IronForce Framing Nailer

from Campbell Hausfeld

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Meet the IronForce Nailer by Campbell Hausfeld

Designed for framing, trusses, sub-floors, sheathing, exterior decks, and pallet/create assembly, the IronForce Nailer from Campbell Hausfeld features convenient top loading magazines, adjustable exhaust, and an adjustable depth of drive mechanism. Other features include a no-mar tip and a single cycle trigger.

Nailer Components And Specifications

	IFN2190	IFN3490
• **REQUIRES** (SCFM with 16 nails per minute @ 90 psi)	4.1	4.1
• **AIR INLET**	1/4" NPT	1/4" NPT
• **NAIL LENGTH RANGE**	2" to 3½"	2" to 3½"
• **NAIL SHANK RANGE**	0.113" to 0.131"	0.113" to 0.131"
• **MAGAZINE CAPACITY**	60-75	75-105
• **WEIGHT**	8 lbs. 5 oz.	8 lbs. 11 oz.
• **LENGTH**	19.5"	19.75"
• **HEIGHT**	15"	15"
• **MAXIMUM PRESSURE**	120 psi	120 psi
• **PRESSURE RANGE**	70 - 120 psi	70 - 120 psi

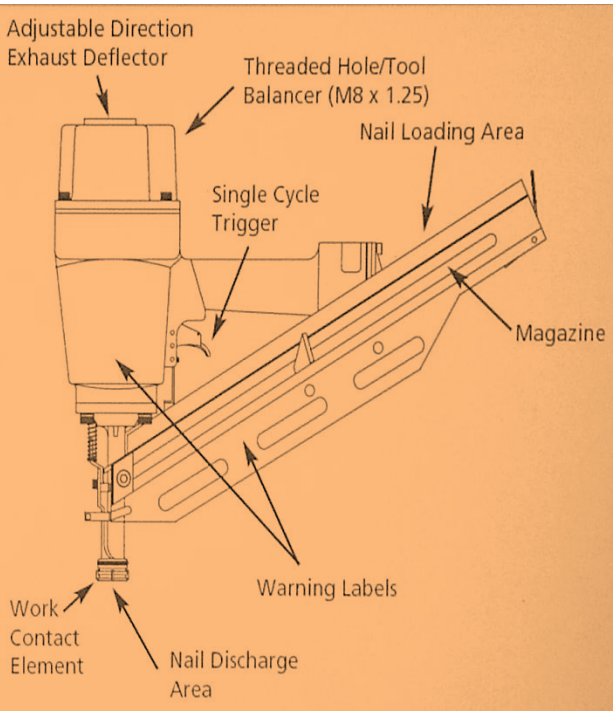
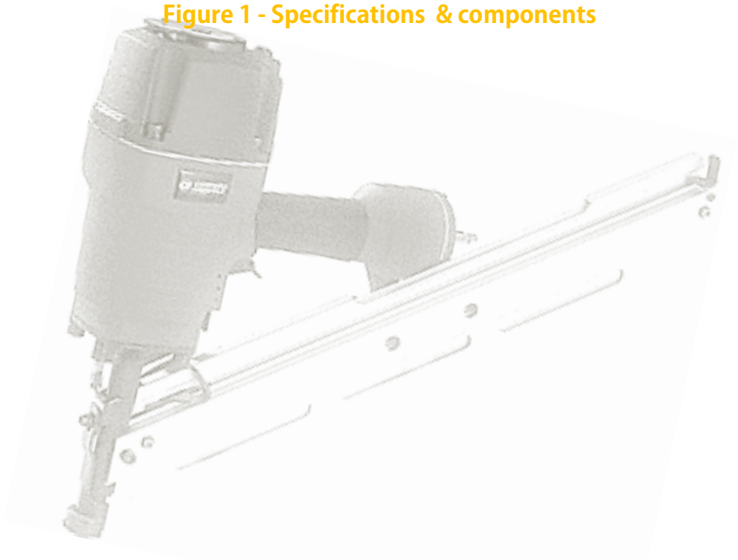


Figure 1 - Specifications & components



Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for safety, and to prevent equipment problems. It is critical to follow all safety guidelines and procedures to ensure the health of the operator. To help recognize this information, observe the following symbols.

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

Warning indicates a potentially hazardous situation which if not avoided, could result in death or serious injury.

Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Notice indicates important information that, if not followed, may cause damage to equipment.

General

a. To reduce the risks of electric shock, fire, and injury to persons, read all the instructions before using the tool.

b. Be thoroughly familiar with the controls and the proper use the equipment. Follow all instructions. Contact your Campbell Hausfeld representative if you have any questions.

c. Only persons well acquainted with these rules of safe operation should be allowed to us the unit.

CAUTION Read and understand tool labels and manual. Failure to follow warnings, dangers, and cautions could result in death or serious injury.

Figure 2 - Ironforce Nailer

Work Area

NOTICE

Keep the work area clean and well lighted. Cluttered benches and dark areas increase the risks of electric shock, fire, and injury to persons. (Fig. 3)

WARNING

Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids gases, or dust. The tool is able to create sparks resulting in the ignition of the dust of fumes.

Keep bystanders, children, and visitors away while operating the tool. Distractions are able to result in the loss of control the tool.

Figure 3 - Neat working area

Personal Safety

NOTICE

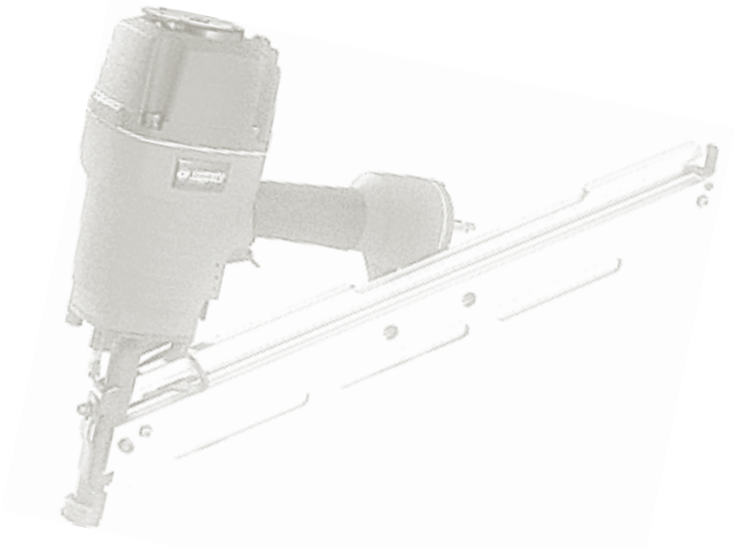
a. Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of alcohol or medication. A moment of inattention while operating the tool increases the risk of injury to persons.

b. Dress properly. Do not war loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair increase the risk of being caught in moving parts.

c. Avoid unintentional starting. Be sure the switch is off before connecting to the air supply. Do not carry the tool with your finger on the switch or connect the tool to the air supply with the switch on.

d. Do not overreach. Keep proper footing and balance enables better control of the tool in unexpected situations.

e. Use safety equipment. A dust mask, non-skid safety shoes and a hard hat must be used for the applicable conditions.



f. Always wear eye protection. (Fig. 4)

Figure 4 - Safety Goggles

g. Always wear hearing protection when using the tool. Prolonged exposure to high intensity noise is able to cause hearing loss.

h. Do not attach the hose or tool to your body. Attach the hose to the structure to reduce the risk of loss of balance if the hose shifts.

i. Always assume that the tool contains fasteners. Do not point the tool toward yourself or anyone whether it contains fasteners or not.

Do not nail on top of another nail. This is able to cause the nail to be deflected and hit someone, or cause the tool to react and result in a risk of injury to persons.

Remove finger from the trigger when not driving fasteners. Never carry the tool with finger on trigger, the tool is able to fire a fastener.

Tool Use and Care

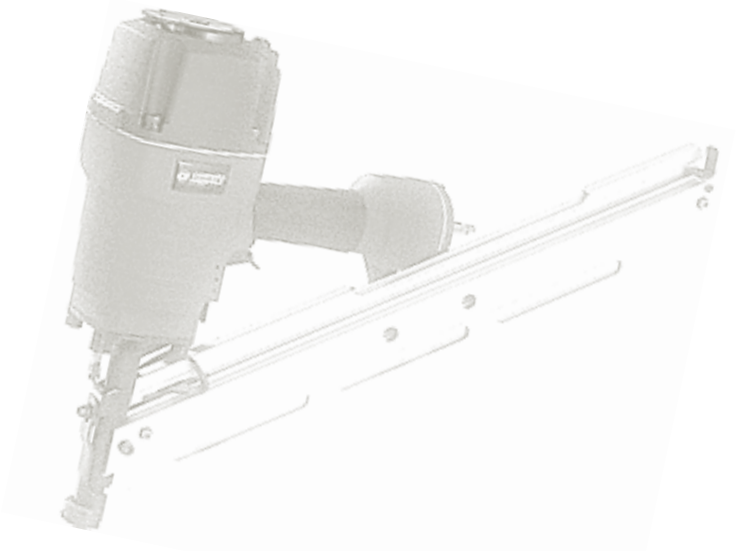
NOTICE

a. Use clamps or another practical way to secure and support the work piece to a stable platform. Holding the work by hand or against the body is unstable and is able to lead to loss of control.

b. Do not force the tool. Use the correct tool for the application. The correct tool will do the job better and safer at the rate for which the tool is designed.

c. Do not use the tool if the switch does not turn the tool on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

d. Disconnect the tool from the air source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool unintentionally.



e. Store the tool when it is idle out of reach of children and other untrained persons. A tool is dangerous in the hands of untrained users.

f. Maintain the tool with care. Keep a cutting tool sharp and clean.
A properly maintained tool, with sharp cutting edges reduces the risk of binding and is easier to control.

g. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool′ s operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. There is a risk of bursting if the tool is damaged.

h. Use only accessories that are identified by the manufacturer for the specific tool model. Use of an accessory not intended for use the specific tool model, increases the risk of injury to persons.

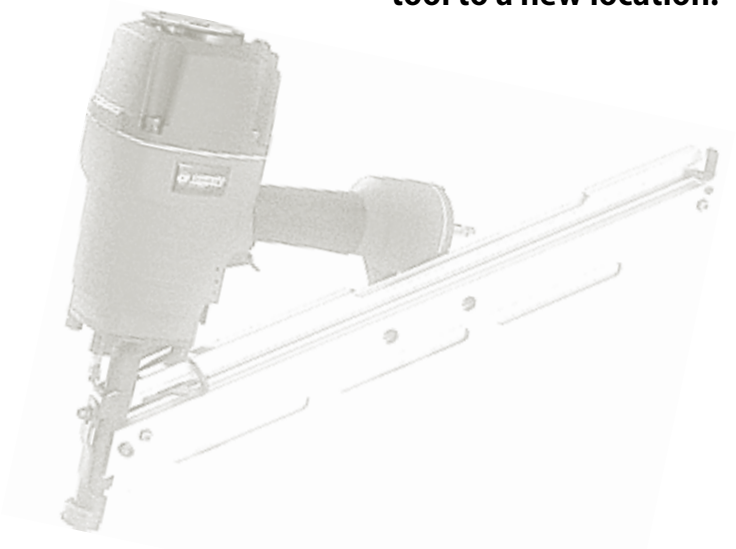
i. Selecting an appropriate tool actuation system, taking into consideration the work application for which the tool is used.

Never use gasoline or other flammable liquids to clean the tool. Never use the tool in the presence of flammable liquids or gases. Vapors could ignite by a spark and cause an explosion which will result in death or serious personal injury.

Do not remove, tamper with or otherwise cause the Work Contact Element (WCE) or trigger to become inoperable. Do not operate any tool which has been modified in a like fashion. Death or serious personal injury could result.

Do not touch the trigger unless driving fasteners. Never attach a pneumatic airline to the tool or carry tool while touching the trigger. The tool could eject a fastener which will result in death or serious personal injury.

Always disconnect the tool from the power source when unattended, performing any maintenance or repair, clearing a jam, or moving the tool to a new location.



Always fit tool with a fitting or hose coupling on or near the tool in such a manner that all compressed air in the tool is discharged at the time the fitting or hose coupling is disconnected.

Never carry the tool by the air hose or pull the hose to move the tool or a compressor.

Always assume the tool contains fasteners. Respect the tool as a working implement; no horseplay.

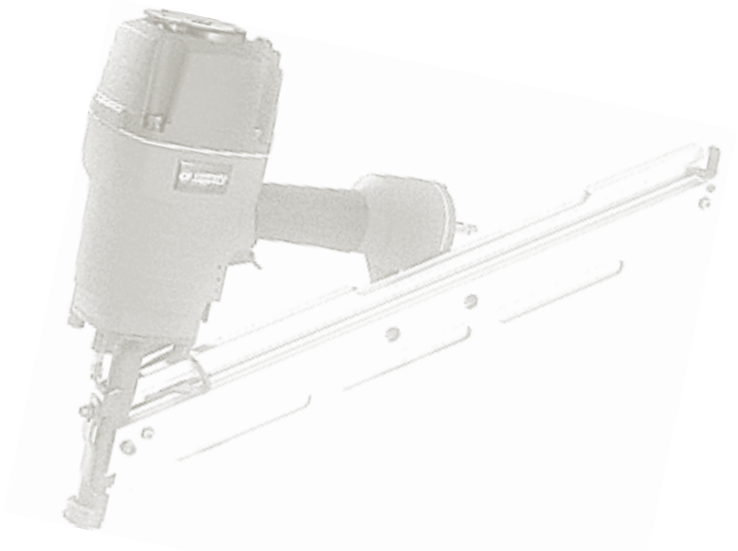
Always keep others at a safe distance from the work area in case of accidental discharge of fasteners.

Always reconnect the air line before loading any fasteners when either the trigger is depressed or the work contact element (WCE) is engaged. The tool could eject a fastener causing death or serious personal injury.

Do not use a check valve or any other fitting which allows air to remain in the tool. Death or serious personal injury could occur.

Never place hands or any other body parts in the fastener discharged area of the tool. The tool might eject a fastener and could result in death or serious personal injury.

Keep hoses away from heat, oil and sharp edges. Replace any hose that is damaged, weak or worn. Personal injury or tool damage could occur.



Avoid using the tool when the magazine is empty. Accelerated wear on the tool may occur.

Clean and check all air supply hoses and fittings before connecting the tool to an air supply.

Replace any damaged or worn hoses or fittings. Tool performance or durability may be reduced.

WARNING

Do not point the tool toward yourself or anyone whether it contains fasteners or not. Accidental triggering of the tool could result in death or serious personal injury.

NOTICE

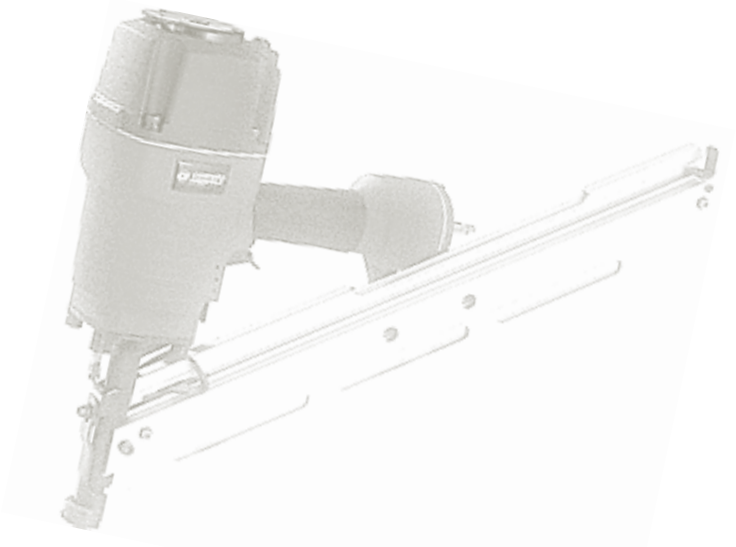
Do not make any modifications to the tool without first obtaining written approval from Campbell Hausfeld.

Always check that the Work Contact Element (WCE) is operating properly. A fastener could accidentally be driven if the WCE is not working properly. Personal injury may occur.

Do not use the tool if any shields or guards are removed or altered.

Do not use the tool as a hammer. Personal injury or tool damaged may occur.

Use filtered, lubricated, regulated compressed air only. Use of a reactive gas instead of compressed air may cause the tool to explode which will cause death or serious personal injury.



Use only a pressure-regulated compressed air source to limit the air pressure supplied to the tool. The regulated pressure must not exceed 120 psi.

Disconnect air supply and release tension from the pusher before attempting to clear jams because fasteners can be ejected from the front of the tool. Personal injury may occur.

If the regulator fails, the pressure delivered to the tool must not exceed 200 psi. The tool could explode which will cause death or serious personal injury.

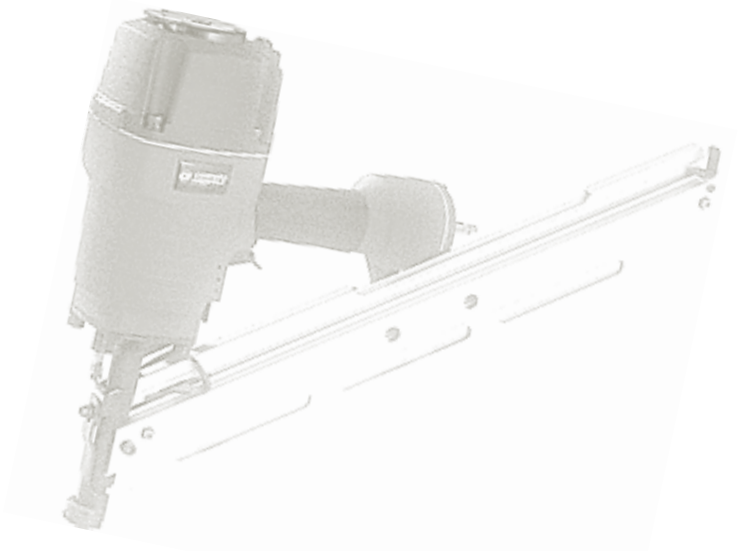
Figure 5 - Nailer disconnected from air source

Air Source

Use only clean, dry, regulated compressed air at the rated pressure or within the rated pressure range as marked on the tool. Always verify prior to using the tool that the air source has been adjusted to the rated air pressure or within the rated air-pressure range.

Never use oxygen, carbon dioxide, combustible gases or any bottled gas as an air source for the tool. Such gases are capable of explosion and serious injury to persons.

Never connect to an air source that is capable of exceeding 200 psi. Over pressurizing the tool is able to result in bursting, abnormal operation, breakage of the tool or serious injury to persons.



Operating Instructions

Lubrication

NOTICE

This tool requires lubrication before using the tool for the first time and before each use. (fig. 6)
If an inline oiler is used, manual lubrication through the air inlet is not required on a daily basis.

Figure 6 - Lubrication oil

1. **Disconnect the air supply from the tool to add lubricant.**

2. **Turn the tool so the air inlet is facing up. (fig. 7)**

3. **Place 4-5 drops of 30 W non-detergent oil into air inlet. Refrain from using detergent oils, oil additives, or air tool oils. Air tool oils contain solvents which will damage the tools internal components.**

Figure 7 - Insertion of oil into nailer

4. **After adding oil, run tool briefly.**

5. **Wipe off any excess oil from the cap exhaust.**

Recommended Hookup

The illustration (fig. 8) below shows the recommended hookup for the tool.

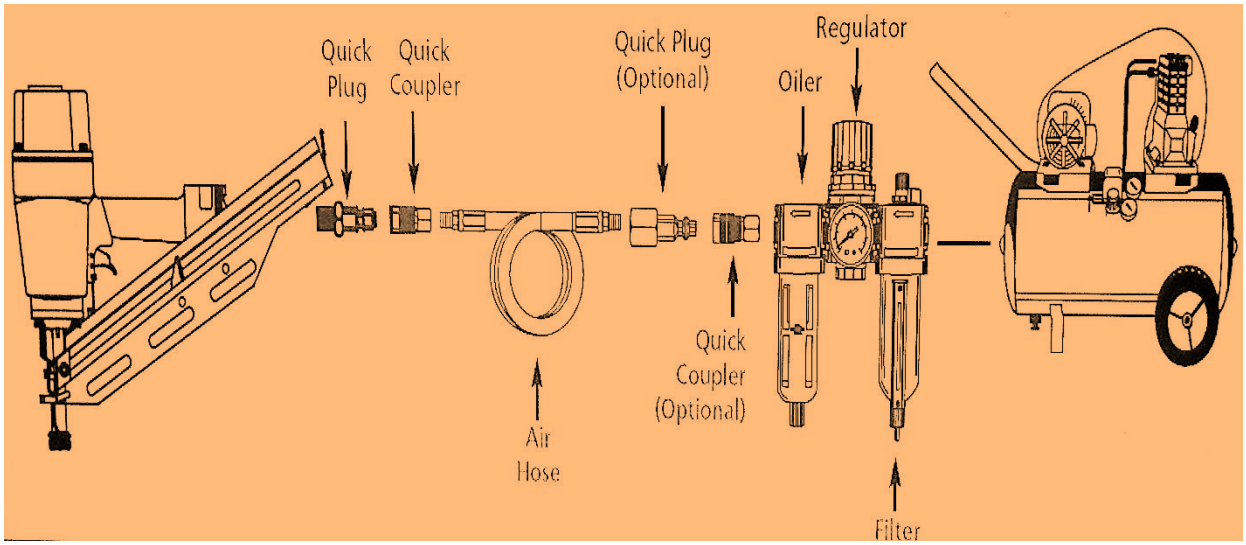
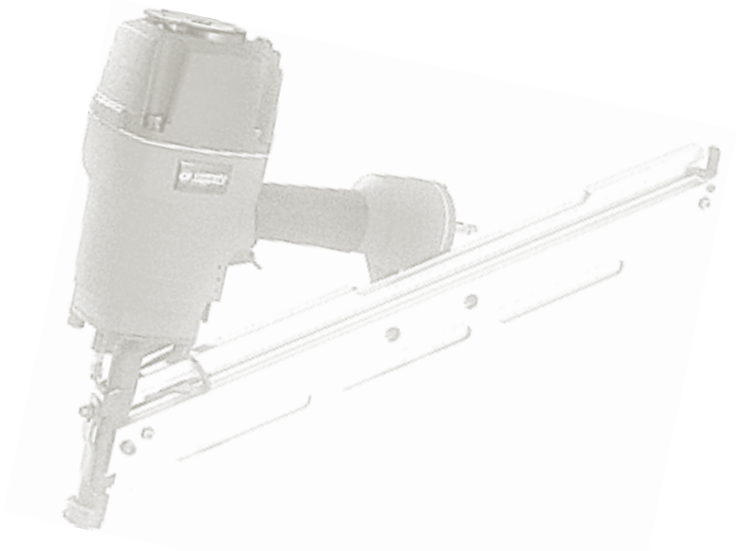


Figure 8 - Hookup diagram, showing all parts separately



1. **The air compressor must be able to maintain a minimum of 70 psi when the tool is being used. An inadequate air supply can cause a loss of power and inconsistent driving.**

2. **An oiler can be used to provide oil circulation through the tool. A filter can be used to remove liquid and solid impurities which can rust of "gum up" internal parts of the tool.**

3. **Always use air supply hoses with a minimum working pressure rating equal to or greater than the pressure from the power source if a regulator fails, or 150 psi, whichever is greater. Use 3/8 inch air hose for runs up to 50 feet. Use ½ inch air hose for 50 foot run or longer.**

****For better performance, install a 3/8 inch quick plug (1/4 inch NPT threads) with an inside diameter of .315 inch (8mm) on the tool and 3/8 inch quick coupler on the air hose. ****

Use a pressure regulator on the compressor, with an operating pressure of 0-125 psi. A pressure regulator is required to control the operating pressure of the tool between 70 and 120 psi.

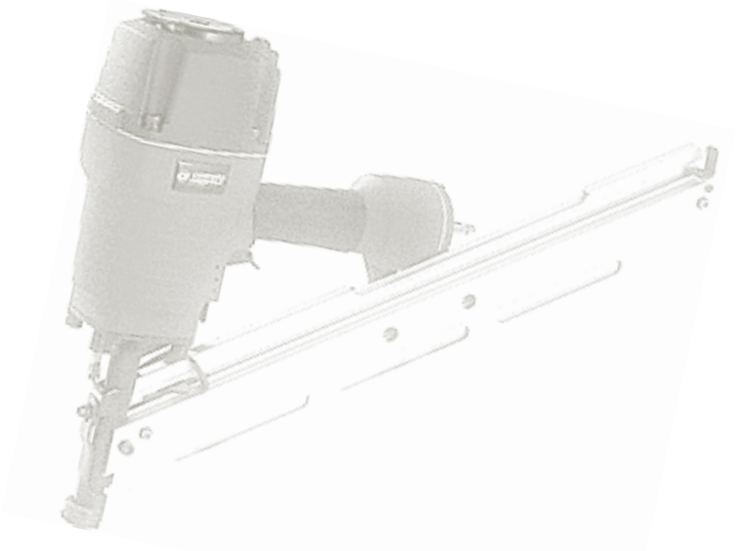
Loading the Nailer

1. Always connect the tool to the air supply before loading fasteners. (fig. 9)

Figure 9

2. Pull nail pusher mechanism back until pusher engages with magazine latch. (fig. 10)

Figure 10 - Pusher Mechanism



3. Load strips of fasteners into the magazine slot. Make sure that the nails are placed into tool at the proper orientation. (fig.11)

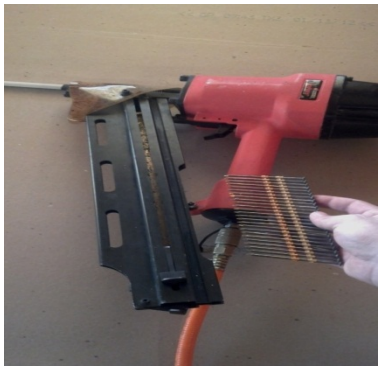


Figure 11 - Loading fasteners

4. Squeeze the pusher and the latch together to unlatch pusher. Make sure the head of the last nail is under the head of the pusher.

Unloading the Nailer

1. Always unload all fasteners before removing tool from service. Unloading is the reverse of loading except always disconnect the air hose before unloading.

2. Pull nail pusher mechanism back until pusher engages with magazine latch.

3. Hold tool upright so nails will slide backwards toward magazine slot. (fig. 12)

4. Squeeze the pusher and latch together to unlatch the pusher once all nails have been removed.

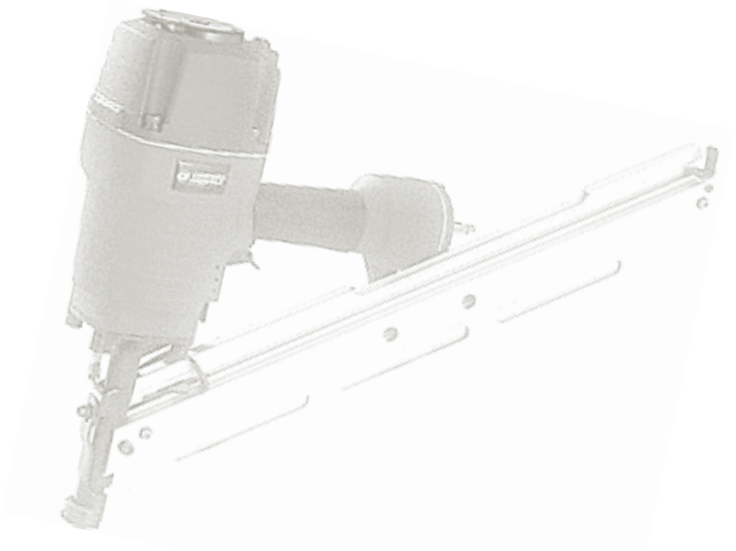
Figure 12 - Unloading fasteners

Adjusting the Nail Penetration

The IFN21950 is equipped with an adjustable depth of drive feature. This allows the user to determine how deep a fastener will be driven into the work surface.

1. Adjust the operating pressure to a pressure which will consistently drive the fasteners. Do not exceed the maximum operating pressure of the nailer of 120 psi.

2. To adjust the depth-of-drive, loosen the 4mm bolt on the top of the nose. To increase depth, push WCE in toward nose as much as desired. Re-tighten bolt



3. Make sure that the trigger and work contact element (WCE) move freely up and down without binding or sticking after each adjustment.

Maintenance Instructions

Technical Service

Please call our Tool Hotline at 1-800-543-6400 with any questions regarding the operation or repair of this tool or for additional copies of the manual.

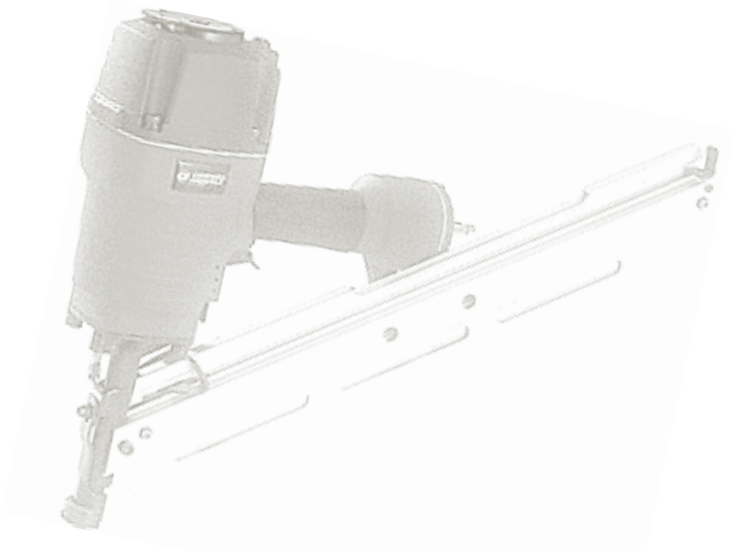
Figure 13 - WCE Shield

Fastener and Replacement Parts

Use only genuine Campbell Hausfeld fasteners (or equivalent - see Fastener Interchange Information). Use only genuine Campbell Hausfeld replacement parts. Never substitute parts. Do not use modified parts or parts which will not give equivalent performance to the original equipment. Tool performance, safety and durability could be reduced. When ordering replacement parts or fasteners, specify the part number.

Tool Repair

Only qualified personnel should repair the tool and they should use genuine Campbell Hausfeld replacement parts and accessories, or parts and accessories which perform equivalently.



Assembly Procedure for Seals

When repairing a tool, the internal parts must be cleaned and lubricated. Parker O-lube or equivalent must be used on all O-rings. Each O-ring must be coated with O-lube before assembling.
A small amount of oil must be used on all moving surfaces and pivots. After reassembling, a few drops of 30W non-detergent oil or equivalent, must be added through the air line before testing.

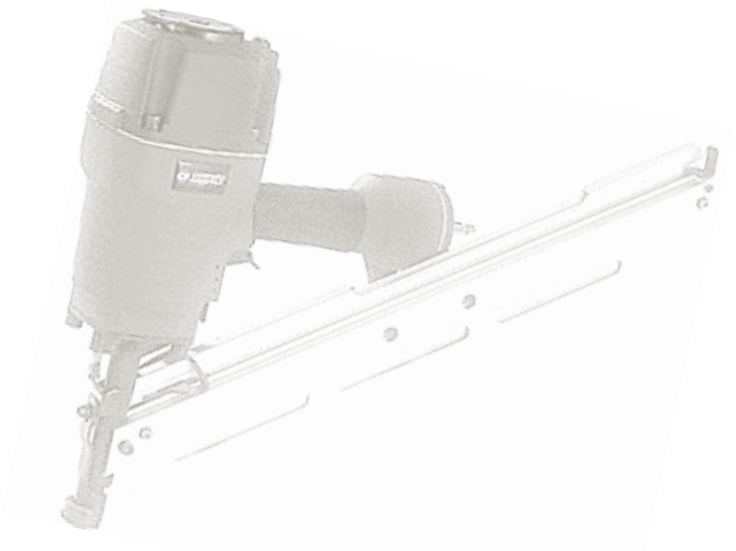
Storage

The stapler should be stored in a cool dry place.

Figure 14 - Ironforce nailer stored on a wall

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Air leaking at trigger valve area.	O-Rings in trigger valve housing are damaged	Replace O-rings and check operation of Work Contact Element (WCE)
Air leaking between housing and nose.	1. Damaged O-rings 2. Damage to bumper	1. Replace O-rings 2. Replace bumper
Air leaking between housing and cap.	1. Loose screws 2. Damaged gasket	1. Tighten Screws 2. Replace gasket
Nailer runs slow or has loss of power.	1. Nailer not lubricated sufficiently 2. Broken spring cylinder cap 3. Exhaust port in cap is blocked	1. Lubricate nailer 2. Replace spring 3. Replace damaged internal parts



Nailer skips driving nail.	1. **Worn bumper** 2. **Dirt in nose piece** 3. **Dirt or damage prevents staples or pusher from moving freely in magazine.** 4. **Damaged pusher spring.** 5. **Inadequate air flow to stapler** 6. **Worn O-ring on piston or lack of lubrication.** 7. **Damaged O-ring on trigger valve.** 8. **Air leaks** 9. **Cap gasket leaking**	1. **Replace bumper** 2. **Clean drive channel** 3. **Clean magazine** 4. **Replace spring** 5. **Check fitting, hose, or compressor** 6. **Replace and lubricate O-rings** 7. **Replace O-rings** 8. **Tighten screws and fittings.** 9. **Replace gasket**

Nails are jammed in nailer.	**1. Guide on driver is worn** **2. Nails are not correct size** **3. Nails are bent** **4. Magazine or nose screws are loose** **5. Driver is damaged**	**1. Replace guide** **2. Use only recommended nails** **3. Replace with undamaged nails** **4. Tighten Screws** **5. Replace driver**