Hitachi NR90AES1

Hitachi NR90AES1 Framing Nailer Instruction Manual

Model: NR90AES1

1. Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of the Hitachi NR90AES1 Framing Nailer. This pneumatic tool is designed to drive plastic collated nails ranging from 2 inches to 3-1/2 inches in length.

Key features include a lightweight design for maneuverability, a selective actuation switch for changing firing modes, and tool-less depth adjustment for precise nail placement. The head guard design facilitates disassembly for maintenance, and the two-step loading system simplifies fastener replenishment.

2. Safety Information

WARNING: Always read and understand all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

- **Eye Protection:** Always wear ANSI Z87.1 compliant safety glasses with side shields when operating or performing maintenance on the nailer.
- **Hearing Protection:** Wear hearing protection during operation to prevent noise-induced hearing loss.
- **Air Supply:** Ensure the air compressor is set to the recommended operating pressure (70-120 PSI) and that the air hose is in good condition. Never exceed the maximum allowable air pressure for the tool.
- **Disconnect Air Supply:** Always disconnect the air supply before loading nails, clearing jams, performing maintenance, or when the tool is not in use.
- **Keep Hands Clear:** Never place hands or other body parts near the discharge opening of the tool.
- **Work Area:** Keep the work area clean and well-lit. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

3. Components Overview

Familiarize yourself with the main components of the Hitachi NR90AES1 Framing Nailer:

- **Magazine:** Holds the collated nails.
- **Trigger:** Activates the firing mechanism.
- **Selective Actuation Switch:** Allows selection between sequential and contact firing modes.
- **Depth Adjustment Dial:** Tool-less adjustment for nail depth.
- **Air Inlet:** Connection point for the air hose.
- **Head Guard:** Protects internal components and facilitates maintenance access.
- **Nose/Contact Trip:** Engages with the workpiece to allow firing.



Figure 1: Main view of the Hitachi NR90AES1 Framing Nailer.



Figure 2: Side view illustrating the nail magazine and overall tool profile.

4. Setup

4.1 Connecting to Air Supply

1. Ensure the air compressor is turned off and the air tank is drained.
2. Connect a suitable air hose to the air inlet of the nailer. The air inlet is typically located at the base of the handle.
3. Set the air compressor regulator to an operating pressure between 70 PSI and 120 PSI. Do not exceed 120 PSI.
4. Turn on the air compressor and allow it to build pressure.

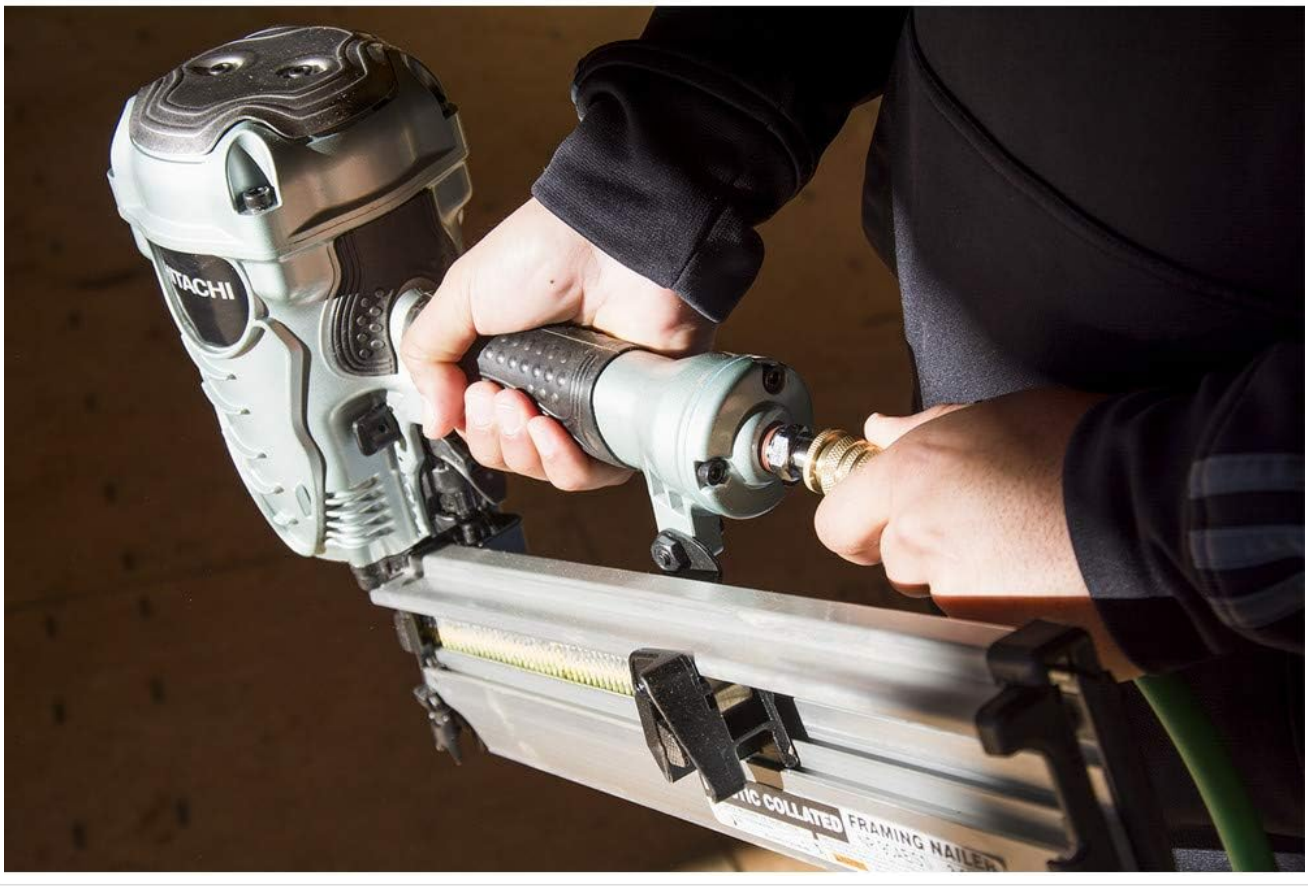


Figure 3: Proper connection of the air hose to the nailer's air inlet.

4.2 Loading Nails

The NR90AES1 uses 21-degree plastic collated nails with lengths from 2 inches to 3-1/2 inches. The magazine capacity is approximately 64 nails.

1. **Disconnect the air supply** from the nailer before loading nails.
2. Pull back the magazine follower until it locks into place.
3. Insert a strip of plastic collated nails into the magazine, ensuring the nail heads are properly seated in the channel.
4. Release the magazine follower, allowing it to push the nails forward until they are seated against the nose of the tool.



Figure 4: Demonstrating the two-step process for loading nails into the magazine.

4.3 Adjusting Depth of Drive

The NR90AES1 features a tool-less depth adjustment mechanism. Rotate the depth adjustment dial located near the nose of the tool to set the desired nail depth. Test on a scrap piece of material to ensure proper depth before beginning work.

5. Operating Instructions

5.1 Selective Actuation

The nailer is equipped with a selective actuation switch, allowing you to choose between two firing modes:

- **Sequential Firing:** For precise nail placement. The contact trip must be pressed against the workpiece before the trigger is pulled. Releasing both the contact trip and trigger is required before the next nail can be fired.
- **Contact (Bump) Firing:** For rapid nailing. Hold the trigger, then press the contact trip against the workpiece to fire a nail. Each time the contact trip is pressed, a nail will fire.

To change the firing mode, locate the selective actuation switch near the trigger and adjust it to the desired setting.



Figure 5: Detail of the trigger and selective actuation switch for changing firing modes.

5.2 Nailing Procedure

1. Ensure the air supply is connected and the nailer is loaded with appropriate nails.
2. Select the desired firing mode (sequential or contact).
3. Place the nose of the tool firmly against the workpiece at the desired nailing location.
4. Pull the trigger to fire a nail.
5. After firing, lift the tool from the workpiece.



Figure 6: The framing nailer being used to secure wood framing to a wall.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your framing nailer.

- **Disconnect Air Supply:** Always disconnect the air supply before performing any maintenance.
- **Cleaning:** Keep the tool clean and free of debris. Use a clean cloth to wipe down the exterior.
- **Lubrication:** Apply a few drops of pneumatic tool oil into the air inlet daily or before each use. Do not over-lubricate.
- **Head Guard Disassembly:** The redesigned head guard allows for easier disassembly during tool maintenance, such as inspecting or replacing internal components. Refer to a detailed service manual for specific disassembly and reassembly instructions.
- **Inspect Air Hose:** Regularly check the air hose for cuts, abrasions, or leaks. Replace damaged hoses immediately.

7. Troubleshooting

This section addresses common issues you might encounter with your framing nailer.

Problem	Possible Cause	Solution
Nailer does not fire	No air supply; Low air pressure; No nails in magazine; Contact trip not fully depressed; Trigger not pulled.	Connect air supply; Adjust air pressure (70-120 PSI); Load nails; Ensure contact trip is fully depressed against workpiece; Pull trigger.

Problem	Possible Cause	Solution
Nails jam frequently	Incorrect nail size/type; Damaged nails; Low air pressure; Worn driver blade; Debris in nose.	Use correct 21-degree plastic collated nails (2"-3.5"); Replace damaged nails; Increase air pressure; Inspect/replace driver blade; Clear debris from nose (disconnect air first). The open nose design facilitates jam clearing.
Nails not driven to full depth	Low air pressure; Depth adjustment set too shallow; Hard material.	Increase air pressure; Adjust depth setting deeper using the tool-less dial.
Air leaks	Loose fittings; Damaged O-rings/seals.	Tighten air fittings; Inspect and replace worn O-rings/seals (consult service manual).

8. Specifications

Feature	Specification
Model Number	NR90AES1
Air Pressure (PSI)	70 – 120
Air Consumption @ 100 PSI (scfm)	0.09
Applicable Nails Diameter (in)	0.113 – 0.148
Applicable Nails Length (in)	2 – 3-1/2
Nail Capacity	64 (.131)
Magazine Angle	21 Degrees
Magazine Loading	Rear
Actuation	Selective
Depth Adjustment	Tool-less
Jam Clearing	Open Nose
Item Weight	7.5 pounds
Product Dimensions	1 x 5.5 x 8.3 inches
Material	Metal
Power Source	Air-powered

9. Warranty and Support

Please note that Hitachi Power Tools has rebranded to Metabo HPT. While the tools remain the same, support and warranty claims are now handled under the Metabo HPT brand.

For specific warranty details and support, please refer to the official Metabo HPT website or contact their customer service. Many Metabo HPT (formerly Hitachi) pneumatic tools come with a 5-year limited warranty. Keep your purchase receipt for warranty validation.

For technical assistance or to locate an authorized service center, visit the official Metabo HPT website or consult the contact information provided with your product packaging.

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