



# FRAMING NAILER

21° ANGLE / 10 GAUGE

**Models** 97511  
93909

## SET UP AND OPERATING INSTRUCTIONS



Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

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**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

## SPECIFICATIONS

Nail Size	.113" to .131" Thick Shank, 2" to 3-1/2" Long; 21° Full Head
Magazine Capacity	60 Nails
Operating PSI	70 to 125 PSI *
Required Average Air Flow	3 - 3.5 CFM at 90 PSI
Accessories	4 Hex wrenches, safety goggles, oil dropper
Features	Full Sequential Safety Trip Mechanism, 360° Exhaust Flow Adjustment, Soft Rubber Grip, 1/4" NPT (18 NPT) Air Inlet with Screen, Adjustable Depth Drive

\* The air pressure setting must not exceed job site regulations/restrictions. The air pressure setting must not exceed 90 PSI when being used with work pieces that have a thickness of less than 1-3/4".

## Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.




## Safety Warnings and Precautions

**WARNING:** When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

**Read all instructions before using this tool!**

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lit. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, extension cords, or air hoses.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

7. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines or air hoses.
8.  **Use eye and ear protection.** Always wear ANSI approved impact safety goggles and appropriate hearing protection. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists. Other people in the work area must also wear ANSI approved impact safety goggles.
9. **Maintain tools with care.** Keep tools clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords and air hoses periodically and, if damaged, have them repaired by an authorized technician. The handle must be kept clean, dry, and free from oil and grease at all times. Do not operate a tool if any portion of the tool's operating controls are inoperable, disconnected, altered or not working properly.
10. **Disconnect Air Hose and release any built-up air pressure.** Never service the Nailer, clear jams, or disassemble with the air hose attached. Always release any built-up air even after disconnecting hose. Disconnect the Nailer when not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before attaching to an air source.
12. **Avoid unintentional starting.** Be sure the trigger is in the Off position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is attached to an air source or not. Do not point the tool towards yourself or anyone whether it contains fasteners or not.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if the trigger does not operate properly.
15. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
16. **Replacement parts and accessories.** This product is to be repaired and serviced only by a qualified technician. When this product is serviced, only identical replacement parts should be used. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
17. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgement or reflexes are

impaired while taking drugs. If there is any doubt, do not operate the tool.

18. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the compressor without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool. Check your air compressor's manual for the appropriate size cord. It is also possible that the use of an extension cord may cause your circuit breaker to trip or your panel fuse to break. If this happens, either use the compressor without an extension cord or find a larger amperage circuit to use.
19. **Maintenance.** The maintenance outlined in the maintenance section should be performed regularly. For your safety, this product should be serviced or repaired regularly only by a qualified technician.
20. **Compressed air only.** Never use combustible gas as a power source.



21. **Do not load nails with the trigger or safety depressed.** Unintentional firing may occur. Do not load nails when the air hose is connected to the tool. Always assume that the tool contains fasteners.
22. **Disconnect air supply before loading Nailer.** Before reloading (or making any adjustments to) the Nailer make sure that the compressed air is disconnected.
23. **Fire nails into an appropriate work surface only.** Do not attempt to fire nails into surfaces too hard to penetrate. Do not drive nails on top of other nails, or at too steep of an angle. Nails can ricochet causing personal injury. Never fire the Nailer into the air, or point it toward yourself or another person. Always wear ANSI approved safety goggles during use, maintenance, and reloading.
24. **Do not fire nails too close to the edge of a workpiece.** They may split the workpiece and fly free, causing personal injury.
25. **Take caution as some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic.** When or nailing these materials extra care should be taken to avoid inhalation and minimize skin contact.

**WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contain 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 or other masonry products**
- **Arsenic and chromium from chemically treated lumber**

**(California Health & Safety Code § 25249.5, et seq. )**

26. **Stay within air pressure capacity.** Never operate the Nailer above 125 PSI.
27. **Hold tool away from head and body.** During operation the Nailer may kick back causing injury.
28. **Transport Nailer safely.** Always disconnect air supply when moving the tool in the

workplace. Carry the tool by the handle and avoid contact with the trigger.

**Note:** Performance of the compressor (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

**Warning:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

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## UNPACKING

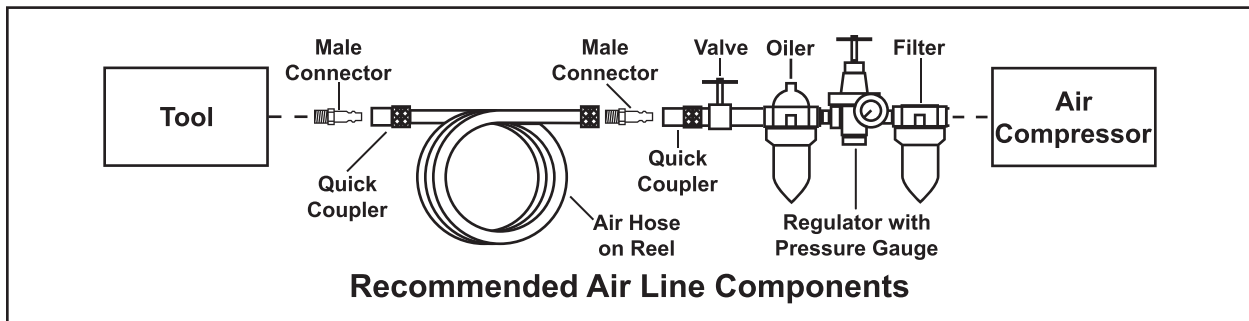
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When unpacking, check to make sure all the parts shown on the [Parts List on page 11](#) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

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## OPERATION

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For best service incorporate an oiler, regulator, and inline filter, as shown above. Hoses, couplers, oilers, regulators, and filters are all available at Harbor Freight Tools.

1. You will need to prepare a 1/4" air connector (sold separately) to connect to the air inlet on the Nailer. First, wrap the 1/4" air connector (not included) with pipe thread seal tape before connecting to a 3/8" ID Air Source Hose (not included). Connect the Air Source Hose to the Air Plug (79).

**Note:** If you are not using an automatic oiler system, before operation, add a few drops of Pneumatic Tool Oil to the airline connection. Add a few drops more after each hour of continual use.

2. Set the air pressure on your compressor to 70 - 125 PSI. Do not exceed the maximum air pressure of 125 PSI.
3. Check the air connection for leaks.

**Note:** The amount of air pressure effects how deep the nails will be driven. It is suggested that you experiment on scrap material.

4. Check the air connection for leaks and disconnect the Nailer.

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## Testing The Full Sequential Safety Trip Mechanism

**Warning: Even though the nailer should be empty during this procedure, ALWAYS point the Nailer at a piece of scrap wood when testing.**

1. The Nailer should not fire if the nose is not depressed against the workpiece. This tool has a full sequential safety trip mechanism, which is designed to reduce the risk of inadvertent firing. The tool should only fire if the Safety (38) is resting on the workpiece prior to pulling the Trigger (44).
2. Disconnect the tool from the air supply.
3. Empty the magazine of nails or staples.
4. Check that the Trigger (44) and the Safety (38) on the nose of the tool, move freely, without sticking.
5. Connect the air supply to the tool at the Air Plug (79) and set at the recommended 70-120 PSI, and not over the maximum 125 PSI.
6. Test the tool by depressing the Safety (38) on the nose of the tool against the workpiece without pulling the Trigger (44). **The tool must not cycle (fire).** If it cycles (fires), stop immediately and take the tool to a qualified service technician for repair.
7. Hold the tool away, or off of the workpiece. The Safety (38) or nose of the tool should return to its original position. Squeeze the Trigger (44). **The tool must not cycle (fire).** If it cycles (fires), stop immediately and take the tool to a qualified service technician.
8. Depress the Safety (38) against the workpiece and squeeze the Trigger (44). **The tool must cycle (fire) once only.** Release the trigger and squeeze it again. **The tool must not cycle (fire).** With the Trigger held, carefully lift the nailer and press it against the workpiece again. **The tool must not cycle (fire).** If it fails to act in the manner explained in bold, have it repaired by a qualified service technician.

## Loading Nails



**ALWAYS WEAR ANSI APPROVED IMPACT SAFETY GOGGLES WHEN RELOADING OR DOING ANY OTHER MAINTENANCE ON THIS TOOL.** Other people in the work area must also wear ANSI approved impact safety goggles.

**Warning! Make sure the Nailer is not attached to the air hose whenever loading the tool.**

1. **CAUTION: Make sure to keep the Framing Nailer pointed away from you and others at all times. Always disconnect the Framing Nailer from its air supply *before* loading nails. Do not load nails with the Trigger (44), or Bracket B (35), or Safety (38) depressed. (See Figure B)**
2. Pull the Feeder Shoe (52) all the way to the rear, until it latches. **(See Figure B.)**

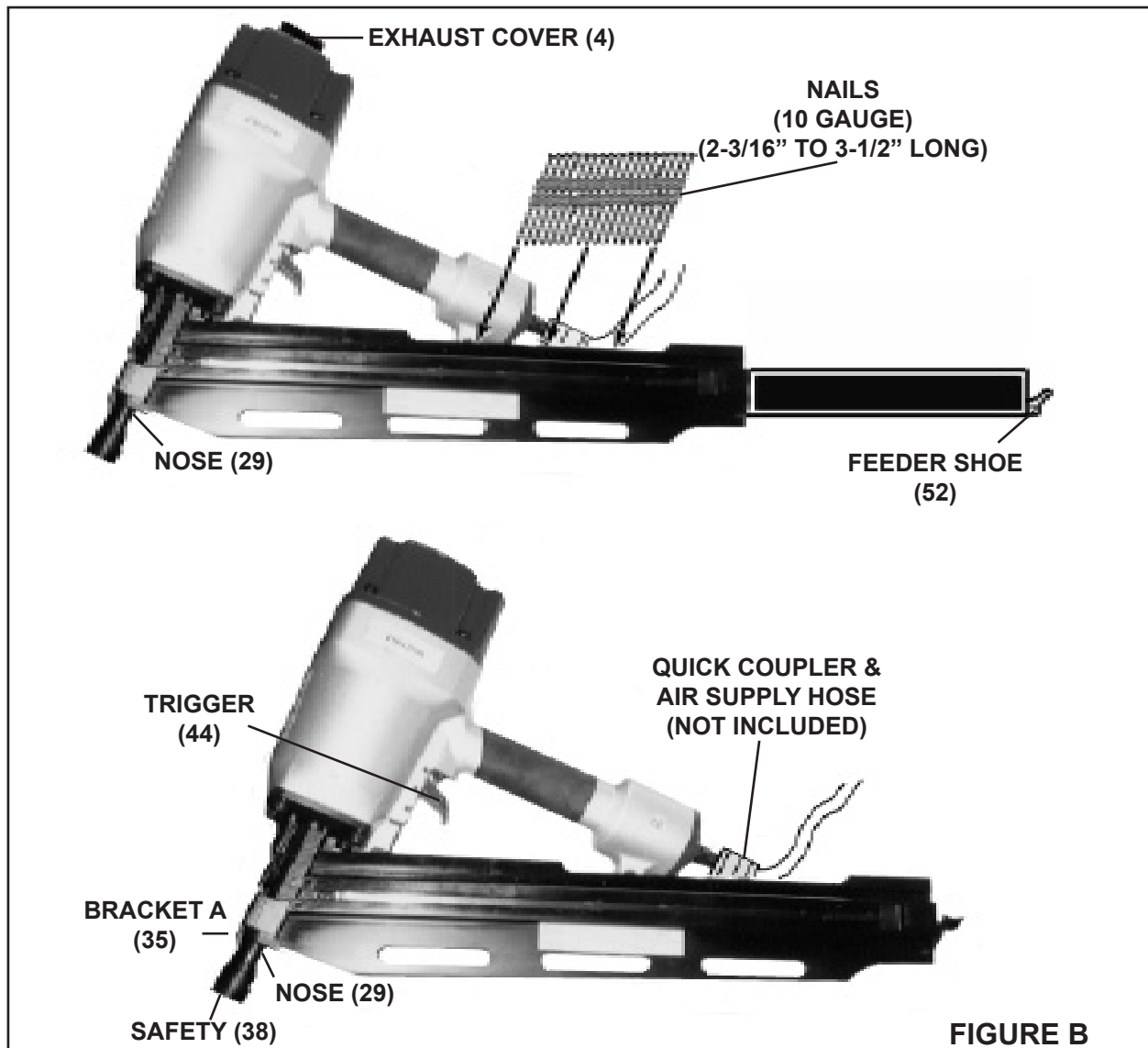
## Loading Nails (continued)

3. Orient a strip of nails with the points down, and drop the strip of nails into the Magazine (71). **(See Figure C.)**
4. Slide the strip of nails forward in the Magazine (71). **NOTE:** The Magazine will hold 60, 10 gauge nails. **(See Figure C.)**
5. Unlatch the Feeder Shoe (52), and allow the Feeder Shoe to slide forward against the strip of nails. **(See Figure C.)**

## OPERATION

**NOTE:** For additional references to the parts listed below, refer to the **Assembly Diagram on page 11.**

1. Adjust the Exhaust Cover (4) to direct exhaust as desired.
2. To fire a nail, place the nose of the Nailer on the workpiece. The Nailer should not fire if the Safety (38) is not depressed. **Once the Safety is depressed, gently and briefly squeeze the Trigger once to fire one nail. Release the Trigger.** Do not fire repeatedly; nails could bounce off on one another, damaging the workpiece or causing personal injury.
3. **With the nose of the Nailer on the workpiece, squeeze the Trigger again to fire another nail.** Continue firing nails as needed.
4. When the work is completed, disconnect the air supply and remove the nails from the nailer.



**FIGURE B**

### To Adjust The Depth To Which A Nail Is Driven

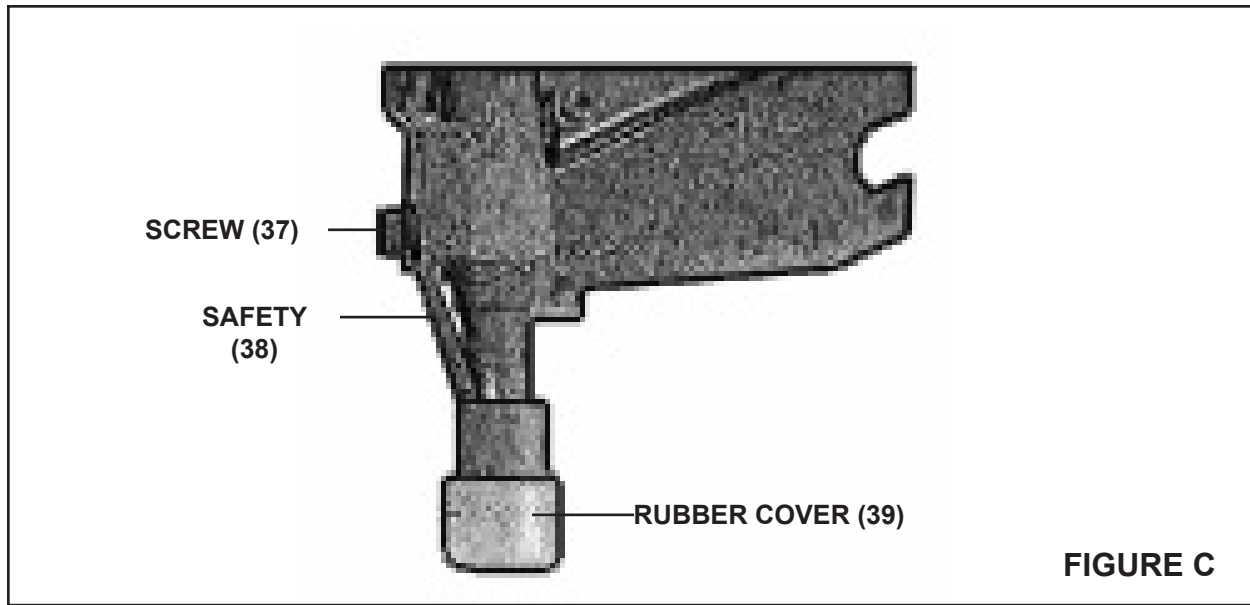
1. The depth to which a nail is driven is controlled by the Safety (38). (See Figures B and C).
2. To adjust the depth of drive, loosen the Screw (37). Slide Safety (38) up or down to the desired position. Then, re-tighten the Screw. **Note:** Sliding Safety (38) upward increases the depth of drive. Sliding Safety downward decreases the depth of drive. (See Figure C).
3. Test fire a nail, and check its depth of drive. Repeat Step #2 as necessary to achieve the desired depth of drive. (See Figure C).

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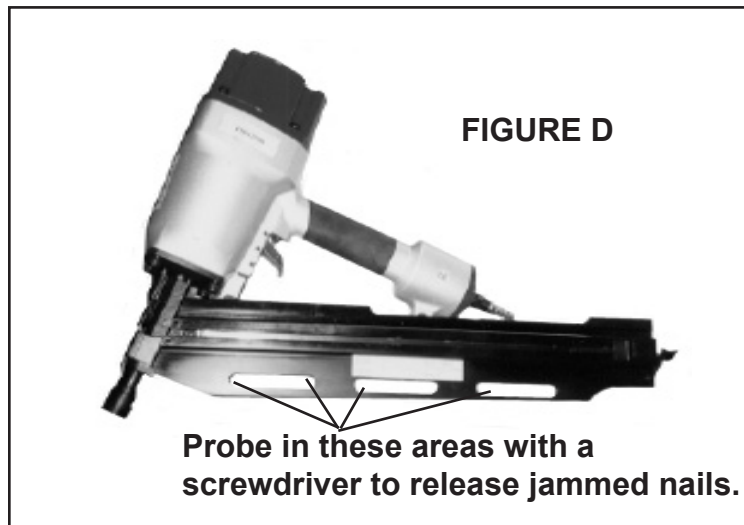


**Anytime *any* maintenance or repairs are done (including clearing jams), FIRST:**

1. Disconnect the Nailer from the air hose.
2. Empty the **Magazine (71)** completely.
3. Attempt to fire the Nailer into a piece of scrap wood to ensure that it is disconnected and is incapable of firing any brads.
4. **Always leave the Magazine (71) open during maintenance. The Magazine is spring-loaded and may cause parts or a nail to fly out of the Nailer.**

### Clearing Jams

1. Disconnect tool from air hose. Always fire the trigger repeatedly to make sure all of the air is expended from the Nailer.
2. If a nail is jammed in the discharge area, simply remove it with pliers.
3. If a nail is jammed in the magazine, pull the Feeder Shoe (52) all the way back to the engaged position. Using a screwdriver, attempt to release the jammed nail by probing either or all of the openings in the magazine (**see Figure D**) to release the nail. Pull out the jammed nail and the remainder of the nail strip that is still in the magazine. Dispose of the remaining nail strip; it may be bent or damaged in some other way. Reload the magazine with a new nail strip. Pull back on the Feeder Shoe (52) and with your other hand, pull the tab down on the Lock (67), and guide the Feeder Shoe (52) back into position. If you are unable to clear the nail jam using the method prescribed above, the tool should be taken to a qualified service technician for proper servicing.



**Anytime any maintenance or repairs are done (including clearing jams), FIRST:**

1. Disconnect the Nailer from the air hose.
2. Empty the **Magazine (71)** completely.
3. Attempt to fire the Nailer into a piece of scrap wood to ensure that it is disconnected and is incapable of firing any brads.
4. **Always leave the Magazine (71) open during maintenance. The Magazine is spring-loaded and may cause parts or a nail to fly out of the Nailer.**

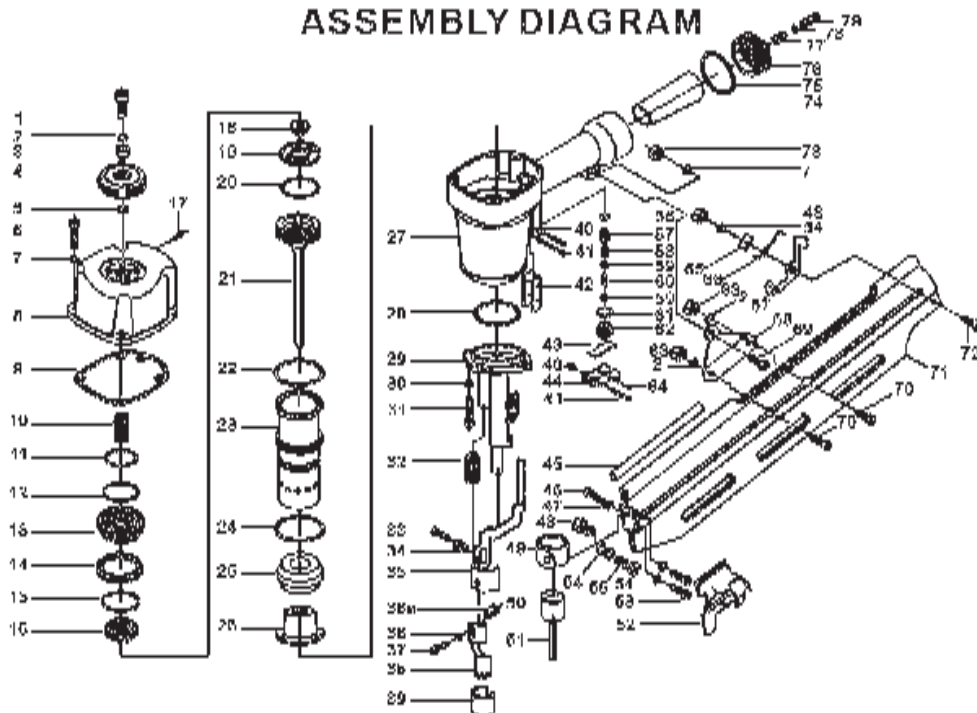
### **INSPECTION, MAINTENANCE, AND CLEANING**

1. **CAUTION:** Always disconnect the Framing Nailer from its compressed air supply source before performing any inspection, maintenance, or cleaning.
2. **BEFORE EACH USE**, inspect the general condition of the Framing Nailer. Check for loose screws, misalignment or binding of moving parts, jammed nails, cracked or broken parts, damaged air supply hose, and any other condition that may affect the safe operation of this tool. If abnormal noise or vibration occurs, immediately disconnect the Framing Nailer from its compressed air supply source and have the problem corrected before further use.  
**Do not use damaged equipment.**
3. **PERIODICALLY**, use a premium quality, lightweight oil to lubricate all moving parts.
4. When necessary, wipe with a damp cloth, using a mild detergent or mild solvent.
5. When storing, keep the Framing Nailer in its Carrying Case (80) or covered with a clean cloth.

## PARTS LIST

Part #	Description	Part #	Description	Part #	Description
1	Screw	28	O-Ring (62.3×1.8)	54	Washer
2	Spring Washer	29	Noise	55	Screw
3	Bushing	30	Spring Washer	56	Seal
4	Exhaust Cover	31	Screw	57	Trigger Valve Head
5	Seal	32	Spring	58	Spring
6	Screw	33	Screw	59	O-Ring (5.4×1.8)
7	Spring Washer	34	Bushing	60	Trigger Valve Stem
8	Cylinder Cap	35	Bracket A	61	O-Ring (15.7×2)
9	Gasket	36a	BUSHING	62	Trigger Valve Guide
10	Spring	36	Washer	63	Nut
11	O-Ring (52.4×2.5)	37	Screw	64	Pin
12	O-Ring (72.4×3.5)	38	Safety	65	Bushing
13	Valve	39	Rubber Cover	66	Torsion Spring
14	Seal	40	Washer	67	Lock
15	O-Ring (56.4×2.5)	41	Pin	68	Support
16	Valve Base	42	Bracket Guide	69	Screw
17	Screw	43	Trigger Spring	70	Screw
18	Stop Washer	44	Trigger	71	Magazine
19	Washer	45	Rail	72	Screw
20	O-Ring (58×4.5)	46	Screw	73	Nut
21	Piston Assembly	47	Washer	74	Soft Grip Sleeve
22	O-Ring (70.4×3.5)	48	Nut	75	O-Ring (65.4×2.5)
23	Cylinder	49	Coil Spring	76	End Cap
24	O-Ring (67×3)	50	Coil Spring Base	77	Filter Net Plug
25	Bumper A	51	Pin	78	Filter Net
26	Bumper B	52	Feeder Shoe	79	Air Plug
27	Body	53	Screw		

## ASSEMBLY DIAGRAM



**NOTE:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

**PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## **90 Day Warranty**

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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