



# AIR BRAD FINISH NAILER

## 16 GAUGE - 2"

Model 97520  
94481

### ASSEMBLY AND OPERATING INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.  
Due to continuing improvements, actual product may differ slightly from the product described herein.

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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.**

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## PRODUCT SPECIFICATIONS

Fastener Size Capacity	3/4" ~ 2" Long / 16 Gauge
Magazine Capacity	100 Fasteners
Load Style	Top Loading Magazine
Nose Piece Design	Spring Actuated Quick Release
Maximum Air Pressure	120 PSI
Average Air Flow	5 ~ 6 SCFM @ 90 PSI
Air Inlet Size	1/4"-18 NPT
Trigger Mechanism	Full Sequential
Accessories	Pneumatic Tool Oil / Wrenches (Qty. 2)
Overall Dimensions	11-3/4" L x 2-3/4" W x 11-1/4" H
Unit Weight	3.9 Pounds

## SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this 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 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.



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 a qualified 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 wrenches.** Check that 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 brads 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 for an air compressor.** 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 compressor. 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.** Use clean, dry, regulated, compressed air at between 70 and 120 PSI. Never use oxygen, carbon dioxide, combustible gases, or any other bottled gases a power source for this tool.
21.  **Do not load brads with the trigger or safety depressed.** Unintentional firing may occur. Do not load brads when the air hose is connected to the tool. Always assume the tool contains brads.
22. **Disconnect air supply before loading the Nailer.** Before reloading (or making any adjustments to) the Nailer, make sure the compressed air is disconnected.
23. **Fire brads into an appropriate work surface only.** Do not attempt to fire brads into surfaces too hard to penetrate. Do not drive brads on top of other brads, or at too steep an angle. Brads can ricochet, causing personal injury. Never fire the Nailer into the air, or point it toward yourself or another person. Always wear ANSI approved impact safety goggles during use, maintenance, and reloading.
24. **Do not fire brads 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 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, cement, and other masonry products,
- \* Arsenic and chromium from chemically treated lumber.

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

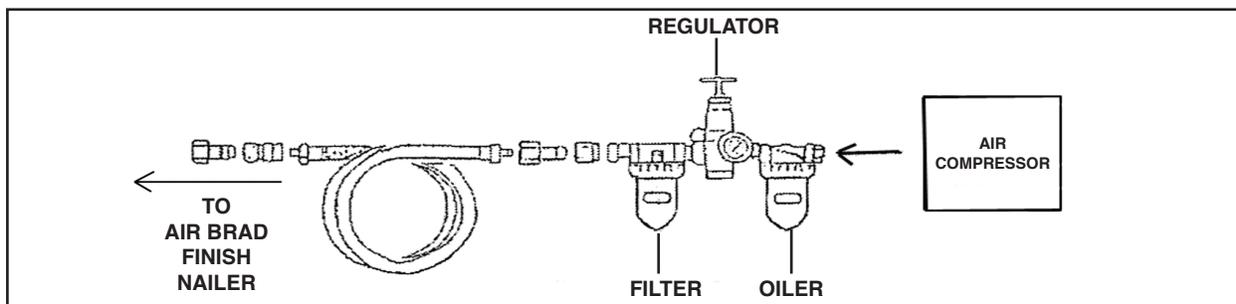
26. **Stay within air pressure capacity.** Never operate the Nailer above 120 PSI.
27. **Hold tool away from head and body.** During operation the Nailer may kick back, causing injury.
28. **Transport Nailer safely.** Always disconnect air supply when moving the tool in the workplace. Carry the tool by the handle to avoid contact with the trigger.
29. **Avoid working alone.** If an accident happens, an assistant can bring help.
30. **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 the tool performance.
31.  **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.

## UNPACKING

When unpacking, check to make sure that the product is intact and undamaged. 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.

## OPERATION

For best service, you should incorporate a regulator and an in-line filter and oiler as shown in the diagram below. Hoses, couplers, regulators, filters, and oilers are all available from Harbor Freight Tools.



## 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.

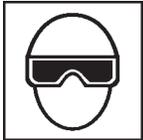
1. Make sure the tool is disconnected from its air supply.
2. Completely empty the Magazine Assembly (70) of Brads.
3. The Nailer should not fire if the Safety (50A) is not depressed against the workpiece.
4. Make sure the Trigger (36) and Safety (50A) move freely, without sticking.



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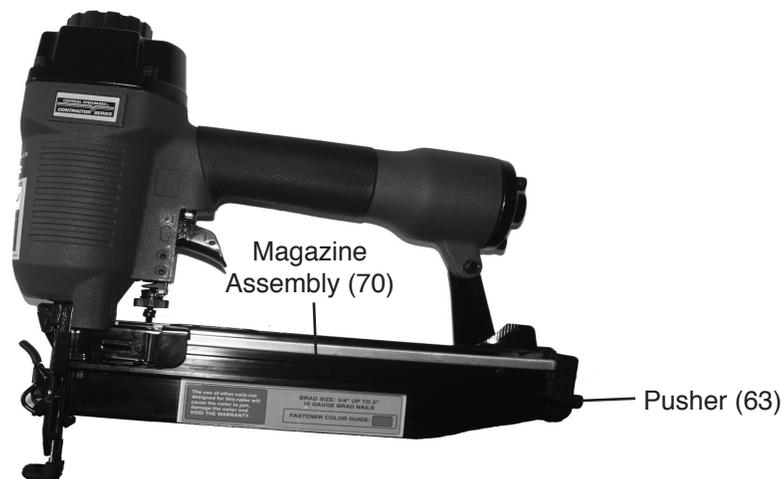
5. Connect the air supply to the tool at the Quick Connector (83). Set the regulator at the recommended **70 to 120 operating PSI**. **Do not exceed the maximum 120 PSI**.
6. Test the tool by depressing the Safety (50A) against the workpiece without pulling the Trigger (36). **The tool must not cycle (fire)**. If it cycles (fires), stop immediately and have it repaired by a qualified service technician.
7. Hold the tool away or off the workpiece. The Safety (50A) of the tool should return to its original position. Squeeze the Trigger (36). **The tool should not cycle (fire)**. If the tool cycles (fires), stop immediately and have it repaired by a qualified service technician.
8. Depress the Safety (50A) against the workpiece and squeeze the Trigger (36). **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.

## LOADING BRADS



**WARNING: Always wear ANSI approved impact safety goggles when reloading or performing any other maintenance on this tool.** Other people in the work area must also wear ANSI approved impact safety goggles.

1. Slide the Pusher (63) back until it locks in place.
2. Place a full clip of the desired size Brads (3/4" to 2") in the Magazine Assembly (70). Up to 100 Brads may be loaded in the Magazine.



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3. While holding the Pusher (63) in place, press the Release (74) and slide the Pusher forward.

## OPERATING THE NAILER

1. Attach the Nailer to the air supply at the Quick Coupler (83). Start your compressor and check the pressure, making sure it is set at the recommended 70-120 PSI.  
**Do not exceed the maximum 120 PSI.**
2. Rotate the Exhaust Cover (2) so that the exhaust air blast will be directed away from the operator.
3. To fire, place the Safety (50A) of the Nailer on the workpiece. The Nailer should not fire if the Safety is not depressed. Once depressed, gently and briefly squeeze the Trigger (36) once; one Brad will be fired.
4. Do not press the Safety (50A) against the workpiece with extra force. Allow the tool to do the work. Always allow the tool to recoil off the work surface.
5. When finished using the Nailer, always disconnect the tool from its air supply. Empty the Magazine Assembly (70) completely of Brads. Attempt to fire the Nailer into a piece of scrap wood to ensure it is disconnected and is incapable of firing any Brads.
6. Make sure to store the Nailer in a clean, dry, safe location out of reach of children.



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

1. Disconnect the Nailer from its air supply.
2. Empty the Magazine Assembly (70) 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.

**CLEARING JAMS**



**Use eye and ear protection when clearing jams.** Always wear ANSI approved impact safety goggles and appropriate hearing protection.

1. Occasionally, a Brad may become jammed in the firing mechanism of the Nailer, making the tool inoperable.
2. To remove a jammed Brad, disconnect the Nailer from its air supply.
3. Slide the Pusher (63) back until it locks in place. Then, lean the Nailer back.
4. Remove all Brads from the Magazine Assembly (70).
5. While holding the Pusher (63) in place, press the Release (74) and slide the Pusher forward all the way.
6. Attempt to fire the Nailer into a piece of scrap wood to ensure it is disconnected and is incapable of firing any Brads.
7. With the Driver Guide Cover (52A) facing away from you, push the Locker Spring (92) and remove Driver Guide Cover.
8. Remove the jammed Brad.
9. Close the Driver Guide Cover (52A), making sure it locks in place.
10. Reload the Nailer with Brads. Then, reconnect the air supply hose to the tool.
11. Press the Safety (50A) against a piece of scrap wood, and test fire the Nailer several times while checking for proper operation. If the Nailer is properly firing, you may continue using the tool. If the tool fails to perform properly, immediately discontinue use and have the tool repaired by a qualified service technician.
12. When finished working, disconnect the air supply. Remove the Brads. Then, store the Nailer in a clean, dry, safe location out of reach of children.

## INSPECTION, MAINTENANCE, AND CLEANING

### Anytime any maintenance or repairs are done, FIRST:

1. Disconnect the Nailer from its air supply.
  2. Empty the Magazine Assembly (70) 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.
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1. Inspect the air supply Screen that is located in the End Cap (81) before each use, and clean or replace as necessary. Dirt and water in the air supply Screen are major causes of pneumatic tool wear. Use a filter in the compressed air system for better performance and longer tool life. The filter must have adequate flow capacity for the specific application.
  2. Clean the external parts of the Nailer with a clean cloth and mild detergent or non-flammable solvent. Then, dry.
  3. Store the tool in a clean, dry, safe location out of reach of children.
  4.  **CAUTION: All maintenance, service, or repairs not listed in this manual are only to be attempted by a qualified service technician.**

## TROUBLESHOOTING

Problem	Possible Solutions
Air leak near top of tool.	<ol style="list-style-type: none"> <li>1. Tighten all screws on the cylinder cap.</li> <li>2. Have a qualified service technician install a head valve piston set.</li> </ol>
Tool does not work.	<ol style="list-style-type: none"> <li>1. Make sure compressor is set between 70 to 120 PSI.</li> <li>2. Check all air connections for leaks.</li> <li>3. Make sure to fully depress the safety sleeve on the workpiece when attempting to fire a fastener.</li> <li>4. Check for fastener jams. Clear the jam if necessary.</li> <li>5. Have a qualified service technician check out the tool.</li> </ol>
Sluggish operation.	<ol style="list-style-type: none"> <li>1. Make sure the compressor is set between 70 to 120 PSI.</li> <li>2. Check all air connections for leaks.</li> <li>3. Have a qualified service technician install a head valve piston set.</li> </ol>
Air leak near bottom of tool.	<ol style="list-style-type: none"> <li>1. Tighten all screws.</li> <li>2. Have a qualified service technician replace the bumper or head valve piston set.</li> </ol>
Poor return after firing the tool.	Have a qualified service technician clean the interior of the tool and/or replace the bumper or head valve piston set.
Weak driving force.	<ol style="list-style-type: none"> <li>1. Make sure compressor is set between 70 to 120 PSI.</li> <li>2. Check all air connections for leaks.</li> <li>3. Have a qualified service technician clean the interior of the tool and/or replace the bumper or head valve piston set.</li> </ol>
Poor feed.	Have a qualified service technician clean the interior of the tool and/or lubricate the magazine and install a new magazine spring.
Tool jamming too often.	Have a qualified service technician clean the interior of the tool and/or lubricate the magazine and install a new magazine spring.

**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 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 RISKS 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.

**PARTS LIST**

Part	Description
1	Shoulder screw
2	Exhaust cover
3	Shim
4	Hex.Soc.Hd.Bolt
5	Spring Washer
6	Deflector
7	O-Ring
8	Packing
9	Gasket
10	Seal
11	Spring
12	Hd.Valve Piston
13	O-Ring
14	O-Ring
15	O-Ring
16	Collar
17	O-Ring
18	O-Ring
19	Driver Unit
20	O-Ring
21	Cylinder
22	O-Ring
23	Bumper
24	Body
25	Nozzle
27A	Trigger Valve Head
28A	Compression Spring
29A	O-Ring

Part	Description
30A	Valve Plunger(Lower)
31A	O-Ring
32A	Valve Body(Lower)
33	Spring
34	Trigger Plate
35	Spring Pin
36	Trigger
37	Pin
38	O-Ring
39A	Guide
42A	Spring Pin
43A	Lock Nut
44A	Setting Knob
50A	Safety B
51A	Safety Sleeve
52A	Driver guide cover A
54A	Driver guide cover B
55	Hex.Soc.Hd.Bolt
56A	Driver Guide
60	Pin
61	Spring
62	E-Ri ng
63	Pusher
64	Rivet
65	Clapboard
66	Spring Pin
67	Tail Cover
68	Hex.Soc.Hd.Bolt

Part	Description
69	Steel Channel
70	Magazine
71	Flat Soc.Hd.Screw
73	Hex.Soc.Hd.Bolt
74	Pusher Release
75	Spring
76	Tail Hanger
77	Hex.Soc.Hd.Bolt
78	Hand Grip
79	Lock Nut
80	Packing
81	End Cap
82	Hex.Soc.Hd.Bolt
83	Quick Coupler
86	O-ring
87	O-ring
88	O-ring
89	O-ring
90	Trigger Valve Head
91	O-Ring
92	Locker Spring
93	Screw
94	Spring
95	Fixture Ring
96	Safety A Unit
97	Spring Pin

**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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