



# 6 IN 1 AIR FRAMING NAILER

**Model** 97510  
93910

## SET UP AND OPERATING INSTRUCTIONS



Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>



**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.**

Revised manual 08j

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## SPECIFICATIONS

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Air Inlet	1/4" NPT
Recommended Air Pressure	70-125 PSI*
Maximum Air Pressure	125 PSI
Nail Type	Approx. 10 Gauge (0.113 & 0.131" Dia.) Clipped or Full Head Nails 2 - 3-1/2" Length
Safety Feature	Full Sequential Actuation
Magazine Capacity	21° - 60 Qty., 28° and 34° - 100 Qty.
Air Consumption	8-12 CFM @ 90 PSI

**\* 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".**

**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.

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## SAVE THIS MANUAL

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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.

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## SAFETY WARNINGS AND PRECAUTIONS

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**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. Don't 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 nonconductive clothes and nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7.  **Wear ANSI-approved impact safety goggles.** Wear a NIOSH-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.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines or air hoses.
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 supply.** Disconnect air hose when adding nails, during maintenance, and 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 any 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.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool.
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.

19. **Maintenance.** For your safety, maintenance should be performed regularly 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. **Fire fasteners into an appropriate work surface only.** Do not attempt to fire fasteners into surfaces too hard to penetrate. Do not drive fasteners on top of other fasteners, or at too steep of an angle. Fasteners can ricochet causing personal injury.

23. **Do not fire fasteners too close to the edge of a workpiece.** They may split the workpiece and fly free, causing personal injury.

24. **Disconnect air supply before loading Nailer.** Before reloading (or making any adjustments) to the Nailer make sure that the compressed air is disconnected.

25. **Take caution as some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic.** When stapling 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.

29. 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

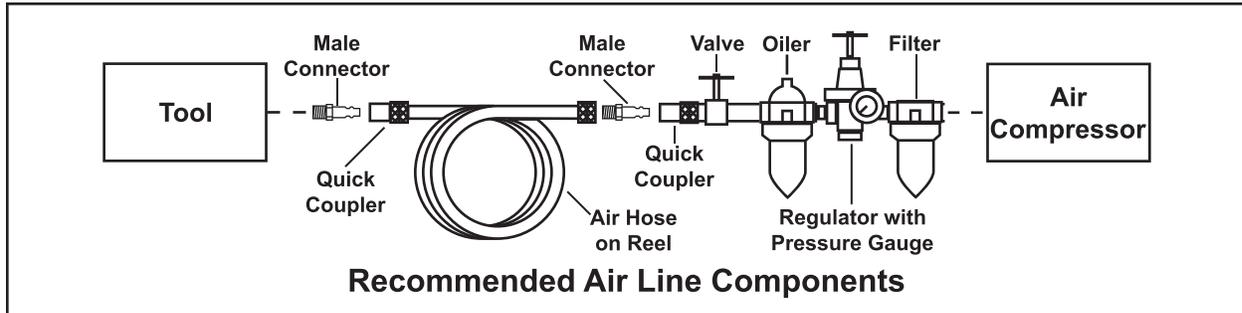
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When unpacking, check to make sure the parts listed on page 11 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

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## OPERATION

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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 threading it into the Air Inlet (90). Connect the 3/8" ID Air Source Hose to the Nailer.

**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 to 125 PSI. **Do not exceed the maximum air pressure of 125 PSI.**
3. Check the air connection for leaks. Disconnect the Nailer from the air source hose.

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## **TESTING THE FULL SEQUENTIAL SAFETY TRIP MECHANISM**

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

1. Make sure the tool is disconnected from the power supply.
2. Completely empty the Magazine (76) of nails.
3. The Nailer should not fire if the Safety (41) is not depressed against the workpiece.
4. **Make sure the Trigger (47) and Safety (41) move freely, without sticking. Do not use nailer if Trigger or Safety sticks.**
5. Connect the air supply to the tool at the Air Inlet (90). Set the regulator at the recommended **70 to 125 PSI**.
6. Test the tool by depressing the Safety (41) against the workpiece without pulling the Trigger (47). **The Tool must not cycle (fire)**. If it cycles (fires), stop immediately and have it repaired by a qualified service technician.
7. Hold the tool away or off of the workpiece. The Safety (41) of the tool should return to its original position. Squeeze the Trigger (47). **The tool should not cycle (fire)**. If the tool fires, stop immediately and have it repaired by a qualified service technician.
8. Depress the Safety (41) against the workpiece and squeeze the Trigger (47). **The tool must cycle (fire) only once**. 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 perform in the manner explained in bold, have it repaired by a qualified service technician.

**Warning!** Disconnect the Nailer from the air compressor whenever loading.

**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.

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## **LOADING NAILS**

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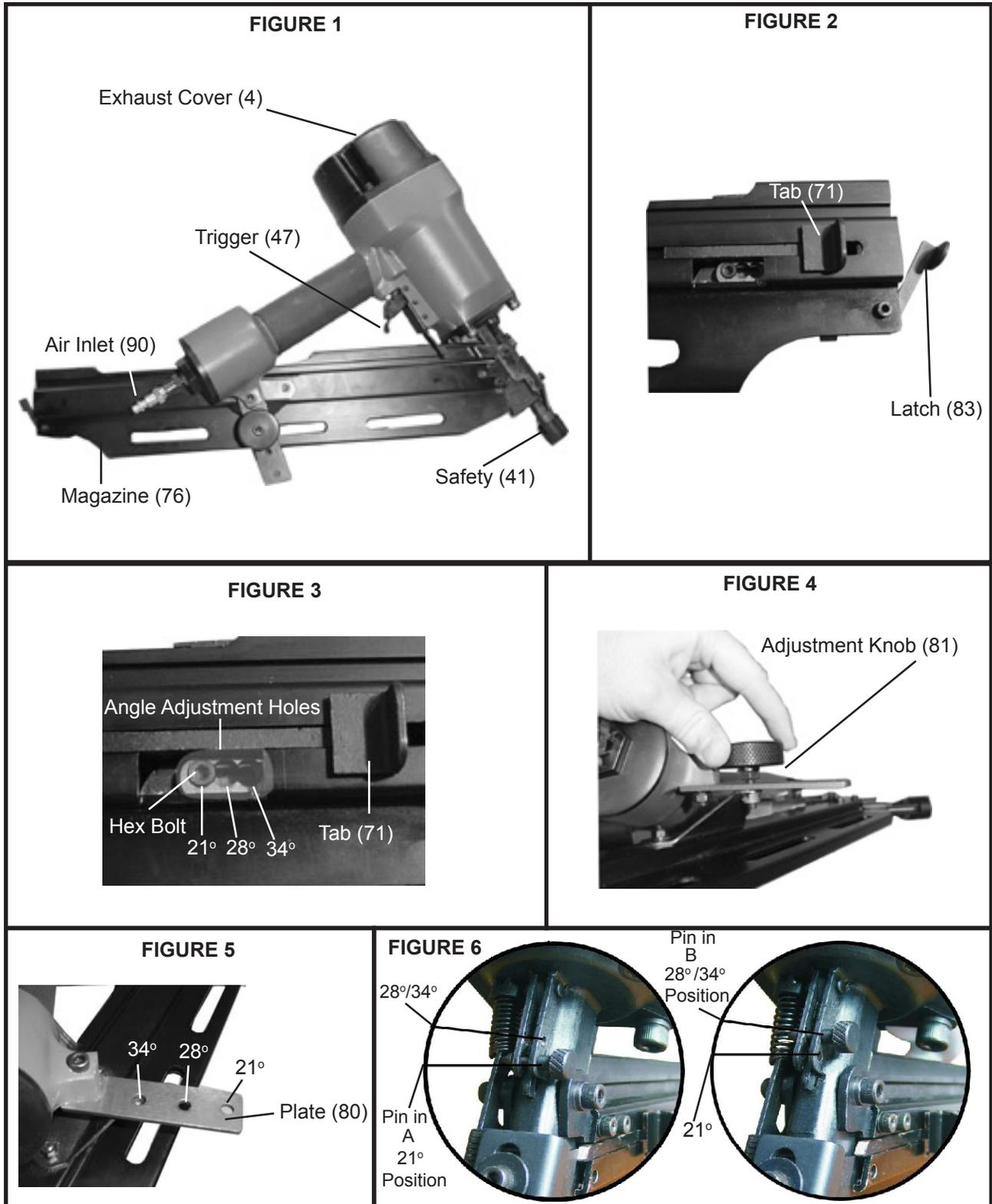
See **FIGURE 2** on page 7.

1. Slide the Tab (70) back and the Latch (83) will hold it in place.
2. Load a stick of nails into the top slot, making sure the nail heads are facing up.
3. **Be Careful**. When you pull back on the Latch (83) to release the Tab (70), it will spring forward with force. Keep your fingers clear when you release the Latch (83) and slide the Tab (70) forward.

**Note:** The Nailer may not work if there are only two or three nails left in the tool. If there are only a few nails remaining, simply load another strip of nails into the Magazine behind the few remaining nails and the Nailer will be ready for further use.

# ILLUSTRATIONS

**Warning!** Disconnect the Nailer from the air compressor whenever loading.



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## OPERATION

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**Note:** The Nailer may not work if there are only 2 or 3 nails left-see **Note** on page 6, bottom.

1. Set the proper angle of the Nailer for your application (a three step process):
  - a. Pull back and engage the Tab (70), exposing three adjustment holes. Loosen the hex bolt and slide it into the appropriate hole (21°, 28°, 34°). Retighten the hex bolt securely, making sure it fits into the appropriate hole properly. See **FIGURE 3**. Gently release the Tab (70).
  - b. Remove the Adjustment Knob (81). See **FIGURE 4**. Move the Magazine (76) so that the desired hole on the Plate (80) lines up with the nut on the Magazine (76). See **FIGURE 5**. Replace and tighten the Adjustment Knob (81).
  - c. Inspect the Pin's (34) location and compare it to **FIGURE 6**. If you are driving 21° angle nails the Pin should be in the lower hole (position **A**). If you are driving 28° or 34° angle nails the Pin should be in the upper hole (position **B**). If the Pin is in the wrong position, pull the Pin (34) out (it is held in place with a rubber washer), reposition the Guide Plate (35), and reinsert and secure the Pin (34). Before using the nailer, be sure that the Pin is properly secured.
2. The driving depth of a nail can be adjusted in two ways. First, by increasing or decreasing air pressure (**never to exceed the maximum of 125 PSI**). Secondly, by loosening the Screw (37) and adjusting the Bracket A (38). We recommend you experiment in a scrap piece of material to determine how far to adjust the unit.
3. Attach the Nailer to the air supply at the Air Inlet (90). See **FIGURE 1**. Start your air compressor and make sure it is set to between the recommended 70-125 PSI and not over the maximum 125 PSI.
4. To fire, place the Safety (41) of the Nailer on the workpiece. The Nailer should not fire if the Safety (41) is not depressed. Once depressed, quickly squeeze the Trigger (47) once. **Do not fire repeatedly; nails could bounce off of one another causing injury.** We recommend you practice with a piece of scrap material.
5. The Exhaust Cover (4) may be turned to suit your preference. See **FIGURE 1** on page 7.
6. The Rubber Cover (42) provides a non-marring surface. If desired, the Rubber Cover may be removed to expose the teeth on Safety (41). Doing so provides a nonslip surface and can improve accuracy.
7. When finished, disconnect the Nailer from the air source.

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

1. Disconnect the Nailer from the air hose.
2. Empty the **Magazine (76)** 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 nails.
4. **Always leave the Magazine (76) open during maintenance. The Magazine is spring-loaded and may cause parts or a nail to fly out of the Nailer.**

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## CLEARING JAMS

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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 **Tab (70)** all the way back to the engaged position. Using a screwdriver, attempt to release the jammed nail by probing either or both of the two openings in the magazine (see photo at right) to release the nail. Pull out the jammed nail and the remainder of the nail strip that is still in the magazine.
4. Dispose of the remaining nail strip; it may be bent or damaged in some other way. Reload the magazine with a new nail strip.
5. **Be careful. When you pull back on the Latch (83) to release the Tab (70), it will spring forward with force.** Keep your fingers clear when you release the Latch (83) and slide the Tab (70) forward.
6. **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.**

Figure 7



Probe in these areas with a screwdriver to release jammed nails.

## TROUBLESHOOTING

**Any internal repair should be performed by a qualified service technician.**

Symptom	Cause	Solution
Top of tool or Trigger (47) leaks air, sluggish operation, or will not operate	<ol style="list-style-type: none"> <li>1. Loose Screws,</li> <li>2. Worn or damaged O-rings or seals</li> <li>3. Inadequate air supply,</li> <li>4. Inadequate lubrication,</li> <li>5. Worn/damaged O-rings or seals</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify screws are tight,</li> <li>2. Check/replace O-rings or seals</li> <li>3. Use a compressor that delivers the proper CFM,</li> <li>4. Add air tool oil (not incl.),</li> <li>5. Check/replace O-rings or seals</li> </ol>
Bottom of tool leaks air	<ol style="list-style-type: none"> <li>1. Loose Screws,</li> <li>2. Worn/damaged O-rings, seals.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify screws are tight,</li> <li>2. Check/replace O-rings, seals.</li> </ol>
Frequent Jamming	Nail-type does not correspond with the adjustment angle setting.	Ensure nail-type loaded corresponds to the adjustment angle setting. Nail types are as follows: 21° Plastic Collated Full Head Nails 28° Paper Collated Clip Head Nails 34° Paper Collated Clip Head Nails
Tool double-fires	All 3 adjustment locations are not set at the same angle (see Figures 1-6 on page 7.)	Set all 3 adjustment locations at the same angle, whether its 21°, 28°, or 34°.
Adjustment pin (33, 34) will not remove	The rubber O-ring at the tip of the pin (Fig. 6, page 7) is tight-fitted.	Remove rubber O-ring with a small flathead screwdriver. The upper hole corresponds to 28°/34° and the lower hole to 21°. Make adjustment and secure pin with rubber O-ring.

## MAINTENANCE

**Disconnect the Nailer from the air source hose before attempting any maintenance.**

1. Wipe tool clean with a lint free cloth and inspect it for damage. Do not use the tool if you find damage. Have it repaired by an authorized service technician.
2. Always test the Full Sequential Safety mechanism before each use (see page 6).
3. Keep all screws tight. Loose screws may damage the tool and cause personal injury.
4. Make sure that Base (29) is clear of all dirt or debris.
5. **Make sure the Trigger (47) and Safety (41) move freely, without sticking. Do not use nailer if Trigger or Safety sticks.**

## PARTS LIST

Part	Description	Part	Description	Part	Description
1	Screw	31	Screw	61	Bushing
2	Spring Washer	32	Washer	62	Screw
3	Bushing	33	Pin	63	Washer
4	Exhaust Cover	34	Pin	64	Turn Plate B
5	Seal	35	Guide Plate	65	Bushing
6	Screw	36	Spring	66	Coil Spring
7	Spring Washer	37	Screw	67	Coil Spring Base
8	Cylinder Cap	38	Bracket A	68	Pin
9	Gasket	39	Washer	69	Screw
10	O-ring	40	Screw	70	Tab
11	O-ring	41	Safety (Bracket B)	71	Feeder Shoe
12	Spring	42	Rubber Cover	72	Hex Bolt
13	Valve	43	Washer	73	Washer
14	Valve Seal	44	Pin	75	Screw
15	O-ring	45	Safe Guide	76	Magazine
16	Valve Seat	46	Trigger Spring	77	Screw
17	Screw	47	Trigger	78	Rail
18	Bushing	48	Seal	79	Nut
19	Washer	49	Trigger Valve Head	80	Plate
20	O-ring	50	Spring	81	Adjustment Knob
21	Piston Assembly	51	O-ring	82	Support
22	O-ring	52	Trigger Valve Stem	83	Latch
23	Cylinder	53	O-ring	84	Torsion Spring
24	O-ring	54	Trigger Valve Guide	85	Bushing
25	Bumper A	55	Spring Pin	86	Nut
26	Bumper B	56	Screw	87	Grip Sleeve
27	Body	57	Spring Washer	88	O-ring
28	O-ring	58	Nut	89	End Cap
29	Base	59	Washer	90	Air Inlet
30	Spring Washer	60	Turn Plate A	91	Washer

### PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR 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.

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



## 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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