



OWNER'S MANUAL

MODEL 402 PORTA-NAILER

For Tongue and Groove Solid Wood & Hardwood
Laminate Flooring



CAUTION - Read important safety instructions AND operation instructions for proper operation of your Nailer. Your new **PORTA-NAILER** is a quality-built machine, capable of dependable performance throughout its lifetime. To take full advantage of these capabilities you should thoroughly understand the proper method and technique of its operation. Therefore, we suggest you read this manual before operating and that you save it for future reference.

MODEL 402 PORTA-NAILER



CAT. NO. 402 **SPECIFICATIONS**

Model 402 Porta-Nailer
with Angled Shoe
To be used for installing
5/8", 3/4" – 33/32" Tongue
and Groove Flooring



CAT. NO. 404 **SPECIFICATIONS**

Model 402 Porta-Nailer
with Face Shoe
To be used for face nailing the
first two (2) rows and the last
six (6) rows of Tongue and
Groove Flooring

PNI's LIMITED ONE YEAR WARRANTY

PNI is proud of the products that it manufactures and warrants them to be free from defects in materials and workmanship for 1 year. In the unlikely event that a problem occurs, return the product to our plant freight prepaid and allowed, so that a determination of the fault can be made. If the fault is determined to be defective materials or workmanship, a no-charge replacement or repair will be made, at our discretion. The product will be returned to you freight prepaid and allowed. This warranty does not cover accidents, abuse or misuse and in no case will PNI be liable for incidental or consequential damages. No other warranty written or verbal is authorized. Returns for warranty service should be sent to:

Porta-Nails, Inc.
4235 US Hwy. 421 N.
Currie, NC 28435

SAFETY RULES FOR PORTA-NAILER

1. **WEAR SAFETY CLASSES** and safety shoes for protection against foreign objects.
2. **NEVER** use a Hammer with a loose head or splintered handle.
3. **USE ONLY** nails from Porta-Nails, Inc.
4. **REPLACE** worn or damaged parts immediately.

APPLICATIONS

- Your Model 402 Porta-Nailer is designed for Angle Nailing 5/8", 3/4"-33/32" Hardwood Tongue and Groove Flooring.
- An Accessory Shoe is available for Face Nailing. (See **Shoe Accessory Applications** section)
- An Accessory Shoe is available for Angle Nailing 3/8" to 9/16" Flooring with the standard 2" Porta-Nail. (See **Shoe Accessory Applications** section)
- An Accessory Angled Base is available for use with the 402 Nailer to nail 3/4" Hardwood Tongue and Groove Flooring over 3/4" Plywood over concrete. (See **Shoe Accessory Applications** section)

PORTA-NAILER ACCESSORY SHOE & SHOE BASE APPLICATIONS

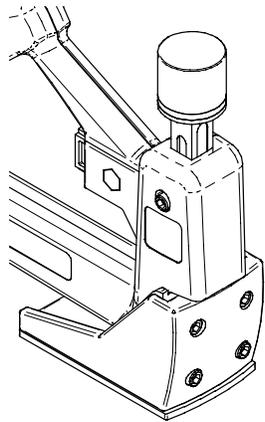


FIGURE 1
Face Nailing Shoe
Accessory Shoe Cat. No.
40225

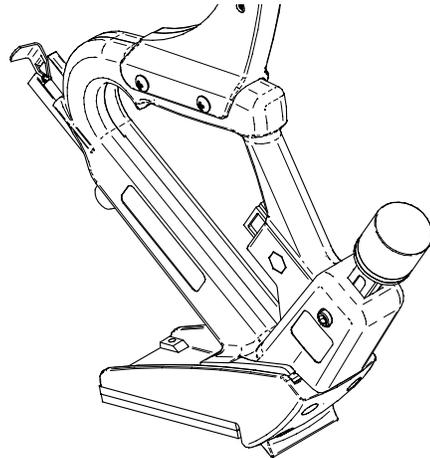


FIGURE 2
Tongue Nailing 5/8", 3/4"
Flooring Shoe
Standard Shoe

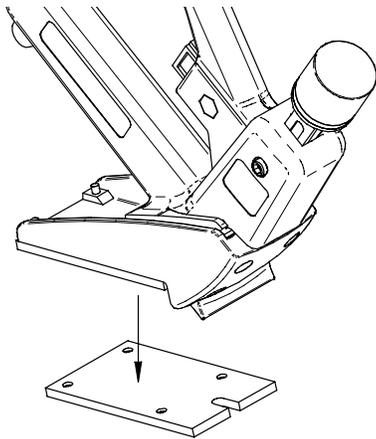


FIGURE 3
Tongue Nailing
33/32" Flooring
Standard Shoe with only
One (1) Shoe base installed.

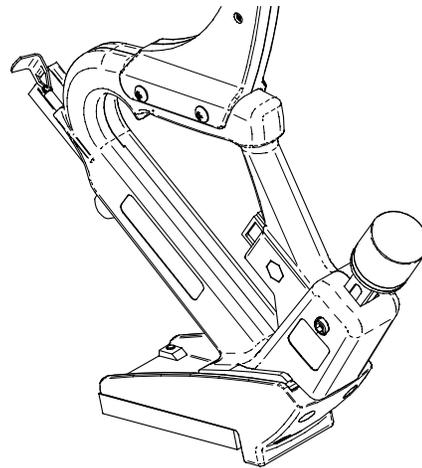


FIGURE 4
Tongue Nailing
3/8"-9/16" Flooring
Accessory Shoe Cat. No.
40230

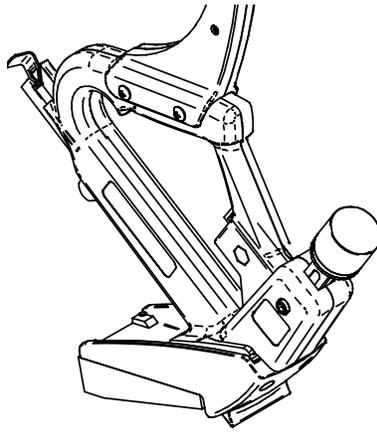


FIGURE 5

Angled Shoe Base

Angled Shoe Base for Nailing 3/4" Flooring
over 3/4" Plywood over Concrete
Accessory Shoe Cat. No. 42626

ASSEMBLING THE EXTENSION HANDLE

Fasten the Extension Handle to the Nailer using the two (2) Screws and Nuts (Ref. No. 38) furnished with the unit.

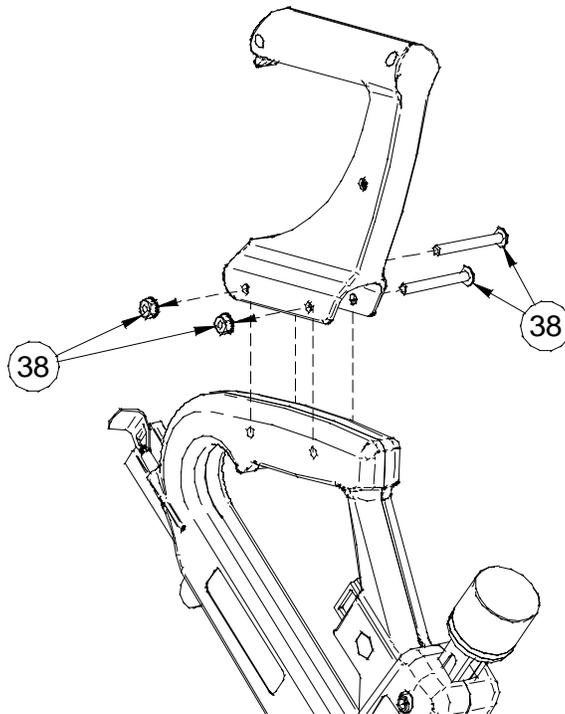
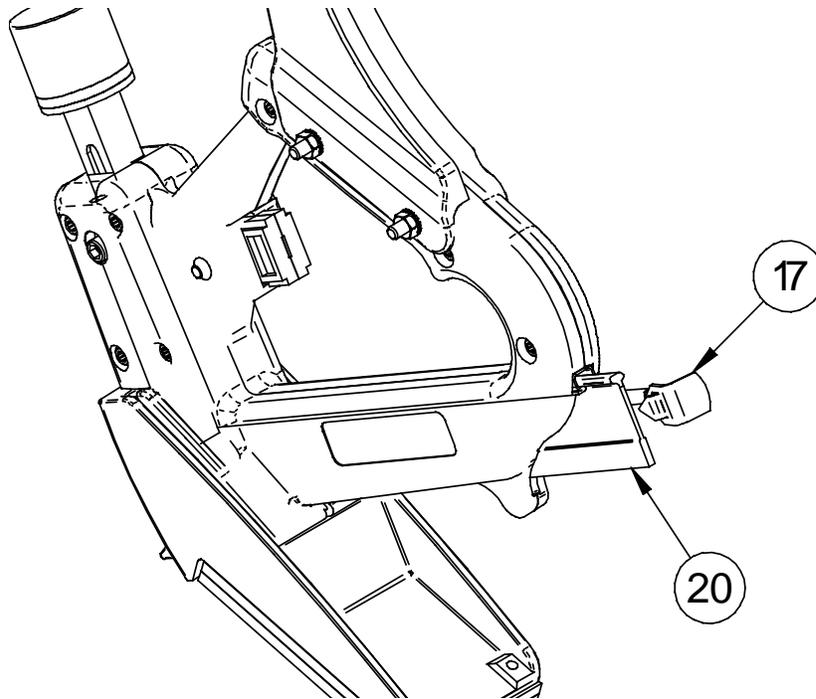


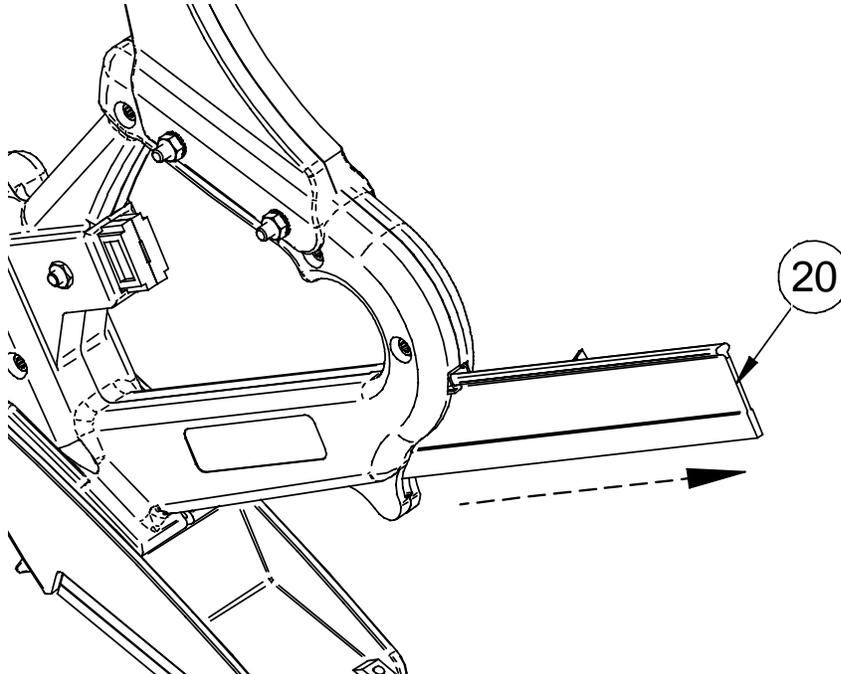
FIGURE 6

Installing the Extension Handle

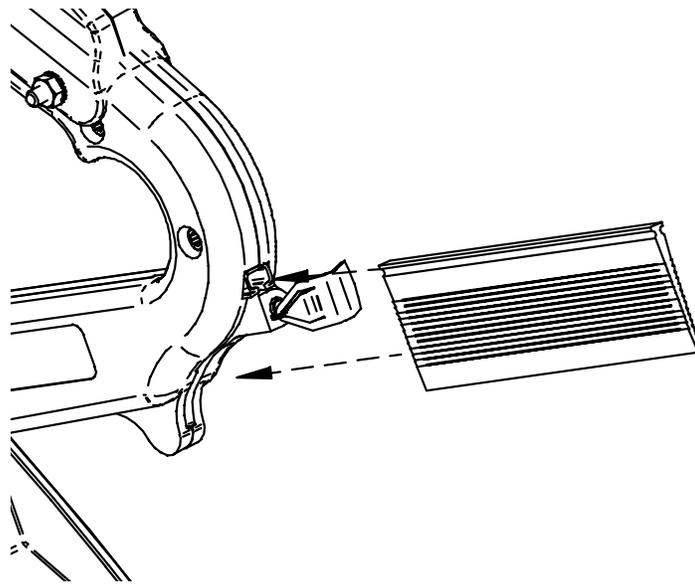
LOADING NAILS



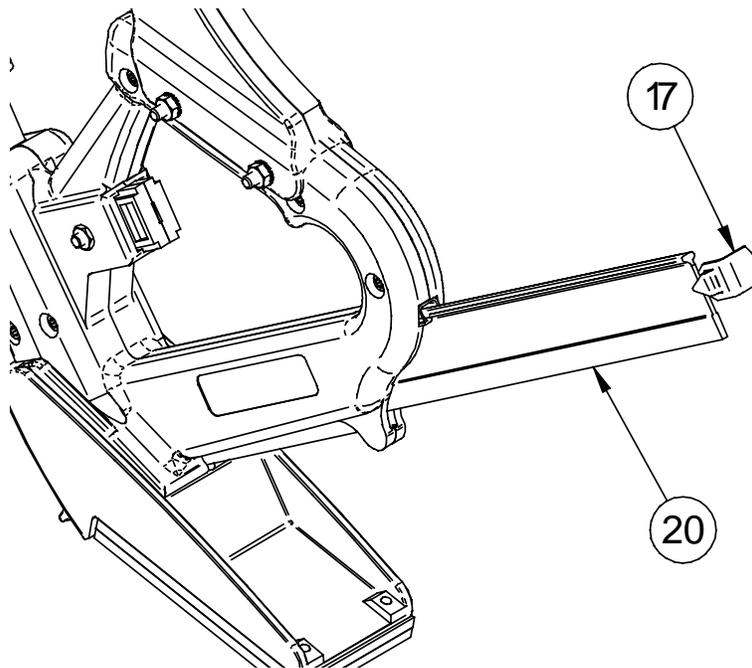
1. Unhook the Connector (Ref. No. 17) from the Pusher (Ref. No. 20).



2. Remove the Pusher (Ref. No. 20) from the Nail Rail.



3. Insert a stack of Nails into the Nail Rail with the Heads “up”.



4. Place the Pusher (Ref. No. 20) in the Nail Rail and hook the Connector (Ref. No. 17) to the Pusher (Ref. No. 20).

WARNING: For proper operation never use Nailer with less than a 2 inch stack of nails remaining in the Nail Rail.

SHOE CHANGING

CONVERSION TO AND FROM FACE NAILING

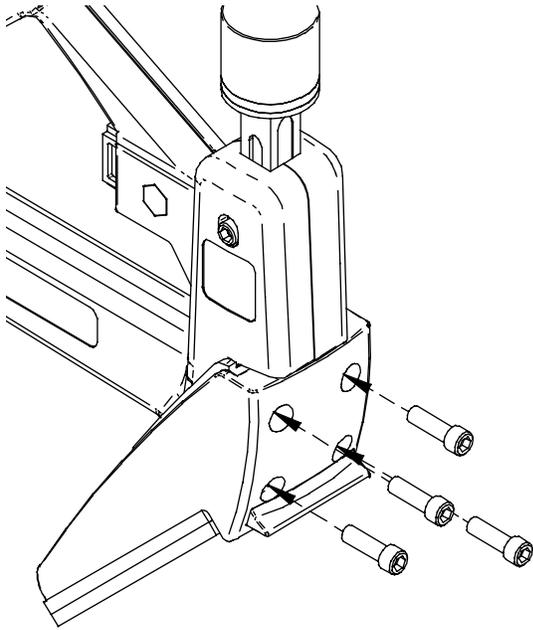


FIGURE 7

Angled Tongue and
Groove Flooring Shoe

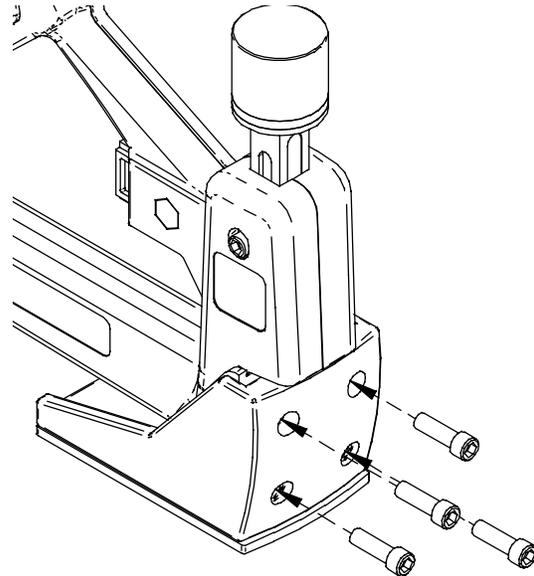


FIGURE 8

Face Nailing Shoe
Cat. No. 40225

Loosen and remove Socket Head Cap Screws (Ref. No. 10) to remove Shoe & Shoe Base Assembly. Change over from the Angled Tongue Nailing to Face Nailing Applications or change from Face Nailing to Angled Tongue Nailing Applications by removing Socket Head Cap Screws (Ref. No. 10) and re-tightening after changeover.

NAILING TONGUE AND GROOVE FLOORING

Your Model 402 Nailer is furnished with two (2) Shoe Bases (Ref. No. 5). When nailing 3/4" thick flooring, both of these bases are used. When nailing 33/32" thick flooring, only use one (1) Shoe Base (Ref. No. 5).

1. After squaring the Floor and allowing for expansion as recommended by the Wood Flooring Industry (NWFA, NOFMA and MFMA), place the grooved edge of the first row of Flooring towards the wall on the side of the room from which you are starting. Nail in place using the Model 402 Nailer with the Face Shoe installed. (See Shoe Changing Section Pg. 8).
2. After nailing the First (1st) row of Flooring, (See Figure 8) place the groove of the Second (2nd) row of Flooring over the Tongue of the First (1st) row of Flooring and drive snug using the rubber knob end of the Porta-Nailer Hammer and nail in place just as the First (1st) Row of Flooring.
3. Change over to use the Angle Shoe (See Shoe Changing Section Pg. 8), and place the groove of the Third (3rd) row of Flooring over the tongue of the Second (2nd) row of Flooring and drive snug using the rubber knob end of the Porta-Nailer Hammer.
4. Position the Model 402 Nailer with the Tongue Nailing Shoe Installed on the tongue of the Third (3rd) Row of Flooring in the manner shown in Figure 8. **(THE FIELD SHOULD BE NAILED ONLY THRU THE TONGUE. SEE ILLUSTRATION ON PAGE 22).**
5. Strike the Ram Head (Ref. No. 21) with the metal end of the Hammer Head to drive the Nail.
6. Continue to strike the Ram Head (Ref. No. 21) until the Ram returns to its original position. (It usually takes two blows to drive a nail.)
7. If, after striking the Ram Head (Ref. No. 21), the Ram does not return to its original position, it is a warning that the Nail has not been completely driven.
8. When the Nail has been completely driven, the Ram will return to its original position.
9. Be careful not to drive one Nail on top of another. Damage to the Nailer might result if this should occur.

10. Slide the Nailer along the tongue of the board to the location at which you desire to drive the next nail. (8-10 inches is the general rule of thumb.) Try to get a nail in each Joist.
11. Continue Steps 5-10 until you have completely nailed the board.
12. Repeat Steps 4-11 until all but the last Six (6) Rows of boards have been nailed in place.
13. Change over to use the Face Nailing Shoe (See Shoe Changing Section Pg. 8), and install the last Six (6) Rows of Flooring as shown in Figure 8.

DISASSEMBLY OF UNIT

Check the Nailer for faulty operation. It can probably be noted at this time if there are any broken springs or assemblies which do not work properly or if the machine is jammed.

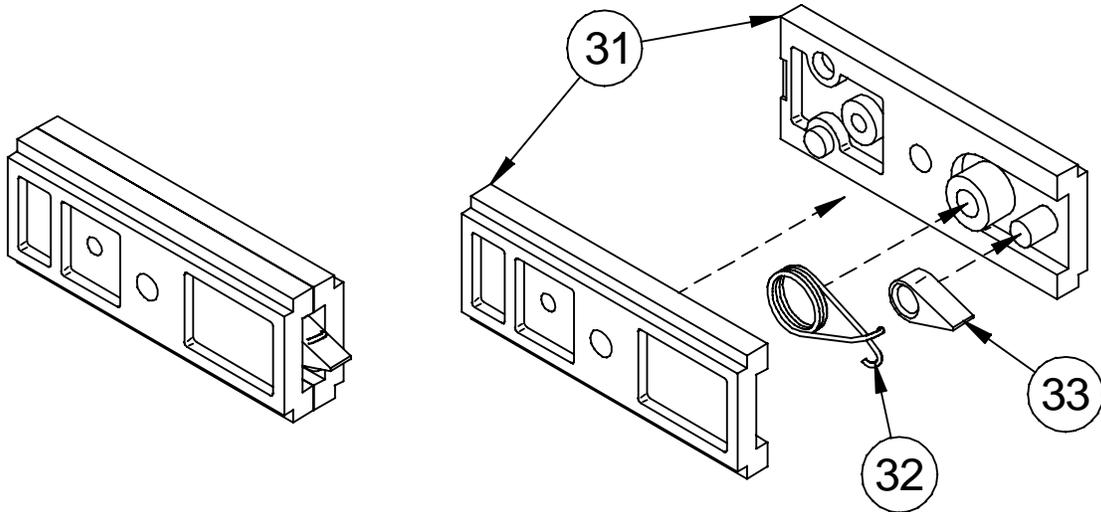
1. Unhook the Connector (Ref. No. 17) and remove the Pusher (Ref. No. 20) from the Nail Rail.
2. Back out, but do not remove, the two (2) Ram Stop Screws (Ref. No. 28) and pull out the Ram (Ref. No. 22), Ram Spring (Ref. No. 26), and Ram Spring Guide (Ref. No. 25). Remove the Driver Blade (Ref. No. 23) from the Ram.
3. Remove the four (4) Shoe Screws (Ref. No. 10), securing Shoe (Ref. No. 4) and remove the Shoe from the Nailer. Check the Wear Plate (Ref. No. 12) and Shear Plate (Ref. No. 13) for wear.
4. Both the Wear Plate (Ref. No. 12) and the Shear Plate (Ref. No. 13) can be lifted off. If the Shear Plate (Ref. No. 13) is tight, pry it off, but use CAUTION not to damage any of the parts.
5. Turn the Nailer over and remove the Shoulder Screw Nut (Ref. No. 30) from the Shoulder Screw (Ref. No. 29).
6. Remove the Shoulder Screw (Ref. No. 29) and pull the Pawl Housing Assembly (Ref. No. 47) from the Pawl Housing Cavity area.
7. Remove the three (3) Body Handle Screws (Ref. No. 37) in the Handle area and the four (4) Nailer Body Screws (Ref. No. 36) in the Ram Housing area.
8. Separate the two (2) main Nailer Body Castings (Ref. Nos. 1 & 2) and lift out the Ram Guide (Ref. No. 27). Check the Ram Stop Blocks (Ref. No. 35) and the Ram Stop Springs (Ref. No. 34) positioned by the Ram Stop Screws (Ref. No. 28) for wear.
9. Remove the Nail Rail (Ref. No. 19) from the Casting.

ASSEMBLY OF UNIT

1. Clean and inspect all parts and check springs for breakage or weak sections. Check the Nailer Body Castings (Ref. Nos. 1 & 2) for cracks or worn spots.
2. Insert the Nail Rail (Ref. No. 19) into the Nailer Body Casting (Ref. No. 1) being sure that the Rail Spring Pin (Ref. No. 18) and the hole in the Nail Rail line up properly.
3. Insert the Ram Guide (Ref. No. 27) into the Nailer Body Casting (Ref. No. 1). **NOTE:** Be sure the Ram Stop Blocks (Ref. No. 35) are well seated in the Nailer Body Casting recess under the Ram Guide and that the holes in the Ram Guide will line up with the two (2) Ram Stop Block Screws (Ref. No. 28).
4. Position the Nailer Body Castings (Ref. Nos. 1 & 2) together; check to be sure they are lined up properly.
5. Replace the three (3) Body Handle Screws (Ref. No. 37) in the Handle area and the four (4) Nailer Body Screws (Ref. No. 36) in the Ram Housing area.
6. Insert the Pawl Housing Assembly (Ref. No. 47) into the Pawl Housing Cavity area.
7. Insert the Shoulder Screw (Ref. No. 29) thru the Nailer Body Castings and fasten with the Shoulder Screw Nut (Ref. No.30).
8. Position the Shear Plate (Ref. No. 13) and tap it lightly to seat it on the Wear Plate / Shear Plate Dowel Pins (Ref. No. 11) and against the Nailer Body Castings. Position the Wear Plate (Ref. No. 12) on the same Pins and tap into place against the Shear Plate. (Ref. No. 13).
9. Secure the Shoe Assembly (Ref. No. 4) with the four (4) Shoe Screws (Ref. No. 10).
10. Insert the Ram Spring Guide (Ref. No. 25) with the flat end down and the round notch towards the front. Slide the Ram Spring (Ref. No. 26) down over the Ram Spring Guide.
11. Lubricate the Ram (Ref. No. 22) lightly with silicone spray or a similar non-fluid lubricant. Position the Driver Blade (Ref. No. 23) into the recess in the Ram (Ref. No. 22). Slip the entire assembly into the Ram Guide (Ref. No. 27).
12. Push the Ram down so the Driver Blade (Ref. No. 23) will slide down between the Wear Plate (Ref. No. 12) and Shear Plate (Ref. No. 13). Hold the Ram (Ref. No. 22) down and tighten the two (2) Ram Stop Screws (Ref. No. 28).

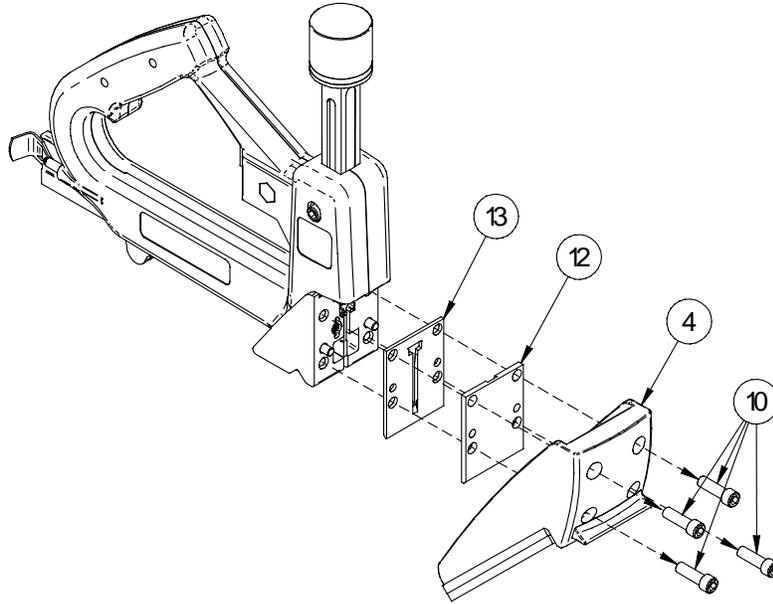
13. Slide the Pusher (Ref. No. 20) into the Nail Rail (Ref. No. 19) and secure it with the Connector (Ref. No. 17).
14. Check the Nailer for overall operation.

REPLACING THE PAWL & PAWL SPRING

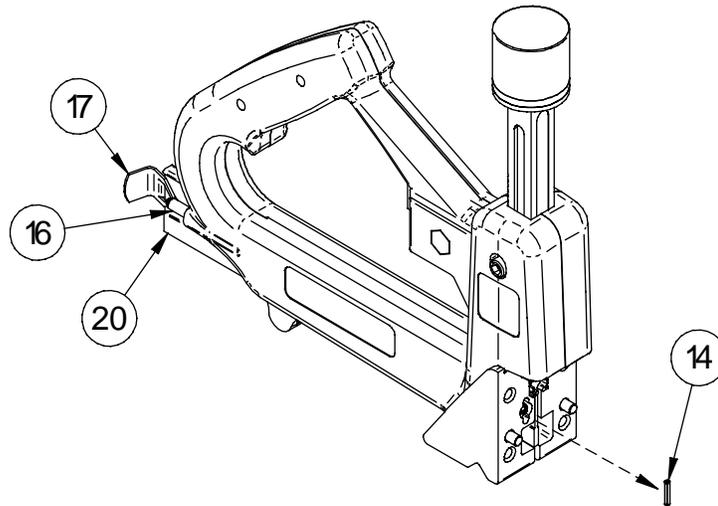


1. Separate the Pawl Housings (Ref. No. 31). Remove the Pawl Spring (Ref. No. 32) and replace if needed. Remove the Pawl (Ref. No. 33) and replace if needed. Insert the Pawl and Pawl Spring into one side of the Pawl Housing (male side with posts). Position the other Pawl Housing on top of the assembly and press together.
2. After pressing together, check to make sure the Pawl moves freely and always returns to the center position.

REPLACING THE PUSHER SPRING

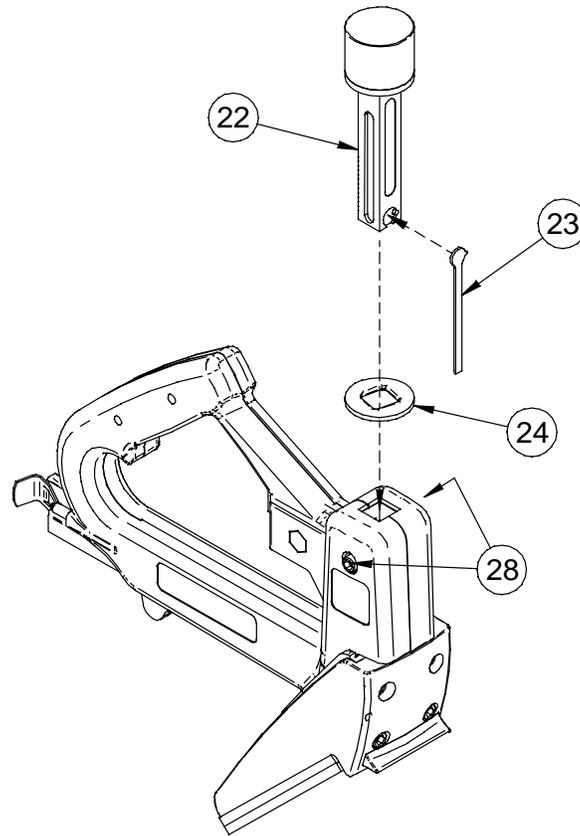


1. Remove the four (4) Shoe Screws (Ref. No. 10), securing Shoe (Ref. No. 4) and remove the Shoe from the Nailer. Remove the Wear Plate (Ref. No. 12) and the Shear Plate (Ref. No. 13).



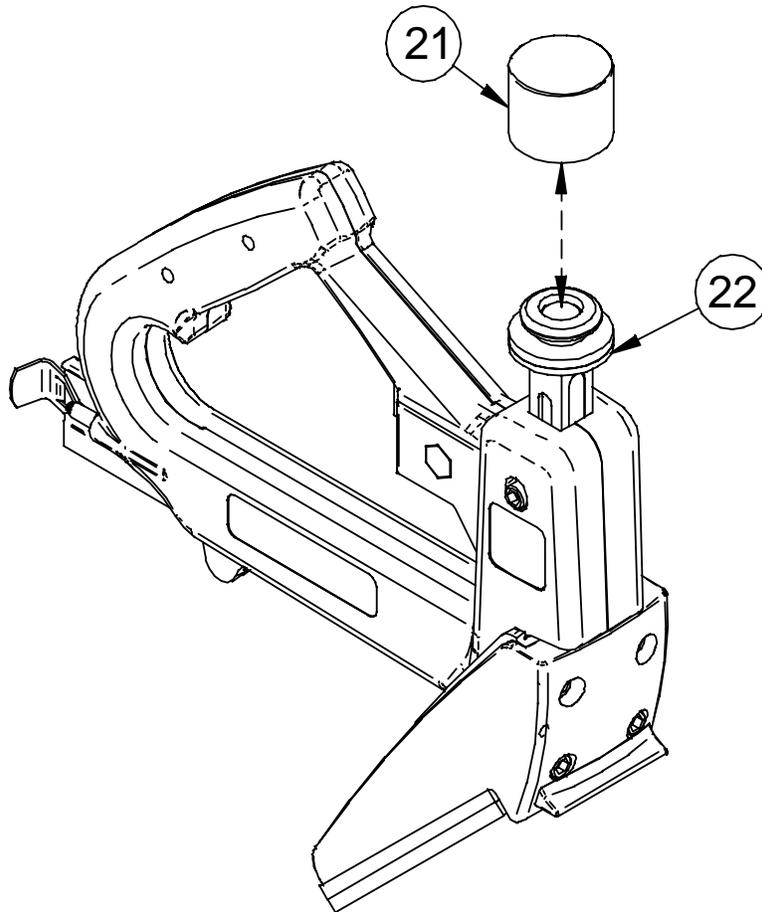
2. Unhook the Connector (Ref. No. 17) from the Pusher (Ref. No. 20) and remove the Pusher. Disconnect the Connector (Ref. No. 17) from the Pusher Spring (Ref. No. 16). Pull the Pusher Spring out thru the front end of the Pusher Spring Tube (Ref. No. 15).

REPLACING THE RAM WASHER



1. Loosen, but **DO NOT REMOVE**, the two (2) Ram Stop Screws (Ref. No. 28) while holding the Ram (Ref. No. 22) down.
2. After the Ram Stop Screws are loose enough to allow the Ram to be removed, gently pull out the Ram and Driver Blade (Ref. No. 23).
3. Remove the Driver Blade and slide the worn Ram Washer (Ref. No. 24) over the Ram to remove it.
4. Slide the replacement Ram Washer over the Ram until it is positioned under the Ram Cap.
5. Reposition the Driver Blade (Ref. No. 23) into the recess in the Ram (Ref. No. 22). Slip the entire assembly into the Ram Guide
6. Push the Ram down so the Driver Blade (Ref. No. 23) will slide down between the Wear Plate and Shear Plate. Hold the Ram (Ref. No. 22) down and tighten the two (2) Ram Stop Screws (Ref. No. 28).

REPLACING THE RAM CAP

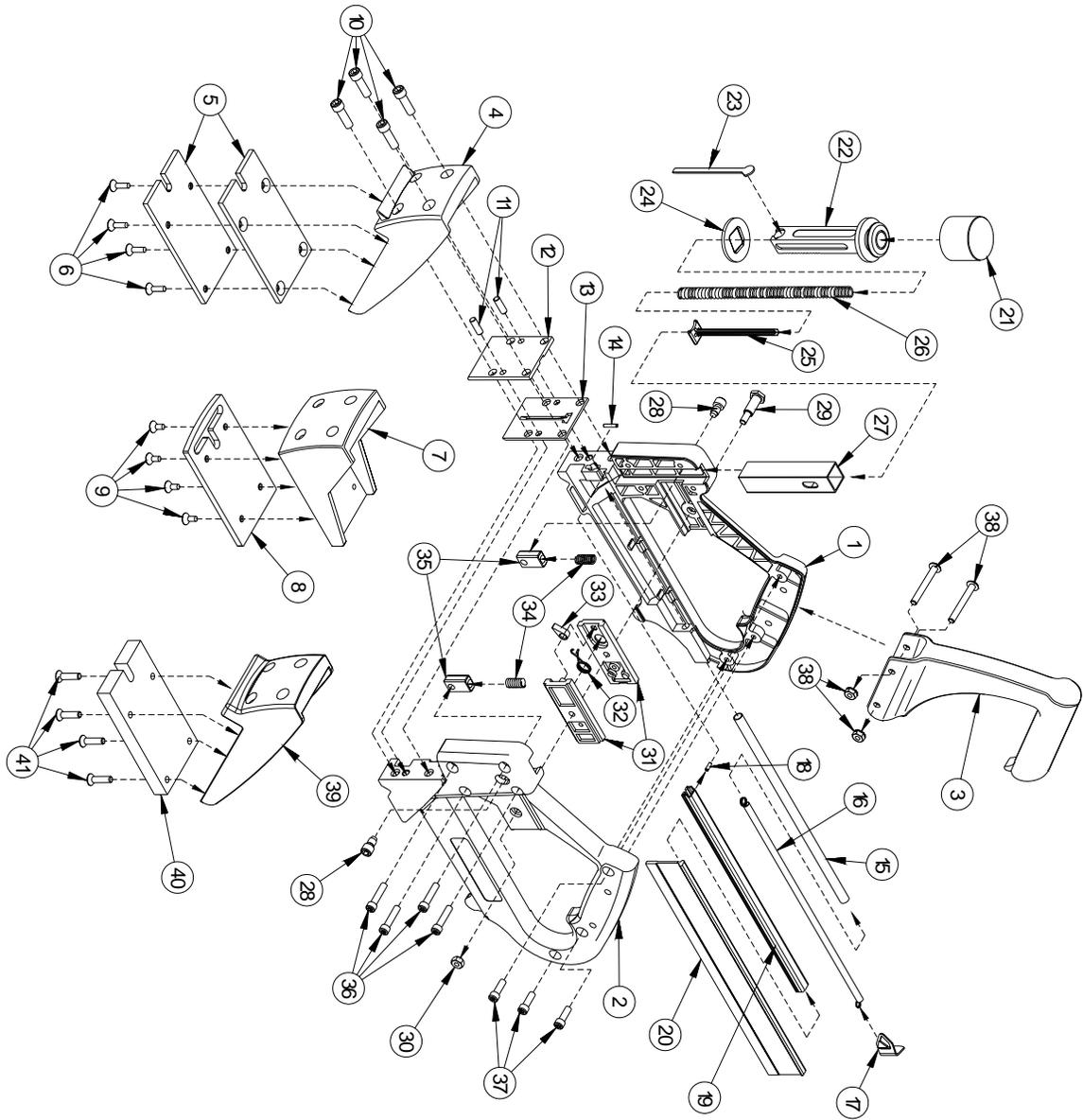


1. To replace the Ram Cap (Ref. No. 21) remove worn Ram Cap (Ref. No. 21) from the Ram (Ref. No. 22).
2. Use soap and water to aid in applying the Ram Cap (Ref. No. 21) to the head of the Ram (Ref. No. 22).

**GUARANTEE ON RAM IS VOID WHEN USED
WITHOUT THE RAM RUBBER CAP IN PLACE.**

TROUBLESHOOTING

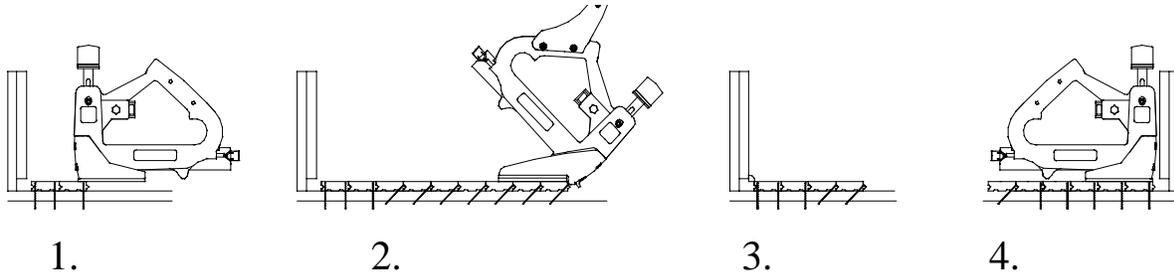
PROBLEM OR QUESTION	CAUSE	CORRECTIVE ACTION
Ram comes up before completing cycle	Ram(Ref. No. 22) or Pawl (Ref. No. 33) worn; Pawl Spring (Ref. No. 32) Broken	Remove the Shoulder Screw Nut (Ref. No.30) and the Shoulder Screw (Ref. No.29). Pull out Pawl Housing Assembly (Ref. No. 47) and inspect the Pawl (Ref. No. 33) and the Pawl Spring (Ref. No. 32) for wear or breakage and replace if necessary. Reinstall and firmly tighten Shoulder Screw Nut (Ref. No. 30).
Ram does not come up after completing downward cycle.	Ram Spring (Ref. No. 26) or Pawl Spring (Ref. No. 33) broken	Loosen, but DO NOT REMOVE , the two (2) Ram Stop Screws (Ref. No. 28). Remove the Ram (Ref. No. 22) and Driver Blade (Ref. No. 23). Replace the Ram Spring. If the Ram Spring is not broken, reverse correction given above. Refer to the above Corrective Action for replacing the Pawl Spring.
Ram will not go all the way down or up.	Nails Jammed in Shear Plate (Ref. No. 13).	Remove the Ram (Ref. No. 22) and Driver Blade (Ref. No. 23) as outlined above. Remove the four (4) Shoe Screws (Ref. No. 10) and Shoe (Ref. No. 4). Lift off the Wear (Ref. No. 12) Plate and remove the jammed nails.
Ram will make a complete cycle but works hard	Lack of lubrication and dirt / contaminate accumulation	Remove the Ram (Ref. No. 22) and Driver Blade (Ref. No. 23) as outlined above. Clean the Ram and Driver Blade and lubricate the Ram lightly with a dry silicone lubricant.



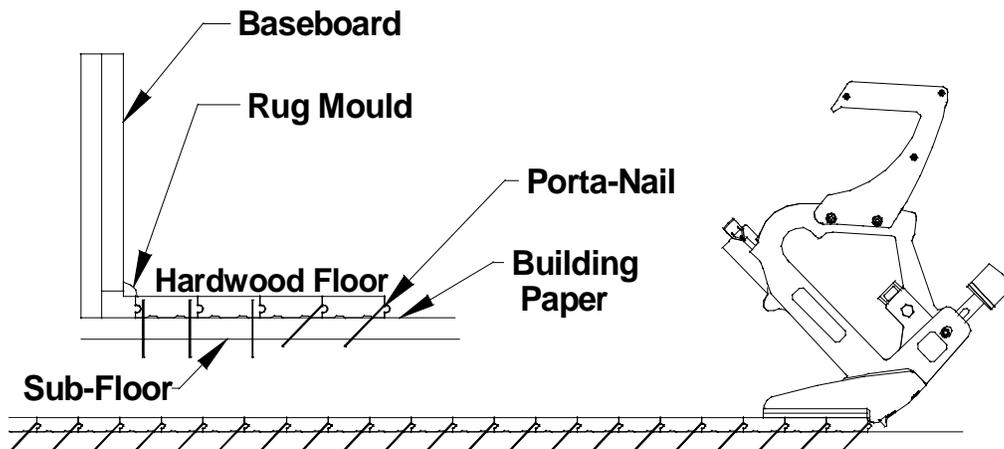
Ref. No.	Part No.	<u>Description</u>
1.	40272	Body – R.H.
2.	40273	Body – L.H.
3.	40061	Extension Handle (Includes #38)
4.	40220	Tongue Nailing Shoe
5.	40153	Tongue Nailing Shoe Base – (2 ea)
6.	2598	Tongue Nailing Shoe Base Screws (4 ea)
7.	40223	Face Shoe
8.	40224	Face Shoe Base
9.	40226	Face Shoe Base Screws (4 ea)
10.	40043	Shoe Screws (4 ea.)
11.	40040	Wear Plate / Shear Plate Dowels (2 ea)
12.	54580	Wear Plate
13.	40170	Shear Plate
14.	53849	Pusher Spring Roll Pin 1/8 x 5/8
15.	-----	Pusher Spring Tube (See Ref. No. 48)
16.	40146	Pusher Spring
17.	40093	Connector
18.	40109	Rail Spring Pin 1/8 x 3/8
19.	40151	Rail
20.	40094	Pusher
21.	40030	Rubber Ram Cap
22.	40116	Ram (Includes #'s 21,24,26)
23.	40131	Driver Blade
24.	40052	Ram Washer
25.	40124	Ram Spring Guide
26.	40126	Ram Spring
27.	40245	Ram Guide

28. 40050 Ram Stop Screws (2 ea)
29. 40241 Shoulder Screw (Includes #30)
30. 301012 Shoulder Screw Nut
31. 2190 Pawl Housing Set
32. 40101 Pawl Spring
33. 40037 Pawl
34. 40115 Ram Stop Springs (2 ea)
35. 40048 Ram Stop Block
36. 40243 Nailer Body Screws (4 ea.)
37. 40244 Body Handle Screws (3 ea.)
38. 1165 Extension Handle Fasteners
39. 40229 Thin Flooring Shoe
40. 40152 Thin Flooring Shoe Base
41. 2600 Thin Flooring Shoe Base Screws (4 ea.)
42. 40221 Tongue Nailing Shoe Assembly
(Includes #'s 4, 5, 6) Not to be used
with Cat. No. 401
43. 40225 Face Shoe Assembly (Includes #'s 7, 8, 9)
Not to be used with Cat. No. 501
44. 40230 Thin Flooring Shoe Assembly (Includes #'s 39,
40, 41) – Not to be used with Cat. No. 401
45. 40008 Hammer (Not Shown)
46. 840080 Spare Parts Package (Not Shown
Includes #'s 24, 26)
47. 2191 Pawl Housing Assembly (Includes #'s 31, 32, 33)
48. 40097 Pusher Spring Tube Assembly
(Includes #'s 15, 16, 17)
49. 59561 Starter Parts Kit (Includes #'s 12, 13, 20, 21, 23,
24, 25, 26, 32, 33)

HARDWARE FLOOR INSTALLATION MADE SIMPLE WITH THE **PORTA-NAILER**



1. Face Nail the first two courses with the Face Nailing Shoe, tongue toward the opposite wall.
2. Nail down the field with the Angle Nailing Shoe. Always nail in the Tongue, not the Groove.
3. Smooth and accurate secret finish.
4. At the opposite wall, Face Nail the remaining six strips.



BRIEF INSTRUCTIONS FOR USE OF THE PORTA-NAILER SYSTEM

Always wear safety glasses AND safety shoes.

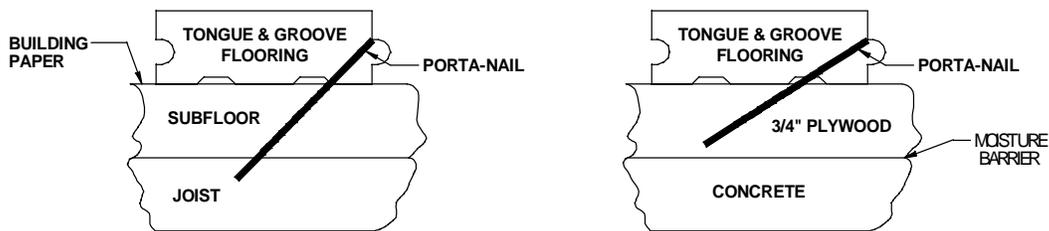
OPERATION FOR USE OF THE PORTA-NAILER SYSTEM

1. This tool is designed to properly seat the nail with one or **SEVERAL** blows of the Hammer.
2. Tap the flooring into place with the non-marring rubber side of the Hammer.
3. Strike the Rubber Cap of the Nailer with the iron side of the Hammer.
4. The first two strips of flooring and the last six **MUST** be nailed with the Face Nailing Shoe installed on the Porta-Nailer.

5. The Porta-Nailer **MUST** be held firmly, but not over-tightly in the hand so that the Porta-Nailer rests perfectly flat on the floor with the lip of the shoe hanging over and against the edge of the strip being nailed. As an aid to holding it flat against the floor, rest the toe of your shoe on the rear of the Porta-Nailer Shoe.
6. **DO NOT OVERPOWER THE PORTA-NAILER** – Strike it firmly but **NOT HARD**, and then strike it again until the Ram returns. The Ram does not return until the nail is properly seated.
7. Do not attempt to nail the last six strips of flooring down with the Angled Shoe installed. Switch and install the Face Nailing Shoe.

The Porta-Nailer system is user-friendly and following these simple instructions, will insure a perfect hardwood flooring installation.

USE OF THE Porta-Nail

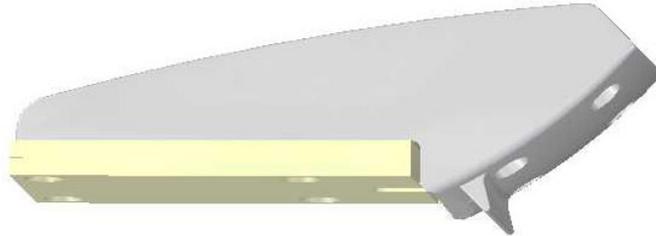


The Porta-Nail is 2” long and the PORTA-NAILER with the standard shoe drives the nail into the tongue and groove flooring at a 45-degree angle. The orientation of the nail is as depicted in wood floor joist construction.

In applications where tongue and groove flooring is laid over concrete, the Accessory Shoe 42626 Shoe Base is used to increase the angle so that the Nail will not protrude through 3/4” plywood underlayment.

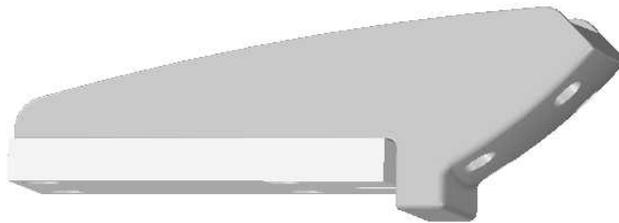
ACCESSORIES (Pg. 23 & 24)

The testing of this tool has been accomplished with the following accessories. For safest operation, it is recommended that only these accessories be used with this product. **WARNING** – Since accessories other than those listed have not been tested with this product, use of such accessories could be hazardous.



Cat. No. 40221

Tongue Nailing Shoe for 5/8" – 33/32" Flooring.



Cat. No. 40230

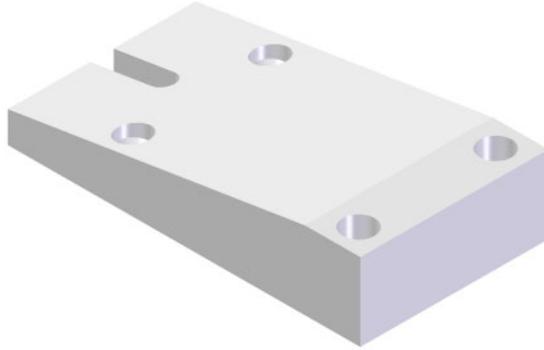
Tongue Nailing Shoe for 3/8" – 9/16" Flooring.



Cat. No. 40225

Face Nailing Shoe

ACCESSORIES cont'd.



Cat. No. 42626

Angled Shoe Base for Nailing 3/4" Flooring
over 3/4" Plywood over Concrete



Cat. No. 42620

Porta-Nail Set Tool



Cat. No. 42623

Porta-Nail - 10 Boxes of 1000 2" Nails

Cat. No. 40253

Molded Carrying Case (not shown)



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