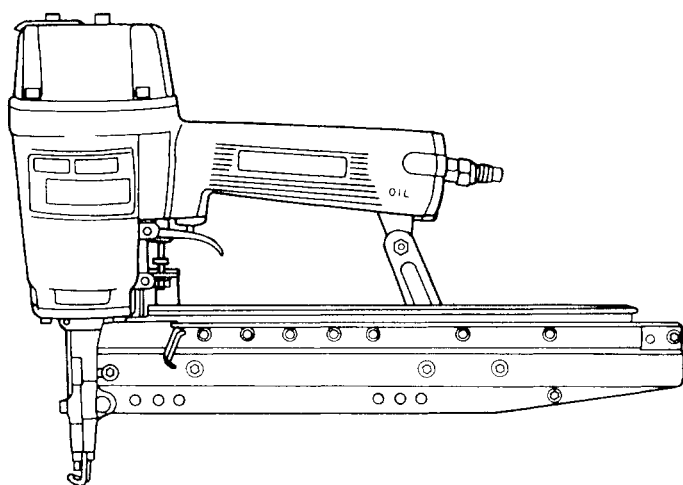


HITACHI

BRAD NAILER

MODEL NT 65A

INSTRUCTION MANUAL



Note

Before using this Pneumatic Power Tool, carefully read through this INSTRUCTION MANUAL to ensure efficient, safe operation. It is recommended that this MANUAL be kept readily available as an important reference when using this pneumatic power tool.

We sincerely thank you for selecting a HITACHI PNEUMATIC POWER TOOL. To operate this pneumatic power tool safely and efficiently, please read this INSTRUCTION MANUAL carefully to get a good understanding of the precautions in operation, the capacity of the pneumatic power tool, uses and the like.

GENERAL OPERATIONAL PRECAUTIONS

1. OPERATE THE POWER TOOL SAFELY FOR CORRECT USES.

Do not use the power tool for uses other than those specified in this INSTRUCTION MANUAL.

2. FOR SAFE OPERATION HANDLE THE POWER TOOL CORRECTLY.

Please follow the instructions given in this instruction manual and correctly handle this tool so as to ensure safe operation. Never let the tool be used by children or people who do not know enough to be able to handle it correctly, or let it be used by people who cannot operate it correctly.

3. ORDER IS THE FIRST STEP TO SAFETY.

The workshop should always be kept in order and be lighted properly. Order is the first step to safety. Always keep the workshop and workbench in order.

4. CONFIRM THE SAFETY OF THE WORKSHOP.

Keep unauthorized people away from the workshop. Especially children should be kept away.

5. THE RIGHT PARTS IN THE RIGHT PLACES.

Do not remove any of the covers or screws. Keep them in place as they have their functions.

Moreover, because it would be dangerous, never make modifications to the tool or use it after making modifications.

6. CHECK THE TOOL BEFORE USING IT.

Before using the tool, always check that no parts of it are broken, that all screws are completely tight, and that no parts are missing or rusty.

7. PROPER CLOTHES SHOULD BE WORN.

Work in proper clothes. Neckties, gloves and open cuffs could be caught by the power tool.

8. PROTECT YOUR EYES WITH SAFETY EYE PROTECTION.

When operating the power tool, always wear safety eye protection.

9. A CORRECT STANCE IS A PREREQUISITE FOR SAFE HANDLING.

It is dangerous to work the machine unless you are firmly in control.

10. EXCESSIVE WORK COULD CAUSE ACCIDENTS.

Do not make tools and accessories work beyond their abilities. Excessive work not only damages the power tool but also is dangerous in itself.

11. STOP OPERATION IMMEDIATELY IF ABNORMALITIES ARE NOTICED.

Stop operation if you notice abnormalities, or if the power tool does not work properly; have the power tool inspected and serviced.

12. NEVER EXPOSE COMPRESSOR, AIR SET AND NAILER TO DIRECT SUNSHINE FOR EXTENDED PERIODS.

13. LOOK AFTER THE POWER TOOL CAREFULLY.

If you drop or knock the power tool against things, the outer frame may be deformed and cracks or other kinds of damage may occur, so please handle it with sufficient care. Also, do not scratch or engrave signs on the power tool. Owing to high pressure air inside the tool, cracks in the surface are dangerous.

Never use the power tool if a crack develops or if air is escaping from a crack.

14. TAKE GOOD CARE FOR A LONG LIFE.

Always take good care of the power tool and keep it clean.

15. INSPECTION AT REGULAR INTERVALS IS ESSENTIAL FOR SAFETY.

Inspect the power tool at regular intervals so that the power tool can be operated safely and efficiently at all times.

16. ASK THE AUTHORIZED SERVICE AGENT FOR REPAIRING AND CHANGING PARTS.

When servicing use only identical replacement parts.

17. KEEP THE POWER TOOL IN A PROPER PLACE.

When not in use, the power tool should be kept in a dry place out of the reach of children. Put into the body about 2cc oil through the hose joint to protect the tool from rust.

PRECAUTIONS ON USING NAILER

General precautions for using the power tool have already been mentioned. For the HITACHI nailer, specific precautions are given below. Expect these precautions to be carefully followed when using this efficient tool for nailing.

1. SAFE OPERATION THROUGH CORRECT USAGE. (SEE PAGE 7)

This tool was designed for driving nails into wood and similar materials. Use it for its intended purpose only.

2. MAKE SURE AIR PRESSURE IS WITHIN THE RATED RANGE OF AIR PRESSURE.

Please make sure that the air pressure is within a range of 5kgf/cm^2 — 8.5kgf/cm^2 (70~120psi.), and that the air which is used is clean and dry. If the air pressure is greater than 8.5kgf/cm^2 (120psi.), the life of the power tool will be shortened and dangerous conditions could develop. Tools shall not be connected to pressure which potentially exceeds 14kgf/cm^2 (200psi.).

3. NEVER OPERATE THE EQUIPMENT WITH HIGH-PRESSURE GASES OTHER THAN COMPRESSED AIR.

Never use carbon dioxide, oxygen or another gas from pressurized con-

tainers under any circumstances.

4. BE CAREFUL OF IGNITION AND EXPLOSIONS.

Since sparks may fly during nailing, it is dangerous to use this tool near lacquer, paint, benzine, thinner, gasoline, gas, adhesives and similar inflammable substances as they may ignite or explode. Under no circumstances should this tool therefore be used in the vicinity of such inflammable material.

5. PROTECT YOUR EYES WITH SAFETY EYE PROTECTION.

When operating the power tool, always wear safety eye protection, and ensure that surrounding people wear safety eye protection too.

The possibility of fragments of the nails that were not properly hit entering the eye is a threat to sight. Safety eye protection can be bought at any hardware store. Always wear eye safety protection while operating this tool. Use either safety glasses or a wide vision safety mask over prescription glasses. Eye protection equipment must conform with the requirements of the latest revision of American National Standards Institute (ANSI) Standard Z87.1, Practice for Occupational and Educational Eye and Face Protection and must afford protection against flying particles both from the front and side. Eye protection which meets these requirements also conforms to OSHA regulations. Employers should always enforce the use of eye protection equipment.

6. PROTECT YOUR EARS AND HEAD.

When engaged in nailing work please wear ear muffers and head protection. Also, depending on conditions, ensure that surrounding people also wear ear muffers and head protection.

7. PAY ATTENTION TO THOSE WORKING CLOSE TO YOU.

It would be very dangerous if nails that were not properly driven in should hit other people. Therefore, always pay attention to the safety of the people around you when using this tool. Always make sure that nobody's body hands or feet are close to the nail outlet.

8. NEVER POINT THE NAIL OUTLET TOWARDS PEOPLE.

Always assume the tool contains fasteners.

If the nail outlet is pointed towards people, serious accidents may be caused if you mistakenly discharge the tool. When connecting and disconnecting the hose, during nail loading or similar operations, be sure the nail outlet is not pointed towards anyone (including yourself). Even when no nails are loaded at all, it is dangerous to discharge the tool while pointing it at someone, so never attempt to do so. No horseplay. Respect the tool as a working implement.

9. MAKE SURE YOU CONNECT AND HANDLE THE HOSE PROPERLY.

Make sure that the hose is securely fastened into the hose air socket with the hose band and that the air plug is securely seated. Old hoses

tend to fly out of the air socket, so please replace the hose before it ages. It is dangerous to move the power tool by pulling on the hose so avoid doing this. Also take care that the hose does not get cut by sharp edges.

10. BEFORE USING THE POWER TOOL, CHECK THE PUSH LEVER.

Before using the power tool make sure to check that the push lever and valve operate properly. Without nails loaded into the power tool, connect the hose and check the following. If the sound of operation occurs this indicates a fault, so in such a case do not use the power tool until it has been inspected and repaired.

- If merely pulling the trigger causes operating sound of drive bit movement to occur, the power tool is faulty.
- If merely pushing the push lever against the material to be nailed causes the sound of drive bit movement to occur the power tool is faulty.

Furthermore, with regard to the push lever, please note that it must never be modified or removed.

11. USE ONLY THE SPECIFIED NAILS. (SEE PAGE 7)

Never use any nails other than the ones specified as this may cause abnormal nailing or malfunctions.

12. BE CAREFUL WHEN CONNECTING THE HOSE

When connecting the hose and loading nails in order not to fire the tool by mistake, make sure of the following:

- Do not touch the trigger.
- Do not allow the firing head (see page 6) to contact with any surface.
- Keep the firing head down.

Strictly observe the above instructions, and always make sure that no part of the body, hands or legs is ever in front of the nail outlet.

13. DO NOT CARELESSLY PLACE YOUR FINGER ON THE TRIGGER.

Do not place your finger on the trigger except when actually nailing. If you carry this tool or hand it to someone while having your finger on the trigger, you may inadvertently discharge a nail and thus cause an accident.

14. PRESS THE NAIL OUTLET FIRMLY AGAINST THE MATERIAL TO BE NAILED.

When driving in nails, press the nail outlet firmly against the material to be nailed. If the outlet is not applied properly, the nails may rebound.

15. KEEP HANDS AND FEET AWAY FROM THE FIRING HEAD WHEN USING.

It is very dangerous for a nail to hit the hands or feet by mistake.

16. BEWARE OF THE TOOL'S KICKBACK.

Do not approach the top of the tool with your head etc. during operation. This is dangerous because the tool may recoil violently if the nail currently being driven in comes into contact with a previous nail or a knot in the wood.

17. TAKE CARE WHEN NAILING THIN BOARDS OR THE CORNERS OF WOOD.

When nailing thin boards, the nails may pass right through, as may also be the case when nailing the corners of wood due to deviation of the nails. In such cases, always make sure that there is no one (and nobody's hands or feet; etc.) behind the thin board or next to the wood you are going to nail.

18. SIMULTANEOUS NAILING ON BOTH SIDES OF THE SAME WALL IS DANGEROUS.

Under no circumstances should nailing be performed on both sides of a wall at the same time. This would be very dangerous since the nails might pass through the wall and thus cause injuries.

19. WHEN USING THIS TOOL IN ELEVATED PLACES

Take the following points into consideration when operating this tool in elevated places:

- Secure the hose at a point close to the area you are going to nail. This will prevent accidents caused due to the hose being pulled inadvertently or getting caught.
- When nailing roofs or similar slanted surfaces, start nailing at the lower part and gradually work your way up. Nailing while moving backwards is dangerous as you may lose your footing.
- On the other hand, nailing vertical surfaces such as walls should be performed from the top to the bottom as this helps you avoid fatigue and enables more efficient work.
- When nailing horizontal surfaces, drive in the nails while moving forward.

This is the safest method and will help you avoid fatigue while enabling more efficient work.

20. BE CAREFUL OF WIRES AND PIPES HIDDEN BEHIND WALLS AND CEILINGS, ETC.

When using this tool on walls, ceilings, floors, or anywhere electrical wires and gas or other pipes may be hidden, check for the possible presence thereof before beginning work. Failing to do so exposes the user to the potentially serious danger of serious electrical shock and/or explosion.

21. DO NOT DISCONNECT THE HOSE WITH YOUR FINGER ON THE TRIGGER.

If you disconnect the hose with your finger on the trigger, the next time the hose is connected, there is a danger that the power tool will fire a nail spontaneously, or operate incorrectly.

22. DISCONNECT THE HOSE AND TAKE OUT ANY NAILS LEFT IN THE MAGAZINE AFTER USE.

Disconnect tool from air before doing tool maintenance, cleaning a jammed fastener, leaving work area, moving tool to another location, or after use. It is very dangerous for a nail to be fired by mistake.

23. WHEN REMOVING A NAIL WHICH HAS BECOME STUCK, MAKE SURE TO FIRST OF ALL DISCONNECT THE HOSE AND RELEASE COMPRESSED AIR.

When removing a nail which has become stuck in the nail outlet, first of all make sure to disconnect the hose and release compressed air inside the power tool.

Accidental firing of the nail could be very dangerous.

24. A FEMALE PLUG (AIR SOCKET) SHOULD NOT BE USED IN THE BODY.

If a female plug is installed in the body, the compressed air sometimes can not be drawn when the hose is disconnected so avoid this.

The tool and air supply hose must have a hose coupling such that all pressure is removed from the tool when the coupling joint is disconnected.

25. CAUTION CONCERNING NAIL ENDS.

When nails with a length greater than 50mm are loaded in the magazine, the sharp nail ends will protrude from the lower side of the magazine. Be very careful not to brush nail ends against yourself or others.

26. WHEN ATTACHING AND DETACHING THE NOSE CAP, DISCONNECT THE HOSE.

When attaching the accessory nose cap to the tip of the push lever and when detaching it, make sure to disconnect the hose beforehand.

It is very dangerous for a nail to be fired by mistake.

NAME OF PARTS

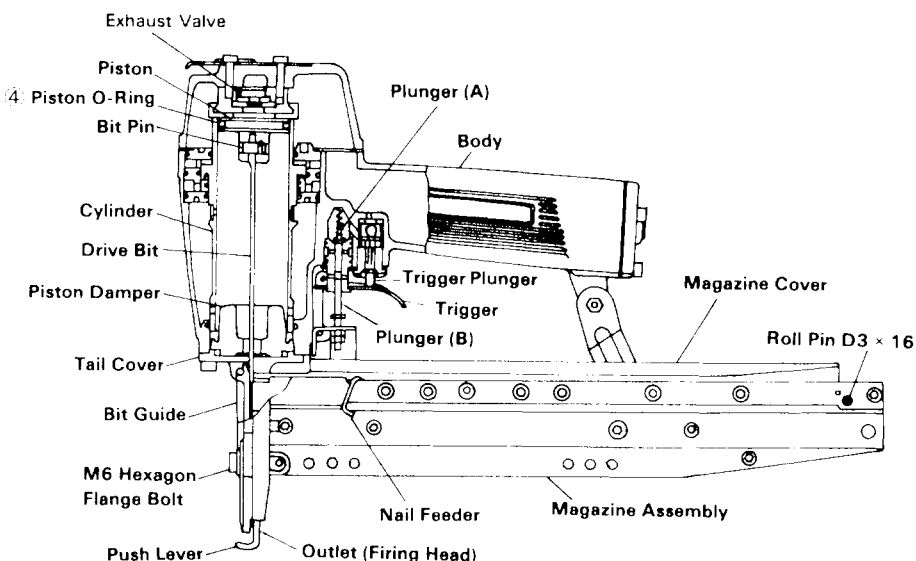


Fig. 1

Note: Numbers in the diagram show spare parts as numbered in **Fig. 3**

SPECIFICATIONS

Type of power	Piston reciprocating
Air pressure (Gauge)	5 ~ 8.5kgf/cm ² (70 ~ 120psi.)
Applicable nails	ref. Fig. 2
Amount of loadable nails	150 nails (3 strips)
Size	380mm (L) × 254mm (H) × 76mm (W) (14 - 31/32" × 10" × 3")
Weight	2.1kg (4.6 lbs)
Hose (inside diam.)	6mm (1/4")

NAIL SELECTION

Choose a suitable nail from Fig. 2. Nails which are not shown in Fig. 2 can not be driven with this tool. You can buy these nails where you bought the nailer.

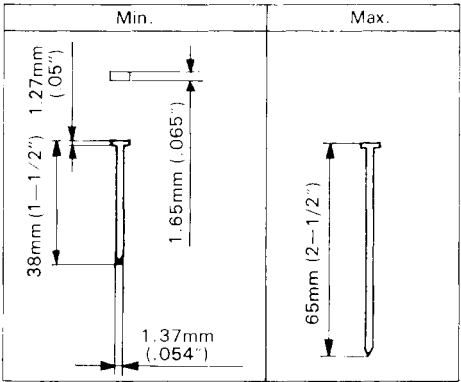


Fig. 2 Dimensions of Nails

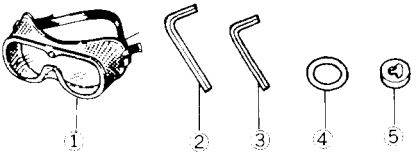


Fig. 3

- ① Safety Glasses 1
- ② Hexagon Bar wrench for M6 screw 1
- ③ Hexagon Bar wrench for M5 screw 1
- ④ Piston O-ring (spare parts) 1
- (Positions of spare parts are illustrated in Fig. 1)
- ⑤ Nose Cap 1

APPLICATIONS

- Nailing as a finishing process for areas around the doors, windows as well as edgings.
- Securing the bottom of drawers. Making various cases and cabinets.

PREPARATION PRIOR TO OPERATION

Prior to operating the device, be sure to check the following items.

1. Prepare the hose

Be sure to use the hose provided with minimum 6 mm (1/4") inside diameter. Securely connect the hose to an air compressor with a hose band.

Notes:

- The air supply hoses must have a minimum working pressure rating of 180psi. or 150 percent of the maximum pressure produced in the air supply system, whichever is higher.
- Before attaching the hose, force air through the hose to clean it out.

2. Discharge drain water from the air compressor

Since moisture or oil deposited in the air compressor may accelerate corrosion, prior to

operating the device, open the drain cock at the bottom of the air tank to discharge moisture and oil. Use the clean and dry compressed air. (For further details, refer to the air compressor instruction manual.)

3. Prepare the nails.

4. Check on safety

Cautions:

- **Unauthorized persons (including children) must be kept away from the equipment.**
- **Wear safety eye protection.**
- **Check the retaining screws which fix the exhaust cover, etc. for tightness. Check the nailer for air leaks and defective or rusty parts.**
- **Check whether or not the push lever works correctly. Also check whether or not any dirt has adhered to the moving parts of the push lever.**
- **Recheck on operational safety.**

BEFORE USE

1. Check the air pressure

Caution:

- **The air pressure must be constantly maintained at 5~8.5kgf/cm²(70~120psi.).**

Adjust the air pressure between 5 to 8.5kgf/cm²(70~120psi.) according to the diameters and length of nails and hardness of the wood being nailed.

Pay special attention to the output pressure, capacity, and piping on the air compressor, so that air pressure does not exceed the specified limit. Note that excessive pressure may affect overall performance, service life, and safety.

2. Never place thinner, gasoline, or other inflammable materials in the work site vicinity.

3. Lubrication

- (1) Prior to operating this nailer, be sure to provide an air set (see Page 15) between the air compressor and this device. Lubrication through the air set offers smooth operation, extended service life, and anticorrosion.

Adjust the oiler so that a single drop of oil is supplied at intervals of 5 to 10 nailing cycles.

- (2) When no oiler is provided, be sure to supply approximately 2cc of oil to the hose nozzle (air plug) at least twice a day—once prior to and once following operation. Prior lubrication will act as lubricant and final lubrication as anticorrosion oil.

Notes:

Since the oil supplied prior to operation will disperse in atomized form through the air exhaust outlet, drive two or three nails in a nearby unimportant spot before using in the intended location.

When lubricating after operation, drive a single nail to uniformly lubricate oil.

- (3) It is recommended using the recommended oil (SHELL TONNA T32). Other applicable oils are listed on page 15. Never mix two or more types of different oils.

4. Connect the hose assembly

As illustrated in Fig. 4 securely connect the hose to this device.

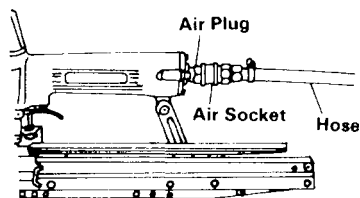


Fig. 4

5. Load nails

- (1) Pull the nail feeder back and hang it over roll pin secured to the magazine. (See Fig. 5)
- (2) Insert nails from above one group at a time using your hand to move them forward in the magazine. (See Fig. 6)
- (3) After inserting the nails, pull the nail feeder up in backward direction, remove it from the roll pin, move it slowly forward and push the nail.

Note:

- After having removed the nail feeder from the roll pin and moving it forcefully forward, the nail coupling may brake and the nail feeder may get caught between the magazine and nails, causing poor nail feeding. Therefore, move the nail feeder slowly forward.

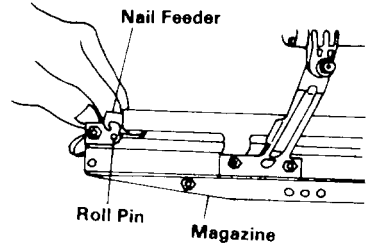


Fig. 5

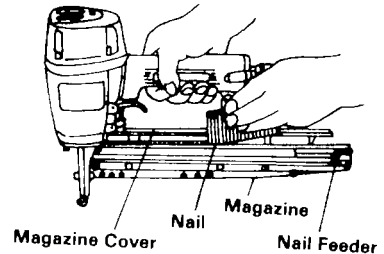


Fig. 6

Cautions:

- To prevent unintentional operation, never touch the trigger or place the top end of the push lever on a work bench or floor. Also, never face the nail outlet toward any part of a person.
- Use nails in which five nails are connected.

HOW TO USE THE NAILER

Cautions:

- When driving nails, always wear safety eye protection. The mis-driven nails sometimes pop out and this can be very dangerous.
- Never use the head or body of this device as a hammer.
- Take precautions to ensure the safety of persons in the vicinity during operation.
- When driving in nails press the nail outlet firmly against the material to be nailed. If the outlet is not applied properly, the nails may rebound.
- Keep hands and feet away from the firing head when using. It is very dangerous for a nail to hit the hands or feet by mistake.
- Never fire one nail directly over another! Not only could the second nail be bent, but it could also fly in an undeterminable direction with great force, as well as cause the nail-feed mechanism to malfunction.

1. Nailing procedures

- (1) Intermittent nailing
Depress the nail outlet onto the desired point; then pull the trigger to drive a nail in a single shot. (See Fig. 7)

Caution:

- This tool will sometimes fire twice in rapid succession when strongly pressed flush against a surface or when using on hard materials. In such cases, fire the nails by squeezing and quickly releasing the trigger.

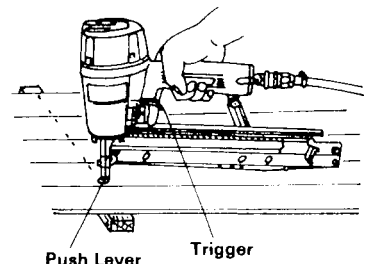


Fig. 7

(2) Push lever

When depressing the nail outlet be sure to fully lift the push lever (see **Figs. 1 and 7**) to release the safety lock. Thus, nails cannot be driven without releasing the safety lock even though the trigger is pulled.

Caution:

- **Never touch or direct the nail outlet toward a person. And then direct the nail outlet downward while supplying compressed air.**

(3) Continuous nailing

First, pull the trigger. Then depress the device onto the desired position to automatically drive nails. (See **Fig. 8**)

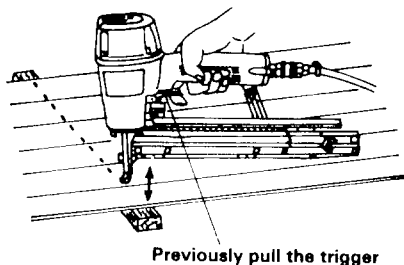


Fig. 8

Cautions:

- **Exercise care when nailing corners of lumber. When continuous nailing corners of lumber, a nail may go astray or break through the corner.**
- **As a good method for continuous nailing, start nailing from close to your body and then gradually proceed in the direction away from you.**

Note:

Precautions on no-load operation

Sometimes nailing will continue after driving in all nails previously contained in the magazine.

This is termed "no-load operation". Such operation may deteriorate the damper, magazine, and nail feeder.

To avoid no-load operation, occasionally confirm the amount of remaining nails. On the other hand, all nails should be removed after using this nailer.

Cautions:

- **After completing operation, always disconnect the hose and remove all nails.**
- **After completing operation, put into the body about 2cc oil through the hose joint to protect the tool from rust.**

Notes:

Under low temperature conditions, the machine sometimes does not operate correctly. Always operate the machine at the appropriate ambient temperature.

Upon completion of nailing, discharge air from the air compressor to reduce the air pressure to zero. When the drain cock is opened, drain water is discharged from the tank and simultaneously the air pressure can be reduced to zero.

2. Adjusting nail penetration

Cautions:

- **Disconnect the air hose and discharge any air from the nailer before beginning with any adjustments.**
- **Keep your fingers away from the trigger while adjusting.**
- **After you've finished making your adjustments, tighten the holding bolt firmly; if the bolt is loose it will cause the nails to jam resulting in serious damage to the drive bit and bit guide.**
- **Set the air pressure only as high as is necessary to obtain sufficient nail penetration. Setting the air pressure excessively high contributes to the premature wear of and/or damage to the piston damper and other parts.**

It is possible with this equipment to adjust the nail driving depth by changing the attachment position of the bit guide on the nail emission port to adjust the level of tension on the drive bit. If the nail driving depth is too deep or insufficiently deep even when the attachment height of the bit guide has been adjusted, adjust the air pressure for use. Adjust as follows. (See Fig. 9)

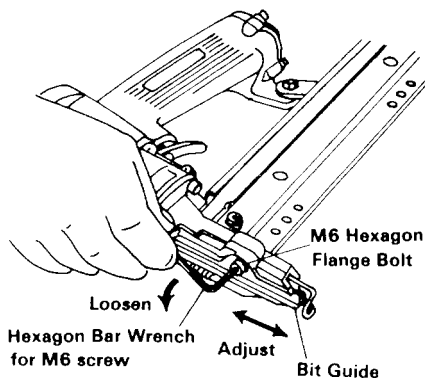


Fig. 9

- (1) First, use the accessory hexagon bar wrench to loosen the M6 hexagon flange bolt securing the bit guide.
- (2) Next, move the bit guide up and down to adjust it. The maximum movement of the bit guide in a downward direction should be approximately 2mm (.08").
- (3) Tighten the M6 hexagon flange bolt and perform test driving (tightening torque: 122-138kgf-cm (9-10ft-lb.))

3. Attachment and detachment of the nose cap

Cautions:

- When attaching and detaching the nose cap, make sure to disconnect the hose to release the compressed air.
- When attaching and detaching the nose cap, make sure to take your finger off the trigger.

When you do not want to cause scratches in the material you work with, use the accessory rubber nose cap. To attach the nose cap, attach it as shown in Fig. 10. Detachment shall be made in reversed order. Also, when attaching the nose cap, the drive bit projection of the nail outlet will be reduced and the nailing power will be lowered. Adjust the nailing power according to the air pressure used and the attachment position of the bit guide.

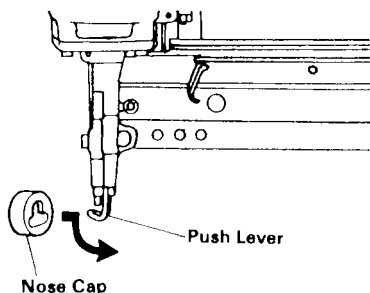


Fig. 10

4. Handling procedures for nail

Notes:

- Carefully handle nails regardless of whether they are packed or in of single strip form. Should they be dropped, the bond between adjacent nails may be broken, resulting in nail feed failure.
- Do not expose nails to the open air or direct sunlight over a long period; otherwise rust may occur or the bond between adjacent nails may be damaged. Keep nails in the original package when not using them.

INSPECTION AND MAINTENANCE

Caution:

- Be sure to disconnect the hose during cleaning jams, inspection, maintenance and cleaning.

1. Countermeasure for nail jamming

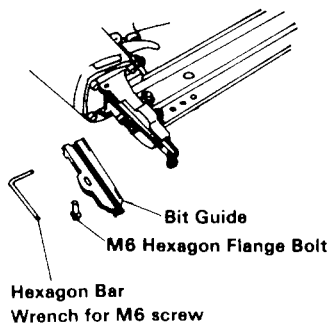


Fig. 11

When removing jammed nails, proceed in the following sequence in order not to discharge the nails by mistake.

- (1) Disconnect the hose and drain the compressed air.
- (2) Remove all nails from the magazine. Always remove nails before removing the bit guide to prevent nails from jumping out when the guide is removed.
- (3) Use the accessory hexagon bar wrench to loosen the M6 Hexagonal flange bolt securing the bit guide and remove the bit guide.

(See Fig. 9 and Fig. 11)

- (4) Remove any nail scraps which have collected in the magazine.
- (5) Attach the bit guide and then attach the M6 Hexagonal flange bolt.
- (6) Load the nails and check to see that normal nail driving is possible.

Note:

- In case of frequent jam, consult the HITACHI service agent from which you bought this machine.

2. Inspection and maintenance

Periodically inspect the device.

- (1) Remove the four hexagon socket hd. bolts securing the exhaust cover and remove the exhaust cover.
Then cylinder, piston, and other parts can be removed in respective assembly groups. Wipe the drive bit, the piston sliding part and the body interior with a cloth to remove deposited dirt.
- (2) Confirm that the piston damper offers normal operation. A damaged piston damper may cause damage to other component parts.
- (3) Carefully check the O-ring for wear while disassembling. A worn or damaged O-ring may deteriorate overall performance. Replace a worn or damaged O-ring with new one.
- (4) Prior to reassembling the device, apply grease (HITACHI Electric Tool Grease No. 1 or HITACHI Motor Grease) to the O-ring. Also, lubricate the device with the recommended oil.

3. Check on mounting screws for each part

At regular intervals check every part for loose mounting screws and whether or not there are any air leaks. Retighten any loose screws. Operating the equipment with loose screws untightened will incur a hazard.

4. Protection against dirt

- (1) Remove dirt from the inlet port and interior of the hose.
- (2) Use only clean oil to protect the air intake port and sliding part against clogging or damage.

5. Inspecting the drive bit

If the drive bit starts to slip to abrasion (Fig. 12), use a file or a grinder to grind the tip of the drive bit to an angle of about $3^{\circ}30'$. See Fig. 15.

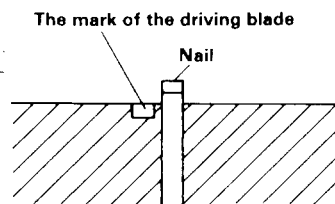


Fig. 12

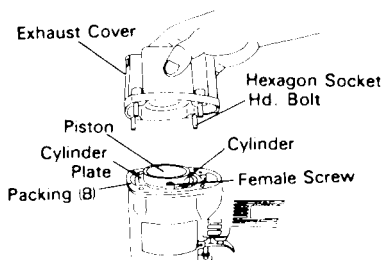


Fig. 13

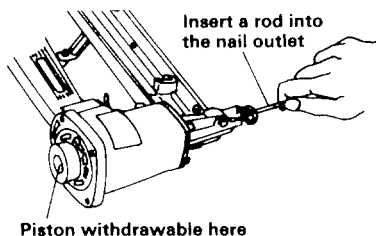


Fig. 14

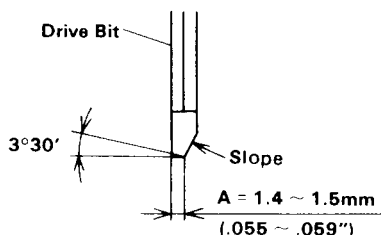


Fig. 15

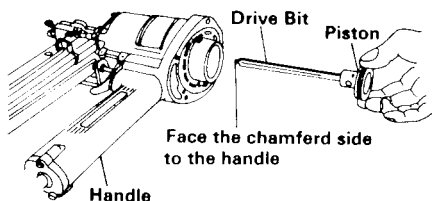


Fig. 16

(1) Removing procedures

- (a) Remove four hexagon socket hd. bolts to disassemble the exhaust cover, whereby the piston is exposed. (See Fig. 13).
- (b) Insert an appropriate rod into the nail outlet to withdraw the piston from the opposite side. (Fig. 14)

(2) Grinding procedures

- (a) Grind the top end as shown in Fig. 15. When grinding the top end by using a grinder, to avoid wear, gradually grind it while cooling the grinding part with water. Excessive grinding may shorten the Nailer service life.
- (b) If nail heads still float above the work surface even though the top end is ground, replace the drive bit with a new bit. (Replace the drive bit when projection beyond the bit guide reaches approximately 1.5mm (.06"))
Drive bits are available from the dealer where you ordered the nailer.

If the tip of the drive bit is ground, also grind the slope to maintain the dimensions (A).

(3) Reassembling procedures

Effect reassembling procedures in reverse order to those of disassembling. Make sure to assemble the drive bit with its chamfered side facing the handle of the nailer body, and confirm that the drive bit is fully inserted into the nail outlet. Then reassemble the exhaust cover. Apply a thin coat of grease (HITACHI Electric Tool Grease No.1 or HITACHI Motor Grease) to the O-ring and interior surface of the cylinder. (See Fig. 16)

Caution:

- A cracked drive bit may cause damage. Prior to reassembling the drive bit, be sure to check for such cracks.

6. Inspecting the piston

A depletion of cylinder oil or a worn O-ring may restrict smooth operation. In such instances, remove the piston as illustrated in **Figs. 13, 14 and 16**, and clean the cylinder interior. Then apply 2cc of the recommended oil over the cylinder interior surface. If the piston still refuses to offer smooth operation, replace the worn O-ring. Also, apply a thin coat of grease (HITACHI Electric Tool Grease No. 1 or HITACHI Motor Grease) to the cylinder interior and the O-ring.

Caution

- **Never clean the O-ring with gasoline, thinner, or similar substance.**

7. Inspecting the magazine

Occasionally clean the magazine. Remove any remaining fragments of bond and wooden particles; then apply a thin coat of the recommended oil to the overall surface.

Caution:

- **Check for smooth movements of the nail feeder before use. If movement is uneven, nails could be fired at irregular angle, presenting a hazard to the operator and others nearby.**

8. Storing

- (1) When the nailer will not be used for an extended period, apply a thin coat of the recommended oil to the steel parts as an anticorrosion measure.
- (2) Preferably store this nailer in a relatively warm temperature to avoid shrinkage of the rubber components, which would ultimately cause air leakage.
- (3) When not in use, the pneumatic power tool should be placed out of the reach of children.

SELECTING A COMPRESSOR

Select a compressor with an adequate output in accordance with the following table, based on the relation between the rate of operation (number of driven nails/min.) and the operating air pressure.

Rate of operation (total No. of nails driven per min.)

Operating Pressure Compressor Output	5 ~ 6kgf/cm ² (70 ~85psi.)	6 ~ 7kgf/cm ² (85 ~100psi.)	7 ~8.5kgf/cm ² (100 ~120psi.)
0.4 kW (1/2HP)	90 ~ 60pcs.	60 ~ 40pcs.	—
0.75 kW (1HP)	185 ~ 135pcs.	135 ~ 100pcs.	100 ~ 70pcs.
1.5 kW (2HP)	320 ~ 240pcs.	240 ~ 180pcs.	180 ~ 120pcs.
2.2 kW (3HP)	500 ~ 360pcs.	360 ~ 270pcs.	270 ~ 180pcs.

Example

Assuming that nails are driven at the rate of operation of 40pcs, per min. on 6kgf/cm² (85psi) of air pressure by using 3 units of the nailer, the total number of nails to be driven is: 3×40=120pcs. From the table, it is evident that a 0.75kW (1HP) compressor is required.

Caution:

- **When the maximum operating pressure of the air compressor exceeds 8.5 kgf/cm² (120psi.), be sure to provide a reducing valve between the air compressor and nailer. Then, adjust the air pressure within the operating range of 5~8.5kgf/cm² (70~120psi.). If the air set is installed, lubrication is also possible, thus providing additional convenience.**

Note:

- Air compressors used to supply compressed air to this tool must comply with the requirements of the latest version of American National Standard Institute (ANSI) Standard B 19.3 Safety Standard for Compressors for Process Industries.

OILER-FILTER-REDUCING VALVE (Air Set)

So that the equipment can be operated under an optimum condition to ensure extended service life, it is advisable to use an oiler filter reducing valve.

Please limit the length of the hose between the unit and the air set to within 10 m when using.

- Oiler Automatically supplies the proper amount of clean lubricant.
It is recommended to use SHELL Tonna Oil T32 (for sliding surface). Shown below are other types of useable oils.
Adjust the oiler so that a drop of oil is supplied per 5 to 10 nails.
- Filter Used to remove moisture and dust mixed in compressed air.
- Reducing valve Used to adjust the pressure of compressed air to a fixed pressure, as necessary.

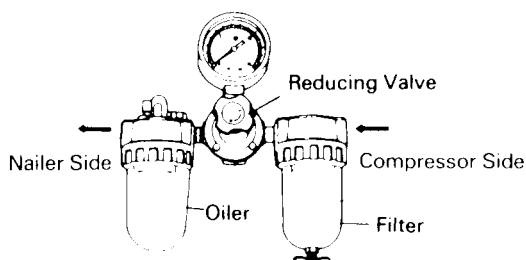
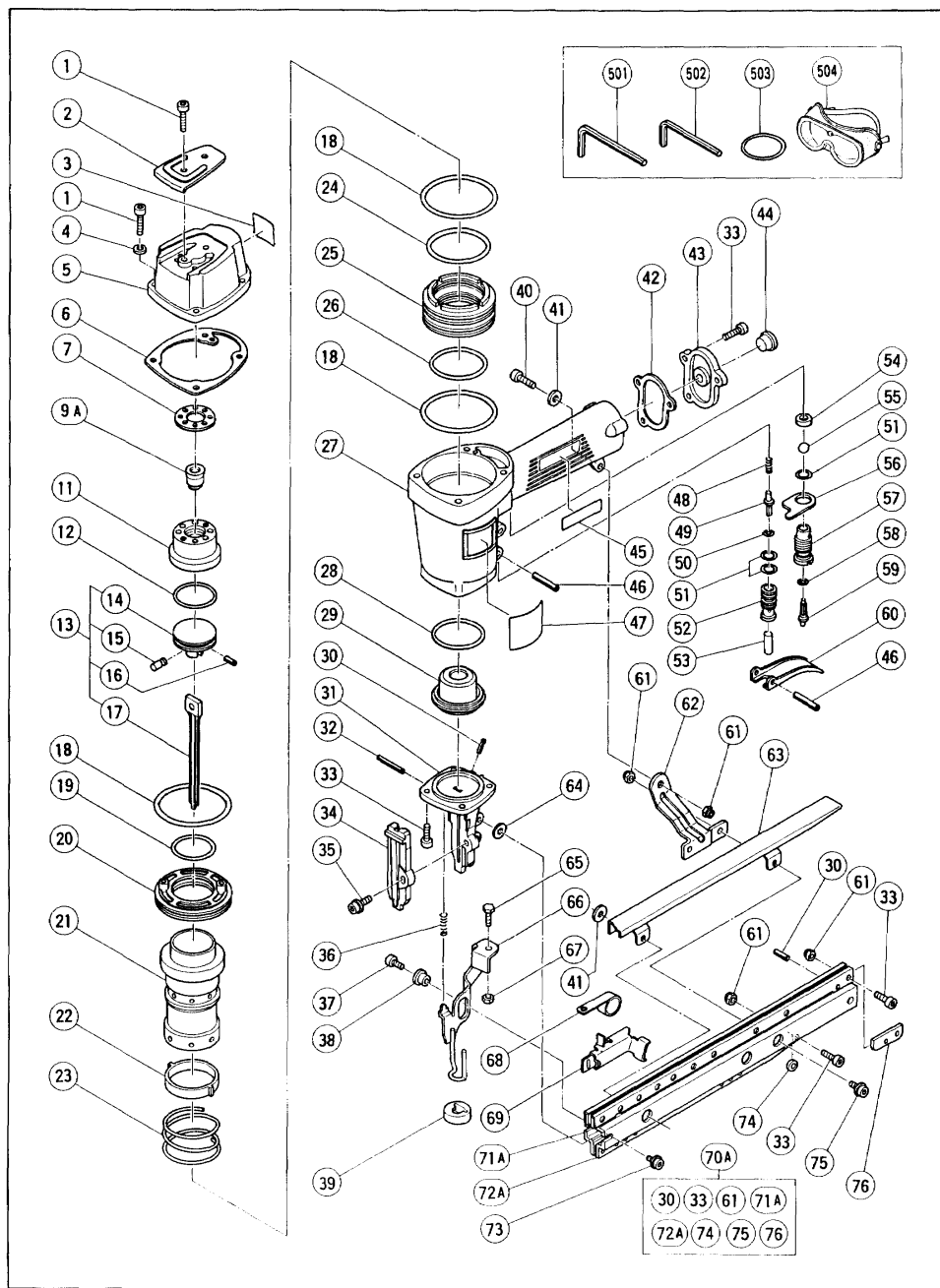


Fig. 17

APPLICABLE LUBRICANTS

Type of lubricant	Name of lubricant
Recommended oil	SHELL TONNA T32
Motor oil	SAE10W, SAE20W
Turbine oil	ISO VG32 ~ 68 (# 90 ~ # 180)



Item No.	Code No.	Part Name	Q'ty
1	949757	Hexagon Socket Hd. Bolt M5×20	6
2	876179	Top Cover	1
3	878499	Caution Plate	1
4	949454	Spring Lock Washer	4
5	877128	Exhaust Cover	1
6	876176	Packing(B)	1
7	876178	Packing(C)	1
9A	878539	Exhaust Valve	1
11	878026	Head Cap	1
12	876174	Piston O-Ring	1
13	878520	Piston Ass'y	1
14	878521	Piston	1
15	878483	Bit Pin	1
16	949861	Roll Pin D2×12	1
17	878532	Drive Bit	1
18	876161	O-Ring(S65)	3
19	877126	Cylinder O-Ring(D)	1
20	876168	Cylinder Plate	1
21	878021	Cylinder	1
22	876167	Cylinder Ring	1
23	876172	Cylinder Spring	1
24	877123	Cylinder O-Ring(A)	1
25	877122	Cylinder Guide	1
26	877124	Cylinder O-Ring(B)	1
27	878020	Body(B)	1
28	877125	Cylinder O-Ring(C)	1
29	878359	Piston Damper	1
30	949496	Roll Pin D3×16	2
31	878522	Tail Cover Ass'y	1
32	949682	Roll Pin D4×32	1
33	949821	Hexagon Socket Hd. Bolt M5×16	9
34	878527	Bit Guide	1
35	878533	Hexagon Socket Hd. Bolt M6×16	1
36	877873	Spring(B)	1
37	949665	Hexagon Socket Hd. Bolt M5×14	1
38	878526	Sleeve	1
39	878538	Nose Cap	1

Item No.	Code No.	Part Name	Q'ty
40	949658	Hexagon Socket Hd. Bolt M5×18	1
41	876205	Washer	2
42	877131	Packing(D)	1
43	876714P	Cap	1
44	872035	Dust Cap	1
45	957561	HITACHI Label	1
46	949866	Roll Pin D3×30	2
47	—	Name Plate	1
48	875643	Plunger Spring	1
49	877881	Plunger(A)	1
50	877705	Plunger O-Ring	1
51	875638	O-Ring(S12)	3
52	877880	Valve Bushing	1
53	877882	Plunger(B)	1
54	875637	Valve Packing	1
55	875645	Urethane Ball(B) D7.14	1
56	875644	Valve Plate	1
57	876738	Trigger Valve Bushing	1
58	874820	Plunger O-Ring	1
59	878121	Trigger Plunger	1
60	876203	Trigger	1
61	877371	Nylon Nut M5	6
62	878531	Handle Arm	1
63	878530	Magazine Cover	1
64	878525	Distance Washer T0.2	0~4
65	875650	Safety Bolt	1
66	878523	Push Lever	1
67	949555	Nut M5	1
68	878528	Ribbon Spring	1
69	878529	Nail Feeder	1
70A	878524	Magazine Ass'y	1
71A	878535	Magazine(B)	1
72A	878534	Magazine(A)	1
73	878537	Hexagon Socket Hd. Bolt M5×8	1
74	963795Z	Sleeve(B)	1
75	996399	Hexagon Socket Hd. Bolt M5×12	3
76	878536	Spacer	1

Item No.	Code No.	Part Name	Q'ty
501	944459	Hexagon Bar Wrench 5mm (for M6 Bolt)	1
502	944458	Hexagon Bar Wrench 4mm (for M5 Bolt)	1
503	876174	Piston O-ring	1
504	875769	Safety Glasses	1

Parts are subject to possible modification without notice due to improvements.

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