2. Slide the wheel guard onto the collar of the gear housing.
3. Adjust the guard to cover the maximum amount of the wheel, protecting you from sparks and debris.
4. Tighten the clamp screw securely to prevent the guard from rotating during operation.

4.3 Installing Grinding/Cutting Wheels

1. Ensure the tool is unplugged from the power source.
2. Press and hold the spindle lock button.
3. Place the inner flange onto the spindle.
4. Position the grinding or cutting wheel onto the inner flange, ensuring it sits flat.
5. Thread the outer flange (nut) onto the spindle.
6. Use the provided wrench to tighten the outer flange securely while still holding the spindle lock button. Do not overtighten.

5. Operating Instructions

Always wear appropriate personal protective equipment (PPE) including eye protection, hearing protection, and gloves before operating the grinder.

5.1 Powering On/Off

- **To Turn On:** Plug the tool into a suitable power outlet. Depress the trigger switch.
- **Trigger Lock:** For continuous operation, depress the trigger switch and then engage the trigger lock button. The tool will continue to run without holding the trigger.
- **To Turn Off:** If the trigger lock is engaged, depress the trigger switch fully and then release it to disengage the lock. If not using the trigger lock, simply release the trigger switch.

5.2 Grinding Techniques

- **Grip:** Hold the grinder firmly with both hands, one on the main handle and one on the side handle.
- **Starting:** Allow the wheel to reach full speed before making contact with the workpiece.

- **Angle:** For general grinding, hold the wheel at an angle of approximately 15-30 degrees to the workpiece surface.
- **Pressure:** Apply moderate, consistent pressure. Do not force the tool, as this can lead to overheating, reduced performance, and premature wheel wear. Let the tool's speed do the work.
- **Movement:** Move the grinder smoothly and continuously across the workpiece to ensure even material removal and prevent gouging.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your Hitachi G23SS Angle Grinder. Always unplug the tool before performing any maintenance.

6.1 Cleaning

- Regularly clean the ventilation openings on the motor housing to prevent overheating. Use compressed air to blow out dust and debris.
- Wipe down the exterior of the tool with a damp cloth. Do not use harsh chemicals or abrasive cleaners.

6.2 Carbon Brush Replacement

The Hitachi G23SS features externally accessible carbon brushes for easy replacement. Worn carbon brushes can lead to reduced power or intermittent operation.

1. Locate the carbon brush caps on the sides of the motor housing.
2. Using a flat-head screwdriver, carefully unscrew the caps.
3. Remove the old carbon brushes.
4. Insert new, genuine Hitachi carbon brushes, ensuring they are oriented correctly.
5. Screw the caps back on securely.

6.3 General Inspection

- Inspect the power cord for any cuts, fraying, or damage. Replace if necessary.
- Check the wheel guard for any damage or deformation. Ensure it is securely attached.
- Periodically check all screws and fasteners for tightness.

7. Troubleshooting

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

Problem	Possible Cause	Solution
Tool does not start	No power supply Worn carbon brushes Damaged power cord	Check power outlet and circuit breaker Replace carbon brushes Inspect and replace power cord if damaged
Excessive vibration	Damaged or unbalanced wheel Loose flanges Bent spindle	Replace wheel Tighten flanges securely Contact service center

Problem	Possible Cause	Solution
Overheating	Blocked ventilation openings Excessive pressure during operation Continuous heavy use	Clean ventilation openings Reduce pressure Allow tool to cool down periodically
Reduced power/sparking at motor	Worn carbon brushes	Replace carbon brushes

8. Specifications

Technical specifications for the Hitachi G23SS Angle Grinder.

Feature	Specification
Model	G23SS
Manufacturer	Hitachi
Power Source	Corded Electric
Voltage	120 Volts
Wattage	1100 watts (3100 watts output)
No-Load Speed	6,000 RPM
Number of Handles	2 (Main and Side)
Special Features	Compact, Trigger Lock, 3-Position Side Handle, Externally Accessible Carbon Brushes
Product Dimensions (L x W x H)	60.45 x 17.15 x 17.78 cm (23.8 x 6.75 x 7 inches)
Item Weight	7.05 kg (15.54 pounds)

9. Warranty and Support

The Hitachi G23SS 15 Amp Angle Grinder is warranted to the original purchaser to be free from defects in materials and workmanship for a period of 1 year from the original purchase date.
For warranty claims, technical assistance, or to purchase replacement parts, please contact Hitachi Power Tools customer support. Keep your proof of purchase for warranty validation.

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